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LEONARDO REVIEWS

LEONARDO DIGITAL REVIEWS
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REVIEW ARTICLE

WHAT IS IT TO BE HUMAN?

Debate presented by the Institute of Ideas at the Cheltenham Festival of Literature, Cheltenham, U.K., 11 October 2002.

WHAT IS IT TO BE HUMAN? WHAT SCIENCE CAN AND CANNOT TELL US

by Kenan Malik. Academy of Ideas, London, U.K., 2001. 53 pp. Paper. ISBN: 1-904025-00-5.

Reviewed by Robert Pepperell, PøLAR (Posthuman Laboratory for Arts Research). E-mail: <pepperell@ntlworld.com>.

Tony Gilland of the London-based Institute of Ideas brought together four writers in a panel discussion to consider aspects of "What is it to be human?"—the same question that titles a collection of essays published by the Institute in 2001. The publicity for the event couched the question of our indeterminate humanity in terms of genetic science and posthumanism, and the various panelists responded, at least initially, by addressing our biological nature. Steve Jones, the eminent geneticist and author of *The Language of Genes* (1995), pointed out with his usual good humor that it was not useful to define humans in terms of their genetic makeup. Besides the fact that humans and mice both have approximately 30,000 genes, we share 40% of our genes with bananas. Launching an immediate attack on the discipline of sociobiology, which understands current human behavior as a consequence of our evolutionary past, Jones dismissed the enterprise as "the ponderous affirmation of the 'bleedin[g]' obvious." At best, sociobiology is able to tell us that older men are often attracted to younger women, or at worst it introduces the concept of "duck rape" to account for certain sexual behaviors among ducks. In fact biology, and genetics in particular, can tell us very little about what it is to be human, concluding that "what makes us humans is that we're not animals."

Susan Blackmore, author of *The Meme Machine* (2000), addressed the question of what makes humans unique by reaffirming her thesis of imitation. She asserted that what defines us is our "copying machinery"—that is, our capacity to imitate the behavior of others, which allows behavioral practices to spread amongst communities or species. As is well known, she regards such imitative behavior in "memetic" terms, as that of quasi-evolutionary replicating units, following the introduction of the concept by Richard Dawkins. Humans, she said, are unique in being able to harbor and spread memes, and our complex social organizations are a consequence. She then expounded the other thesis for which she is well known, the "illusion of self," which follows from the ideas of Daniel Dennett. For Blackmore, the idea that we have a specific, centralized sense of our own existence, or even a consciousness, is a delusion, partly caused by our acquisition of memes. These delusions do not mean that we do not have a self or a conscious life, she claimed, but simply that these things are "not what they seem." She concluded with the admission that she is "utterly baffled" by what it means to be human.

Kenan Malik, who wrote *Man, Beast and Zombie* (2002) as well as making the major contribution to the *What Is it To Be Human?* book, offered a more humanitarian and philosophical view. He rejected what he saw as the recent conceptual shift that stresses the continuities between humans and the natural world. He argued that the rejection of the idea of humans as something special made for bad science and bad politics. Humans are in the special position of being able to make moral decisions; in effect we are "self-conscious moral agents." Further, we are uniquely subjects and objects who can shape our own destiny. If we follow the pessimism inherent in "anti-humanism" (by which he may have meant posthumanism), we will lose many of the valuable social impulses that drive progressive science and politics.

Novelist Maggie Gee disagreed with Steve Jones's assertion that we are not animals. She was keen to insist on the primacy of our animal nature, and was then led to ask: "What is the nature of the human animal?" For her, humans are "intelligent, dextrous and dangerous." We are inherently dissatisfied with the limitations of our physical bodies, and this causes us, with our capacity for intelligence, to act on the world so as to make lasting changes. She characterized the human condition as an ongoing and ever-repeating banana-skin joke—we are always tripping up. She pointed to the vulnerability of humankind; we are apt to get things wrong and make mistakes on a global scale. We specialize in "mad, blinkered obsessions," using the example of the U.S. policy of preemptive self-defense as being a case of "mad reason."

During questions from the audience, Susan Blackmore's memetic ideas came under close scrutiny, not least because they imply a lack of personal responsibility if, as she claims, we are just "replicating machines" in which memes largely determine our behavior. Steve

Reviews Panel: *Peter Anders, Fred Allan Andersson, Wilfred Arnold, Roy Ascott, Curtis Bahn, Claire Barliant, Marc Battier, Roy R. Behrens, Andreas Broeckmann, Annick Bureaud, Chris Cobb, Robert Coburn, Nicolas Collins, Donna Cox, Sean Cubitt, Shawn Decker, Luisa Paraguai Donati, Maia Engeli, Bulat M. Galeyev, George Gessert, Elisa Giaccardi, Thom Gillespie, Dene Grigar, Craig Harris, Josepha Haveman, Paul Hertz, Amy Ione, Stephen Jones, Eduardo Kac, Richard Kade, Douglas Kahn, Curtis E.A. Karnow, Nisar Keshvani, Julien Knebusch, Mike Legget, Roger F. Malina, Jacques Mandelbrojt, Rick Mitchell, Robert A. Mitchell, Mike Mosher, Kevin Murray, Frieder Nake, Maureen A. Nappi, Angela Ndalianis, Simone Osthoff, Jack Ox, Rene van Peer, Robert Pepperell, Cliff Pickover, Patricia Pisters, Michael Punt, Harry Rand, Sonya Rapoport, Stefaan van Ryssen, Shirley Shor, George K. Shortess, Joel Slayton, Aparna Sharma, Christa Sommerer, Yvonne Spielmann, David Surman, David Topper, Ian Verstegen, Stephen Wilson, Arthur Wood, John Wood.*

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Jones offered the most authoritative indictment of the memetic thesis, at the same time pursuing one of his "few remaining pleasures," that of "annoying Richard Dawkins." He cited an occasion when he looked up the term "meme" on Google. Perhaps unsurprisingly, there were a large number of hits. But when he did an equivalent search on the Web of Science, the global index of scientific papers, it revealed just 37 hits, of which only two referred directly to the "biological meme" theory.

"What Is It to Be Human?" was one in a series of debates staged by the Institute of Ideas in response to the eponymous publication, which includes contributions from Matt Ridley, Kevin Warwick, Maggie Gee and Anthony O'Hear. A previous event at the Institute of Education in London, called "A Posthuman Future," featured Francis Fukuyama and Gregory Stock discussing the implications of Fukuyama's recent publication of a similar title, *Our Posthuman Future.* But despite the title, and the publicity for the event in Cheltenham, there was virtually no mention of the word "posthuman" from the panel members, the chair or the audience at either debate. It would seem, regrettably, that posthumanism may be being employed by some as a sexy promotional tag without much serious consideration of its ramifications. I, for one, regret this appropriation, and hope that posthumanism will not be reduced to a general anxiety about one aspect of biological research.

AUDIO COMPACT DISC

EXTRASENSORY PERCEPTIONS

by Chris Chafe and Greg Niemeyer. Center for Computer Research in Music and Acoustics, Stanford University, Palo Alto, CA, U.S.A., 2002. Audio CD CCGNESP01-2.

Reviewed by Stefaan Van Ryssen, Jan Delvinlaan 115, 9000 Gent, Belgium. E-mail: <stefaan.vanryssen@pandora.be>.

More often than not, students who are taking my course in the Sociology of Music find it extremely hard to imagine what music without a melody line could be all about. They are still more bewildered to find that there is music without a beat, and they are in the pitch dark when I try to tell them about music without apparent meaning, function or use. Admittedly, they are not all musicians, and they have not lived through the experiments of the 1970s and 1980s. Some of them have been surrounded by only popular music from birth—and one or two have even been subjected to prenatal music training, listening to Wagner, Weber and Wolf through the warm walls of the womb. What puzzles them is that some people seem to appreciate sound for its own sake, for its sheer beauty and the sensual quality of hearing an object send vibrations through the air. Paradoxically, sensory perception in itself seems to have been lost in this age of immediate sensory fulfilment. So, what about extrasensory perceptions? Where have they gone? Down the drainpipe, together with the chirping of the common sparrow, or far into oblivion together with the tooth fairy? I must warn the reader that this is a very misleading introduction. The music on this magnificent CD is not generated by objects—at least, not in the classical sense; it is not a vehicle for extrasensory perceptions, and it was not made to explore the beauty of sounds—or was it? Time for some explanations.

Chris Chafe and Greg Niemeyer have been collaborating in two installations at the San Francisco Museum of Modern Art and the San Jose Museum of Art. Both works aim at making audible information that is normally only available for interpretation through visual means. In "Oxygen Flute," the first of the two "tracks," they present arrangements of real-time and historical carbon dioxide gas measurements inside a dedicated growth chamber. In the chamber, visitors exhale and raise the carbon dioxide levels. Bamboo plants growing inside the chamber absorb the carbon dioxide and exhale oxygen. These changes in carbon dioxide provide the real-time data for the recording. The data have been computer-generated using custom-made software under Linux. The overall aspect of the sounding result is reminiscent of bamboo flutes being played in a contemplative, self-absorbed mood.

"Ping," the second "track," derives its data from a network of a local host and eight remote servers. Transmission speeds were measured and transformed into parameters steering the music in real time. I can only guess at the effect both installations had on an informed spectator who was in a position to appreciate the transformation of otherwise unavailable (extrasensory!) information into real sounds, but that is beside the point. Listening to these recordings puts us in a position where we can distinguish between three processes: the sensory perception of articulated sound without apparent structure, mood or meaning, and free from traditional aesthetic codes; the search for structure and meaning in this seemingly random environment; and the emergence of a (very private) aesthetic experience, the delightful sensation of being able to project/detect meaning where there was nothing before.

Of course, this effect is not exclusive to this CD. Other music can do the trick for anyone who is willing to put some effort into analyzing their own thoughts and experiences (I did so with Wagner and Weber, long after leaving the womb), but the advantage of *Extrasensory Perceptions* is that a listener with less self-assurance cannot be distracted by the search for a presupposed meaning. Knowing that these sounds have not been put together with a premeditated message and that they are not hiding a code that has to be broken, the listener is free to observe her own participation in creating sense from sensation.

WORLD WIDE WEB SITE

HOLES–LININGS–THREADS

Web site: <http://www.felber.dircon.co.uk/holesliningsthreads/>. Artist: Alicia Felberbaum.

Reviewed by Luisa Paraguai Donati, Department of Multimedia, Institute of Arts, Unicamp, Brazil. E-mail: <luisa@iar.unicamp.br>.

The site's concept is based on Sadie Plant's essay "The Future Looms: Weaving Women and Cybernetics." According to the author, women have historically had a fundamental role in the invention, development, manufacture and use of technology. Plant begins her argument by pointing to the role of women in the history of technology, drawing attention to the technology of looms and their connection to computers through the development of Babbage's Analytical Engine. Using the metaphor of weaving, she describes

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the development of computer software and tries to visualize the basic nonlinearity characteristic of the World Wide Web: as a "web of complexity, weaving itself." In an extension of this argument, Alicia Felberbaum, the author of *holes–linings–threads*, uses women's history in the textile industry, in Batley, West Yorkshire, U.K., to create the context of Sadie Plant's essay in a construct of visual and auditory references.

The web site does not have a common informational architecture of the sort that provides explicit menus that usually give a comprehensive overview of the informational space to be explored and accessed. Initial words (cards and holes, softwares linings, threads) invite users to get "interlaced" in the concept of the web site and start their navigation. An image of tapestry emerges as the web matrix, which is gradually constructed by the proposed connections. These links are constantly actualized by each user's reading, intervention and action. The images used bring together the concept and physical aspects of looms and weaving, showing diagrams and components such as switches and sets of gears. These images refer also to the functional process, the logic that is present in computer technology in which the user/weaver needs to have her/his commands understood by the machine. Following the context of computer systems and web technology, there are several levels of language that translate the machine language, based on binary numbers, to different users, from computer programmers to common web users. Turning on and turning off becomes yes and no, zero and one, and this can become a language to be converted into physical movements performed by any machine during its different and specific tasks. There are other important considerations about the use of images on this site, namely the movement created by the animated GIF files using a specific property from HTML tags to construct backgrounds in which a small image is horizontally and vertically repeated until the screen is totally completed. The purpose appears to be to re-create and reinforce the idea of looping in the constant repetitions that determine the physical movements of looms and define internal procedures of computing. This mirrors the necessity of every computing language to have routines and sub-routines as basic elements to describe recurrent functions and implement events. The use of these animated GIFs as background in many pages here results in an interesting visual effect, but it is also pure metalanguage used to talk about the logic of computing employed by the author.

Plant has created a cohesive metaphor of the Web and an alliance between women, machinery and the new technology. Felberbaum refers to Plant's work and accurately uses resources from the programming language to create a poetic space. The site demands an unusual attitude from users to handle the interface and to weave their own way from their choices. From this exercise, it proposes changes in the users' contemplative and interpretative behavior for action and intervention. The informational layers are in a constant potential state, until the user's reading and interaction determines an actual state out of the many potentials. The web space can be "occupied" by users via the creation of personal networks, in the same way women's work wove their histories in the textile industry.

CONFERENCE

ISEA2002: CONNECTING ART AND TECHNOLOGY WITH TRANSPORTATION, TRANSIT, TOURISM, AND THEORY

Nagoya, Japan, 27–31 October 2002

Reviewed by Simone Osthoff. E-mail: <sxo11@psu.edu>.

The first International Symposium on Electronic Art to take place in Asia, the Nagoya symposium in Japan contributed to closing distances between East and West while raising questions about the symposium's forms in relation to space, place and conference design. Any participant taking the journey to the conference in Japan experienced its theme—*Orai*: Comings and Goings—at least in terms of transportation, transit, tourism and commerce. Beyond theme, can *Orai* also be seen as the conference's formal and organizational key? From the opening ceremony, through the shows, performances, discussions and panel presentations, the plurality of events, places and experiences made constant demands on one's ability to choose—the impossibility of seeing and hearing everything kept me both focused and disoriented, and continues to do so by placing demands on the possibility of observation, description and evaluation.

In the opening ceremony, at the International Design Center Nagoya, guest speaker Suda Hiroshi, the chairman of the Central Japan Railway Company, addressed the theme of *Orai* through the scope of the Japanese urban transit and communication systems. Hiroshi spoke of economic systems under the impact of internationalization and information, energy and environmental challenges, with their social and economic implications. His talk contrasted with the more abstract and holistic remarks of ISEA2002 president Kohmura Masao, who connected East and West, heavens and earth, employing a parallel between Pythagoras's music of the spheres and the *I Ching*. The model Hiroshi put forward, however, where self-governing communities could act as administrative units supporting wide economic blocs, stressed the connection among natural, social and economic resources, pointing to the need for urban designs to be, at once, ecologically sustainable, socially participative and economically sound. In retrospect, Hiroshi's model, which at the time seemed a bit odd in the opening ceremony of an art-and-technology symposium, offered an essential link between ISEA's nomadic artistic and academic community and the place and institution hosting the conference. This connection needs to be further examined in future conference designs, in the light of the obvious but overlooked fact that the academic conference-tourist-entertainment-consumer industry is in frank expansion.

Looking at ISEA as a social model in miniature—a geographically dispersed community of artists and researchers exploring participatory networks, nonlinear systems and different notions of authorship's intentionality and responsibility, while imagining current and future relations between technology, art and culture—one might be surprised by its tight and homogeneous academic network, which, while exploring a global connectivity, multiplicity and dimensionality, in practice tends to reinforce its own identity. If connectivity—social, artistic and otherwise—is to be fostered with rather unexpected partners, both regionally and globally, some critical discussion about process, form and design seems to be in demand.

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It was just an unfortunate example, or perhaps a symptomatic one, that the only scheduled live streaming event of the conference, connecting East and West in real time—room 0 in the Harbor Hall at Nagoya Port with the Sackler Center for Arts Education at the Guggenheim Museum in New York—organized by the Utrecht University of the Netherlands, did not occur for technical reasons. But the large panel did not give up. Anxious to connect with the New York museum, they tried to carry out the engagement through a long-distance cell-phone conversation, the phone being passed along from one panel member to another in a surrealist parody of dialogue. To the small audience that remained in the room, this scene was painful and embarrassing to watch, as panel members made desperate attempts to convey their message, and at the same time, understand and respond to the questions placed over the phone. Another example of difficult connection, this time not the fault of technological failure, was the simple lack of space for social contact among conference participants (or perhaps too much space), eliminating the possibility of unexpected meetings over breakfast, for instance, whose importance for networking was completely undermined by the symposium organization as it opted for a flexible, yet too decentralized structure, which kept participants dispersed throughout the city's many hotels and conference sites/events. Since the conference did not provide transportation between hotels and sites (not to mention tourist information), one had to learn to navigate the city's public transportation system and overcome language obstacles efficiently in a very short period of time.

Artworks, on the other hand, ended up being joined so seamlessly in the two large warehouse exhibition spaces at Nagoya Port that they functioned as one big installation made mostly of exposed wires, projectors and loud techno-sounds, thus erasing their particularities in visual and aural homogeneity. The dim lighting in the exhibition space further unified the individual installations, working well for most but not for all, and contributing to the sameness of the environment that overall appeared formulaic and amateurish. Whether or not the answer to these large-scale new-media exhibitions is a more rigorous curatorial and editorial presence—as I heard a few people expressing during the conference—I am not sure, since new media often embraces post-studio practices of distributed, more experimental and participatory means. Some balance between individual nuances and a dynamic group of works, however, might be possible with some rethinking of the exhibition format.

The possibility of combining geographical territorial movement with a rhetorical territory creates a unique space at the conference by merging movement and distance, theory and practice—a rich opportunity that the paper presentations, in general, did not explore, embrace or acknowledge. The papers' critical edge was further compromised by a lack of physical and emotional engagement with the theories they embraced. Usually reading from behind one or more computer screens that presenters kept hiding behind, authors projected their voices through microphones and, in the dark, seemed completely disconnected from the audience in the room. How many 20-minute papers (often longer), written in a language more appropriate for academic publication than to be heard, can one absorb in a conference? Utterly disengaging from the audience's point of view, a few of these presentations were particularly exasperating, as their innovative content contrasted directly with their form of delivery, bad use of web design, and tired academic language.

And yet, despite its shortcomings, I enjoyed the conference very much. The port city of Nagoya was certainly one of the most exciting and pleasant aspects of the conference, with its beautiful geographic location and new urban and architectural structures, as well as a vibrant pop culture made of tradition and trendy fashion. Nagoya offered many possible articulations of space and place, which I hope future conferences will explore in thematic choices as well as in form, content and design.

PERFORMANCE

THE MASTER AND MARGARITA

at the Volksbuehne, Berlin, Germany. Directed by Frank Castorf, after the novel by Russian poet Michail Bulgakov.

Reviewed by Yvonne Spielmann, Visual Media, Braunschweig School of Art, Braunschweig, Germany. E-mail: <spielmann@medien-peb.uni-siegen.de>.

We are getting used to a visual world of machine vision, where web cameras, telepresence and remotely controlled telerobotics transmit live images that produce a new kind of reality effect. These machine images are not necessarily linked to a live presence in front of a camera or any recording device. Moreover, live images streamed in networked real time, and eventually interactive media environments, challenge the belief in what we see and perceive. The attribute "live" refers more to the actual presence of the transmission process of electronic signals itself; it does not indicate if what we perceive is past, present, prerecorded, simulated or actually happening "next door." Criteria to distinguish "life" and "live" are conflated on the technological level.

What is happening is a significant shift in vision from seeing to knowing. We can only rely on the visual information that is presented if we know that what we see is real. Whereas machine vision that comes to us directly confuses our understanding of an image's reality and its meaning to the extent that completely separate levels of reality are conflated and the perceiver loses orientation. What is real or live in media presence is not so easy to decide when it comes to telepresence and reality TV. The question is who will tell the difference between which reality is what and who knows if there really is a difference between reality and its transmission in technological presence or if these things are already merged in the reality that we live in?

In his satire *The Master and Margarita*, the poet Michail Bulgakov envisages the conflation of real and unreal by drawing a picture of the Stalinist Soviet Union as a schizophrenic state; the Devil enters the Moscow of the 1930s and causes confusion, so that the unreal becomes reality and reality turns into fiction. In adapting Bulgakov's novel, written in 1940 as a reflection upon Stalinism and probably addressed to Stalin himself as the first expert reader, theater director Frank Castorf of the Volksbuehne in Berlin takes up the timely role of reality television and video observation and uses them as contemporary metaphors that stress the merger of realities and loss of ori-

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entation in Moscow of the 1930s. From the start the parallels are clearly set between control systems under Stalin and the technological supervision of our time through public and private cameras and publicly displayed imagery of intimacy. What Bulgakov draws together in this piece of fantastic literature is state control turned into a staged metaphor of multiple realities that reveals how the belief in a difference between the actual and the virtual collapses. Differences or reality turn into sameness.

The performance is divided into three areas that, according to the three levels of the story, capture and display different forms of presence. The performance takes place simultaneously on different sections of the stage, not all of which are visible to the audience. The novel as it is transformed for stage performance by Castorf works with the principle of simultaneity that interrelates various levels of narration: first, the narrator ("The Master") who tells the content of the novel and refers to scenes from the crucifixion of Christ in Jerusalem as a metaphor for Stalin's terror; secondly, the portrayal of state control and confusion that reflects people's powerlessness, their fears, anxieties, disbelief and failures to understand the structure that surrounds them; and finally the level of fantastic fiction where Christian mythology and a "real" devil meet against the background of the chaotic bureaucracy of Stalin's Moscow. The performance jumps back and forth and in the end the levels of reality converge in the same presence, and Jesus commands the devil to let the Master and Margarita, his love, go.

The stage design corresponds to the narrative structure. In front of the audience there is a conventional theater decoration with two interconnected rooms and another room on the roof, where the later reunion of the Master and Margarita takes place. Behind the decoration, and not visible to the audience, are the rooms of the asylum (two cells and a shower), plus another interior room in Moscow where the conspiracy of the devil develops. In the back of the stage there is open space plastered with architectural models of modernist Moscow that are in the end set on fire. And somewhere in the back of the stage Pilate and Jesus meet in a bathtub. We get to know all these different places because every space is recorded with live video and tracking cameras that move 360° around the scenery. What is happening in the back of the stage is displayed on one large screen at the top of the decoration, where we also read advertisements for sex films and the prognostic headline "I want to believe."

Ironically, believing becomes problematic in the context of a multiple-reality theater performance where the religious connotation of the question of faith is juxtaposed with the question of what to believe in the visual world. Even when we see the tracking for the video camera and its operators, the audience is not assured of the reliability of the visuals displayed on screen. It takes the viewer a while to realize that everything seen on screen is really a live recording of live acting for video camera on and behind the stage. Hints of a live yet staged reality and referentiality are given in brief moments when we see actors changing rooms and opening doors in the asylum that lead into the visible front of the stage. Mostly, however, the recording behind the stage depicts an enclosure where actors are spatially squeezed in, prisoners of internal visions. The montage of scenes on the screen gives the visual picture of different live images. Together, they produce the effect of real-time simulation on the theater stage. It compresses the omnipresence of state and media supervision in a schizophrenic view. As in reality TV, the reality of the theater show must go on; live recording does not allow for interruption or moments of privacy. In the interpretation of the leading metaphor "Stalinism equals lunatic asylum," theater director Castorf "shoots" a live video on stage in which being captured inside the asylum is no better than being outside where the "real" devil mixes realities. Enclosure is everywhere, and proof of reality must fail because the levels of perception, belief and common sense collapse. It is then no surprise that the inserted narration of Jesus and Pilate on the eve of crucifixion enters the primary level of narration, and fictional characters go back and forth between video and theater.

Where Bulgakov's vision originated from his experiences in the Soviet system of the 1930s, Castorf's media vision of the novel as a theater play takes up the merging of realities in our society that, through the combination of live performance and overall media presence, constitutes the notion of never-ending reality TV. In this setting television is no longer an escape from reality; on the contrary, the structure of the theater unfolds another principle where in general everyone can become the author of his or her own reality, a reality that is happening simultaneously on a video screen and has been recorded live. This double-vision that in pathological terms indicates schizophrenia is also meant to express the merger of multi-level media through the amalgamation of live images and live action on stage.

In combining both systems, Stalinist state control and today's media control, the theater performance of Bulgakov's novel states that the overall presence of supervision creates not only fear and anxiety in the individual but also generates a schizophrenic state of being that becomes quotidian. The general feeling of omnipotent state and media apparatuses that could possibly intervene anywhere at any moment increases alertness and the wish to escape into another world. In Bulgakov's satire, which was banned from publication until 1966 (26 years after the death of its author), escape from despotic tyranny and Kafkaesque bureaucracy is not possible. The novel instead leans to double-minded talk and parallel worlds that reflect the same kind of enclosure: one being the lunatic asylum, another the encounter between Jesus and Pilate on the eve of the crucifixion. Theater as a live performing medium is now reflecting the convergence of realities through the use of media that merge different realities. Theater's live mix raises the fictional level of Jesus and Pilate to a more complex state, consisting of live performances on stage and staged live video performances, both shifting between real Moscow and the "real" devil and the reality of the asylum.

The novel and its adaptation on stage present what in psychoanalysis is called a double-bind, when one world competes with another reality. On stage the two worlds are connected via video camera and doors on stage that open to prove the link. Things get more complex when not only Moscow and the asylum, but also the devil and Jesus and Pilate enter the stage of parallel worlds. Here, the collapse is complete: inner vision and outer reality, but also inside spaces and outside physicality, are both real and unreal in the same instant. We have reached the reality of virtual simulation, not in cyberspace as usual, but

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in a theater performance that beats telepresence.

BOOKS

BODY AND WORLD

by Samuel Todes. MIT Press, Cambridge, MA, U.S.A., 2001. 292 pp. Paper. ISBN: 0-262-20135-6.

Reviewed by Robert Pepperell, PøLAR (Posthuman Laboratory for Arts Research). E-mail: <pepperell@ntlworld.com>.

Body and World is an edited republication of Samuel Todes's 1963 doctoral thesis, presented here with appended material. According to the foreword by Hubert L. Dreyfus, "one can think of *Body and World* as fleshing out Merleau-Ponty's project while presciently relating it to the current scene" (p. xii). The significance of this statement in the current philosophical climate is itself worth stressing. With only a few exceptions (Merleau-Ponty being one of them), philosophers in the Western tradition have relegated our flesh to the status of an irrelevant appendage. Only recently has there been specific and wider recognition of the role of the body, and indeed our global environment, in the generation of our mental experience.

Todes explains that in the classical realm, for Plato and Aristotle at any rate, the earthly world, including the body, stands in unfavorable opposition to the ideal world. These opposing realms are linked by the mind (soul), which aspires towards the heavenly and away from the corporeal. Thus the qualitative distinction between mind and body, subject and object, was inaugurated and hardly ever revised throughout the course of Western philosophy. From this point on, many thinkers became fixated by the subjectivity of experience, to the extent that the very existence of the body, and the world it inhabits, was thrown into doubt.

Descartes, of course, is usually credited with formalizing the complete divorce of mind and body, though, in fact, the real story is more complex, and Descartes's view more subtle than is often reported. As far as Descartes's *cogito* is concerned, any attempt to deny the human subject already presupposes it. So the indubitable existence of the human subject becomes a first principle from which equally secure principles can be derived with certainty. Although certainty in knowledge was the optimistic aim of Descartes's philosophical program, as Todes points out, he remained in some confusion about the status of the human body in relation to the world, and to God. Descartes famously saw his own senses as a fallible source of truth about the world, but equally recognized that his knowledge of the extended world (including his own body) formed part of the same subjective experience he could not deny.

Moving to a consideration of Hume and Leibniz, who both developed Descartes's ideas in different ways, Todes mounts a critique of their equal but opposing responses to the doubtful status of the human body. In following Descartes, neither Hume nor Leibniz could see any means by which externally generated events could give rise to internally experienced perceptions. This left the realm of mental experience largely insulated from its extended environment. Moreover, the mind cannot contain any extended matter (according to Descartes) but only representations of the world that the mind "has." Todes makes much of this notion of "having," in the sense that the subject "has" experiences—including the experience of the body. But, to my mind, this itself raises the specter of an unproductive infinite regress, as the verb to "have" implies a further subject who is doing the having.

Having considered Hume and Leibniz, Todes presses the accelerator on his own thesis. Attempting to adduce evidence for his argument, he mounts the claim that we can distinguish between imaginary figments and veridical knowledge by the feedback gained from physical intervention. So, for example, to distinguish between a real oasis and a mirage, one would take certain active steps in an attempt to reconcile mental and physical experience. One is put in mind of Samuel Johnson's toe-stubbing refutation of Berkeleian idealism. But if the threat of idealism, and illusion, could be dispensed with so readily, would it have plagued Western philosophy for the last couple of thousand years? How can we separate the real from the imagined in, for example, an inactive state, or a state where physical verification is not an option? Equally, might not a hallucination persist despite, or even because of, our physical activity? Todes counters these objections with a dubious appeal to logic. The distinction, he says, "between illusory and veridical appearances is not an apparent distinction but a logical one, to be made with the help of judgement about the consistency, coherence, simplicity, etc., of the family group of appearances that can be formed by including or excluding the given appearance from among them" (p. 56). To me this is far from satisfactory.

There is another respect in which I find Todes's appeal to the agency of the body problematic. He writes: "To appear, or to be anything at all, is to be a function of the human body. For the world itself is such a function and so is made as to allow only such things in it. What is not a function of the human body is outside the world, and hence can neither be nor appear to be anything at all" (p. 42). In this view, the human body stands at the "portals of the world and allows entrance only to that which can be domesticated for its uses, so as to make the world of experience liveable." Of course, this implies we know what a body is, what its bounds and limits are, and that, indeed, it is something distinct from the world.

On one level Todes's thesis is quite straightforward, even perhaps slightly obvious: that our bodies have a considerable influence on the way we consciously perceive the world. He summarizes his position as "the fundamental contention . . . that the human body is not merely a material thing found in the midst of other material things in the world, but that it is also, and moreover thereby, that material thing whose capacity to move itself generates and defines the whole world of human experience in which any material thing, including itself, can be found" (p. 88). Hence the original title of the 1963 dissertation "The Human Body as Material Subject of the World." But, of course, things in academic philosophy are never straightforward, and on another level this thesis implicates all sorts of complex ontological issues, which this review cannot address. Much of the remainder of the book is occupied with a critique of Kant's philosophy and further developments of the main argument.

While I welcome *Body and World* as a contribution to the re-orientation of philosophy away from idealism and towards a view of the subject as active in a body and a world, it must also be said that this is a work of scholarly philosophy and, as such, not easily recom-

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mended to the general reader. However, Todes's style is clear and consistent, and the book has obviously been expertly edited. As a consequence, with determination and patience there is much to be drawn from it.

THE JUDGEMENT OF THE EYE: THE METAMORPHOSES OF GEOMETRY—ONE OF THE SOURCES OF VISUAL PERCEPTION AND CONSCIOUSNESS

by Jürgen Weber. Springer-Verlag, Vienna, Austria and New York, NY, U.S.A., 2002. 200 pp., illus. Paper. ISBN: 3-211-83768-X.

Reviewed by Amy Ione, P.O. Box 12748, Berkeley, CA 94712-3748, U.S.A. E-mail: <ione@diatrope.com>.

Of the many books that have recently explored relationships among art, perception and geometry, Jürgen Weber's *Judgement of the Eye: The Metamorphoses of Geometry—One of the Sources of Visual Perception and Consciousness* stands out. In this recently published work, Weber effectively brings his background in science together with his life as a sculptor, painter and art educator. Overall the book acquaints the reader with the extensive research program that evolved as Weber studied a number of questions of interest to him. As he explains at the beginning, the book is "essentially about what forms say to us, what information they convey about their very existence, how we understand their language. How does their expression come about?"

To its credit, the book offers a good survey of visual perception and an adequate sense of how one might balance art, neurophysiology and perceptual psychology. Weber has obviously studied a number of areas related to vision and art. Most impressive is the way he uses several neurological case studies in the beginning of the book to set the stage for his inquiry into expression and perception. Gestalt psychology and the work of a number of gestalt psychologists are also well stated. Weber surveys the work of gestalt (form) psychologists such as Köhler, Koffka and Arnheim to convey the history and distinctions of this movement. As he explains, these psychologists were the first to state that geometric forms played a decisive role in visual perception and recognition. His efforts to relate gestalt psychology to the Lie Transformation theory are a bit hard to follow. Nonetheless, Weber does convey that this second movement followed a completely different path. Essentially, those who worked with the Lie theory of continual transformation groups (e.g. Hoffman, Dodwell) attempted to relate the simple geometrical forms produced by the visual cortex with environmental phenomena.

Perhaps Weber's greatest contributions to the work of the gestalt psychologists and Lie theorists are the experiments he conducted with his students. Some mentioned in this book include asking them to respond to basic shapes and drawings, to reproduce shapes from memory as well as identification, and to complete tasks that included 2D, 3D and rotated shapes and surfaces. Weber, moreover, does not restrict his work to static shapes. He also asks about movement and how Euclidean forms might undergo a geometric metamorphosis. This allows him to compare historical art and traditions such as Egyptian and Greek art.

Several aspects of the book, however, undermine its effectiveness. Although much of the discussion encourages the reader to look closely and thus aids perceptual understanding, the format of the book works against it. The carefully chosen images effectively illustrate ideas about shape, memory, how we see and how art is made. Yet it is difficult to interrelate the text and images due to the book's structure, which relegates the images to a separate section at the back. The 83 pages of 501 primarily black-and-white images could have easily been integrated into the body of the text. In my opinion, the decision to print these images separately makes them difficult to use, particularly since pages with images contained 6 to 8 pictures of various shapes and sizes. Indeed, the need to keep turning pages to locate the appropriate images was distracting, and about halfway into the book I found I had lost patience when I needed to search through a page full of images to find the number mentioned in the text. I would have also liked a longer index and a more extensive bibliography. Hoffman, for example, is mentioned frequently throughout the book, but I failed to find a single text by him listed in the bibliography.

In summary, Weber impressively brings his work as an artist and art educator together with a number of disciplines outside his field. Asking how we see, why we do not see what appears on the retina, and how we see additional information such as the mood contained within a facial expression (among other things), Weber effectively asks good, important questions about perception. He ably succeeds in aiding the reader to look closely at what is seen. The book, as a result, is successful in extending scientific theories into the world of practice and expression.

ONE PLACE AFTER ANOTHER: SITE-SPECIFIC ART AND LOCATIONAL IDENTITY

by Miwon Kwon. MIT Press, Cambridge, MA, U.S.A., 2002. 218 pp., illus. ISBN: 0-262-11265-5.

Reviewed by Claire Barliant, CCS/Bard College, Annandale, NY, 12504, U.S.A. E-mail: <cbarliant@yahoo.com>.

What do most people think of when they hear the term "site-specific art"? Richard Serra's *Tilted Arc*, perhaps, or Claes Oldenburg's baseball bat in Chicago—both examples of what is now pejoratively referred to as "plunk" art. Or else one might think of temporary installations, such as the twin towers of light dedicated to the collapse of the World Trade Center. Whatever images come to mind, chances are they are out of date; the definition of what is site specific is constantly changing. In her groundbreaking book, *One Place After Another: Site-Specific Art and Locational Identity*, Miwon Kwon charts the development of site-specific art from the mid-1960s to the present. It is not an easy history to document. Beginning in the mid-1960s with well-meaning bureaucrats who wanted to bring "art to the people," these intentions were complicated in the 1970s as artists began to question the cultural confinement and physical boundaries of the museum. Today artists have moved beyond the critique of the institutional framing of art, largely because art-world concerns are usually deemed too exclusive and do not belong to a broader social context. Kwon argues that as artists seek out methods of making art that do not focus on the object, but rather the process, many artists who work on site-specific projects are engaging with social and political issues, rather than a physical place.

Obviously the idea of artist as itinerant freelancer poses several problems, and Kwon tackles these problems with convincing examples and clear, accessi-

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ble prose. Today artists are not hired to produce an object (read: commodity) for a site, but to provide an aesthetic service. The artist becomes a sort of manager, or bureaucrat, while the community gets to, as Kwon provocatively puts it, "enact unalienated collective labor." In other words, the artist provides a surrogate for a labor system in which the worker's voice is often suppressed. As Kwon moves into a discussion of the problems surrounding site-specific art that involves the community (this has been termed "new genre public art" by critic Suzanne Lacy), she uses "Culture in Action: New Public Art in Chicago" as her target. This massive event in 1993 was a crucial moment in the trajectory of public and site-specific art. Conceived by Mary Jane Jacob, "Culture in Action" commissioned artists to work directly with specific communities within Chicago. It was a break from public art that seemed to ignore community concerns—Richard Serra's *Tilted Arc* being the most extreme and tricky example, which Kwon also revisits in this book.

However much I enjoy Kwon's challenging ideas, I have some trouble with her attack on "Culture in Action." There were eight projects in total for Jacob's event, and it seems obvious that such a huge effort would have some degree of failure. But failure is a relative term, and here, for Kwon, it seems to mean the amount of actual collaboration between the artist and the community, as well as the amount of meddling on the part of the curator and institution. Kwon cites examples in which it appears that the curator was prohibiting actual discourse between the artist and the community. Yet I find it hard to imagine public art happening without some institutional support, and Kwon doesn't give any examples of recent developments in public art that have successfully involved community, so one has the sense that we're not getting the complete picture. But her goal is not to solve problems, just to identify them. Her hands-off approach is clear from the title of her last chapter: "By Way of a Conclusion: One Place After Another." As the title warns, she doesn't provide any solutions or conclusive arguments that site-specific art is doomed. Instead, it is a lyrical meditation on the increasing displacement not only of the artist, but the academic as well. Kwon writes: "As many cultural critics and urban theorists have warned, the intensifying conditions of such spatial undifferentiation and departicularization—fueled by an ongoing globalization of technology and telecommunications to accommodate an ever-expanding capitalist order—exacerbate the effects of alienation and fragmentation in contemporary life."

Once she brings herself into the book, she drops the clinical tone and becomes more sympathetic. Longing or nostalgia for a (generally fictitious) stable location is perhaps a means of survival, Kwon muses, in a world that is (thanks to a global market economy) rapidly changing. This is not to say that globalization is entirely bad for us, but that doesn't mean we aren't adjusting to the difference. Kwon uses an unusually literary example, *Valparaiso*, a play by Don DeLillo, to show that sometimes being constantly on the move can reveal our true character in a way that stasis cannot. Perhaps the next phase of site-specific art will address the nature of this mobility and fragmentation—relational specificity, Kwon calls it. While recent site-specific art is certainly a long way from early "plunk" art, as Kwon and many others have observed, it still has a long way to go.

WRITINGS

by Vilém Flusser. Edited and with an introduction by Andreas Ströhl. University of Minnesota Press, Minneapolis, MN, U.S.A. and London, U.K., 2002. 256 pp., illus. Trade. ISBN: 0-8166-3564-1.

Reviewed by Stefaan Van Ryssen, Jan Delvinlaan 115, 9000 Gent, Belgium. E-mail: <stefaan.vanryssen@pandora.be>.

Prague-born philosopher Vilém Flusser (1921-1991) is becoming increasingly influential in Europe and Latin America. Unfortunately, most of his writings are scattered throughout journals and hard-to-find books, and remain untranslated from the original German or Portuguese. This book, the first English-language anthology of his work, displays the wide range and originality of his ideas. Andreas Ströhl, director of the Goethe Film Institute in Munich, wrote an insightful and very readable introduction into the origins and evolution of Flusser's thought and selected 25 essays that cover practically all facets of his oeuvre.

In 1939, Flusser escaped from a death in the German camps when he fled to Brazil with his wife. His parents and sister stayed behind and were all killed. In São Paulo, he found a job in a motor factory and resumed his philosophy studies in the evenings and on weekends. Though he quickly became an enthusiastic believer in a great future for Brazil—an ideal that was cruelly shattered by the military coup in 1964—the fact remained that he was an exile with hardly any ties binding him to his home country. Deeply influenced by Husserl's phenomenological method in philosophy and by Buber's ethics, he developed a keen sense of forlornness—which he called "bottomlessness." This absolute lack of sense in life and the total and uncompromising solitude of a person before death did not lead him to a negative or cynical view of life; rather, they are the foundations of a philosophy of freedom and choice, of communication as a means to escape solitude and of history as a product of writing.

When Flusser became an assistant professor of philosophy at the University of São Paulo, he started his work on communication. His international breakthrough came with the publication of *Towards a Philosophy of Photography (Fuer eine Philosofie der Fotographie).* In this long essay, published in German in 1983, he analyses photography (and other communicative "surfaces") in an entirely different way from Sontag, Benjamin or Barthes. Flusser argues that "the task of a philosophy of photography is to analyse the possibility of freedom in a world dominated by apparatus; to think about how it is possible to give meaning to human life in the face of the accidental necessity of death." Instead of concentrating on the relationship between the image and reality, Flusser sees photography as a revolutionary step away from the domination of linear thinking that was established through the development of writing and that reached its full height in the Enlightenment and the Renaissance. If history is a function of writing, photography—and with it the other "surface" media like television, film, posters and advertising in magazines—is the real "end of history." It is "posthistorical." Long before Fukuyama identified the end of history as the end of the Grand Stories, the end of ideologies and the end of the Cold War, which are basically historical events in their own right, Flusser foretold the end of the "age of linear reasoning," which he equated with history. History is not a series of events, but the written image of the relationships of facts. Photography freezes events into scenes;

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it successfully reintegrates the image into a linear unfolding of events and a narrative of history.

In his essays, Flusser draws heavily on science as well as on the aforementioned philosophers. He frequently refers to entropy and negentropy, the laws of thermodynamics, quantum mechanics and the uncertainty principle of Heisenberg, cybernetics and Einstein. He freely mixes insights from those sciences on the border of philosophy with purely logical reasoning in the style of the early Wittgenstein. This makes for a very refreshing cocktail, certainly if you compare it with the overwhelming long drinks that are served by so-called postmodern media theorists who have had more of Baudrillard and Deleuze than a healthy stomach can take. Flusser is good reading, profound and playful at the same time, wide ranging in his subjects and surprisingly naive sometimes in his stance, but always to the point, clear, final and inescapable.

Very few writings of Vilém Flusser have been translated. Neither has he written comprehensive theories or closed systematic and exhaustive treatments of problems in philosophy. He chose the essay as his form, and he really excels at it. This collection is a must-read introduction for all professional media theorists and workers, philosophers and artists, into the connected and networked world of one of the most original and prophetic thinkers of last century. Flusser died in a car crash in Czechoslovakia in 1991.

CRUMPLE, THE STATUS OF KNUCKLE

by Dave Cooper. Fantagraphics Books, Seattle, Washington, U.S.A., 2000.

Reviewed by George Gessert. E-mail: <ggessert@igc.org>.

Stories of all-female tribes go back to the Amazons of ancient Greece. During the 20th century all-female tribes expanded in literature to nations, and then to all-female worlds. Valerie Solanas's *SCUM Manifesto* (1967) proposed to eliminate all men except for biotechnologists working on artificial wombs and other men dedicated to eliminating themselves. Joanna Russ's science fiction novel, *The Female Man* (1975), went even further: a female scientist creates a sex-specific disease that completely exterminates the male half of the human race. With the help of biotechnology, female-female reproduction assures the future, and a lesbian utopia of radically diminished human diversity unfolds. Solanas gained notoriety for shooting Andy Warhol. Russ achieved literary renown, and was praised by Marge Piercy and Donna Haraway. Haraway brought *The Female Man* to the attention of academic audiences in *The Cyborg Manifesto* (1982) and discussed it glowingly in a later essay, *Femaleman Meets Oncomouse* (1997). And yet, *The Female Man* presents a genocidal vision that makes Hitler's goals seem modest. The power of the novel derives not only from its hatred, but from its tactical plausibility. The idea of a sex-specific disease may have been inspired, directly or indirectly, by work that the U.S. military initiated in the early 1970s to create race-specific weapons based on different body chemistries. Also, reproductive technologies were sophisticated enough by the middle 1970s, when *The Female Man* was first published, that female-female reproduction had become at least theoretically possible.

I do not know whether theory has become practice today, but in the late 1980s I heard from a biologist that "probably" a baby girl had been born who had two mothers and no father. The parents concealed the circumstances of the child's conception to avoid a firestorm of publicity. I am told that oocyte-fusion research continues, and work is being done now on haploidization, that is, insertion of a female's DNA into a sperm so that it can be used to fertilize her female partner's egg.

Over the last half century what has been missing in the art and literature of all-female worlds is male perspectives. The lone exception is Dave Cooper's graphic novel, *Crumple: the Status of Knuckle*. Cooper tells the story of two friends, Knuckle and Zev, who sometime in the future go to Hollywood seeking wild women. There Knuckle discovers that women have found out how to reproduce without men. Cooper has extraterrestrials do the work of biotechnology, but they serve his story well, because they allow for more vivid mythmaking than pipettes and petri dishes, as well as for weirder and more hilariously yucky graphics.

The male characters in *Crumple* have a lot to answer for. They exploit women whenever possible, do not defend them when they most need help, and are clueless about mutual pleasure. However, males are not quite the genetic scourge that they are in *The SCUM Manifesto* and *The Female Man*. Knuckle and Zev have plenty of redeeming, or at least poignant, qualities. They are classic losers, trapped in fantasy, victims of popular culture and the media. Knuckle is weighed down by awareness of his powerlessness and failings. And Zev is an amazingly ignorant schmuck but incapable of falseness. I couldn't help but care about their fates—but then, I'm a male.

So what happens to Zev and Knuckle after Hollywood? It's too good a story to give away, so let's just say that it does not have a Hollywood ending and that Cooper's sense of humor never fails. The graphic novel is brilliantly drawn, and paced just right. Get it if you are at all interested in the impact of biotechnology on imagination, and on the war of the sexes.

EXPLORING CONSCIOUSNESS

by Rita Carter. University of California Press, Berkeley, CA, U.S.A. and Weidenfeld & Nicolson, London, U.K., 2002. 320 pp., illus. Trade. ISBN: 0-520-23737-4.

Reviewed by Amy Ione, P.O. Box 12748-3748, Berkeley, CA 94712, U.S.A. E-mail: <ione@diatrope.com>.

Rita Carter's *Exploring Consciousness* complements her 1988 book *Mapping the Mind*. In this second book Carter, a science writer, successfully turns her investigations from the mind and brain to the somewhat more philosophical domain of consciousness studies. Linking the two books is the delectable layout and design of Weidenfeld and Nicolson. These visuals enhance the text and immediately draw the reader to the book. One example is the graphic depicting John Searle's famous Chinese Room. So many have critiqued Searle's argument that it frequently seems there is little to add to the ongoing debates. Although the visual doesn't present new insights, it is so delightful that it seems something has nonetheless been added to the discussion.

Turning to the text, one finds a representative group of ideas and contributions from key players in the field such as O'Regan, Chalmers, Dennett and Blackmore (among others). Effectively integrating the spectrum of views, the book successfully conveys that particular theories are firmly established in

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consciousness studies, and that there is also much disagreement among theorists. The book benefits from the way Carter allows the many points of view to speak for themselves as they are used to structure the book's presentation and scope. This does not translate into a linear textbook, but is rather a mechanism that allows her to convey that the field is not easily defined. As a result, the discussion is woven around a number of trajectories and she never links them together in an easily characterized form. This is not to say the writing is confused or amorphous. To the contrary, it is because so many points of view are clearly stated that the book succeeds in mirroring the interdisciplinary framework that defines (or fails to define) consciousness studies. Overall the book's format might be characterized as a mirror of consciousness if one adopts a first-person perspective. If a third-person point of view is preferred, the idea of a mirror of consciousness research is the more appropriate characterization.

The format is perhaps best conveyed by an example of how the book works. My favorite section, a part of the "Hard Problem" chapter, demonstrates how the author balances points of view. Inserted in this chapter's general description of the "hard problem" are discussions of this "problem" by David Chalmers and Daniel Dennett. Placed face-to-face, the two views are, in effect, given equal weight. Chalmers, of course, has championed the idea that we can never explain what he has termed "the hard problem of consciousness." This, according to Chalmers, is the problem of experience and how physical processing gives rise to a rich inner life. He writes: "It seems objectively unreasonable that it should, and yet it does" (p. 50). Dennett, on the other hand, writes: "Chalmers' attempt to sort the 'easy' problems of consciousness from the really 'hard problem' is not, I think, a useful contribution to research, but a major misdirection of attention, an illusion-generator" (p. 51). Similarly, Stuart Hameroff and Alywn Scott debate their views on quantum theories of mind. In *Exploring Consciousness,* as in consciousness studies overall, art is never adequately positioned. Like the prevailing two-culture (science and the humanities) paradigm of this field overall, this book relegates art to a secondary position. As is often is the case when the two-culture model is adopted, art is utilized to explain many key points but rarely discussed on its own terms. Even on the periphery, the inserted work is effective and compelling. Common perceptual illusions and the well-known drawings of autistics (e.g. Nadia) are in evidence. In addition, a number of less widely circulated visuals offer explanations of scientific research. For example, Bridget Riley's *Cataract 3* (1967) adds a visual element to Carter's explanation of how V5 firing gives the illusion of movement. Mark Tansey's *The Innocent Eye Test* (1981) comments on the idea that we use interpretive mechanisms to translate the image of an animal on a canvas into the three-dimensional animal we accept as a "realistic" depiction when we view the canvas. Tansey's painting was intended to commemorate an experiment of a cow failing to respond to a painting of a cow. Six self-portraits by an Alzheimer's patient capture the degree to which the artist's idea of himself became increasingly demented.

Equally illuminating in terms of the consciousness research agenda is the discussion of the East/West, spiritual/scientific views of consciousness. This is standard fare in consciousness studies and so rightly included. However, in my opinion, this deeply ingrained way of formalizing some of the unresolved philosophical issues too often seems to undermine the field. In a global world that includes influences of African and South American countries, it is absurd to continue to characterize ideas in terms of a 19th-century East/West division. Moreover, when this is bound up with spirituality, cultural diversity is further undermined. Inevitably, as is the case in *Exploring Consciousness,* the next step is to insert personal experiences to discuss why we need to address the "spiritual" in consciousness studies. This, I believe, is the Achilles heel of the field. To be sure, Carter's use of her own experiences to explain this area of consciousness studies did not seem inappropriate when one considers how the field has evolved. This section did, however, bring to mind why consciousness studies has had so many problems achieving credibility.

In summary, *Exploring Consciousness* is a beautiful, accessible and useful book. Ironically, it is the scope of the work and its diffuse style that make the book so readable. Readers will not feel they need to read straight through from beginning to end. Instead it is the kind of book that allows the reader to move around from subject to subject easily. For a coffee table book, *Exploring Consciousness* does a splendid job of presenting the field. It is accessible despite its non-linearity. Although most of the thorny issues are put aside, the reader still walks away with a good sense of the issues, the spectrum of ideas and consciousness studies in general. Readers who are just discovering this intriguing subject will find the easy to read textual introduction welcoming. Newcomers will also be pleased to find a bibliography that offers an avenue for further exploration of the issues and debates. Although it is not a textbook, nor intended to be one, *Exploring Consciousness* does offer a compelling introduction to the range of views contemporary thinkers bring to the enduring mystery of consciousness.

LEWIS CARROLL, PHOTOGRAPHER

by Roger Taylor and Edward Wakeling. The Princeton University Library Albums. Princeton Univ. Press, Princeton, New Jersey, U.S.A., 2002. 288 pp., illus. Trade. ISBN: 0-691-07443-7.

Reviewed by Roy R. Behrens, 2022 X Avenue, Dysart, Iowa, U.S.A. E-mail: <ballast@netins.net>.

Anyone with any amount of education must know that Lewis Carroll was the nom de plume of Charles Lutwidge Dodgson (1832–1898), the Victorian-era British author, mathematician and Oxford don who wrote what very well may be the most famous children's story of all time, *Alice in Wonderland.* What is less commonly known is that Dodgson was also an avid and early practitioner of the science (and eventual art) of photography. He made the first of about 2,700 photographs in 1856, the last in 1880. Half of these are photographic portraits of children, while 30 percent are of adults and families. Far less frequently, he also made self-portraits, photographs of his extended family, still lifes, landscapes, works of art, literary narratives and skeletons (including that of an anteater) and other props for anatomical studies. He even made a portrait (reproduced in this book) of the Dodgson family doll, Tim.

Of the third or so of his photographs that are known to have survived, the majority are in American collections, and 407 of those are at the Princeton University Library. This scholarly album of photos (designed in an award-

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winning format by Lindgren/Fuller Design) features a book-length essay by Roger Taylor (a British photographic historian) about Dodgson's interest in photography in the context of his time and place; a chronology of his life; an annotated catalogue by Edward Wakeling (a British scholar) of all the Dodgson images at Princeton, each of which is reproduced in the order that Dodgson intended; and a complete listing of the dates, subjects and (if known) the current whereabouts of all his photographs, which is of course a great assistance to Dodgson scholars. Writes Peter Bunnell (in the book's introduction): "Alice in Wonderland has been read, and cherished, by generation upon generation. Charles Lutwidge Dodgson's photographs can now be seen to warrant a similar admiration and equal affection."

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MUSIC AND TECHNOLOGY IN THE TWENTIETH CENTURY

edited by Hans Joachim Braun. The Johns Hopkins Univ. Press, Baltimore, MD, U.S.A., and London, U.K., 2002. 256 pp., illus. Trade. ISBN: 0-8018-6885-8.

Reviewed by Chris Cobb, San Francisco, CA, U.S.A. E-mail: <ccobbsf@yahoo.com>.

This much-needed collection of critical essays addresses sound art from many new and interesting perspectives. While some of the authors have taken on certain issues, such as Hans Joachim Braun's "Movin' On: Trains and Planes as a Theme in Music," others such as Andre Milliard have delved deep into the meaning of recorded audio as a phenomenon. From reading this book, one gets the impression that sound art is rediscovered periodically but never really seems to find its place. This is due to the fact that it always gets diluted by the pure abstraction of art or the concrete nature of written music. In between, there are numerous subgenres, and each has its passionate adherents. From the earliest days of the Theremin to contemporary DJ mix-and-scratch compilations, there are plenty of examples of music that is not quite music. And in the same vein, there are many artists who do sound art as a side practice, or are influenced by nonmusic. Braun's essay "Movin' On" reveals the connection between the industrial age and the art produced during that time. Many composers, Braun asserts, were affected by the intensity of these big, loud machines that roared through towns. He singles out Duke Ellington's "Daybreak Express" as "perhaps the greatest piece of train-inspired music." He mentions the birth of both swing and jazz and the love of rhythm and wild time signatures as being all connected.

My favorite essay is Andre Milliard's "Tape Recording and Music Making." Here Milliard surprises us with an account of how Chuck Berry was quick to purchase a tape recorder, apparently upgrading from his clunky old wire recorder. Milliard also mentions how Buddy Holly's voice was subtly enhanced by his usage of tape effects in the recording studio—in particular on Holly's "Words of Love" from 1957, which gives the impression of several voices in harmony. What I like about this collection is that there is even enough room for over-the-top academia. I am speaking of Rebecca McSwain's aptly titled "The Social Reconstruction of a Reverse Salient in Electric Guitar Technology: Noise, the Solid Body, and Jimi Hendrix." Her essay in four sections seeks to pick apart the history of the guitar in the context of its existence as a tool for social expression.

While I am glad that such an important social issue is being addressed, her essay shows just how hard it can be to approach music (or film for that matter) as a critic or historian. After all, music, especially that made with guitar, is inherently one thing: entertainment. Because of this, the essay often comes off as if this were her first encounter with the guitar as an object. Interestingly, this is both painfully academic and yet breathlessly devotional, an interesting marriage of sentiments. Braun did a nice job of bringing together these 17 very strong and personal voices, which in the end make for good, thought-provoking reading.

MATERIALS RECEIVED

Multimedia

Arte y Electricidad
Arteleku (Regional Government of Gipuzkoa). Rodriguez Foundation, 2002. CD-ROM.

fineArt forum 15th Anniversary CD-ROM
fineArt forum, Brisbane, Australia, 2002. Mac/PC CD-ROM.

Holographie ART Holography: L'art des images virtuelles en 3D / The Real-Virtual 3D Images
Georges Dyens et al. MGD Productions & GRAM, Montréal, Canada, 2001. In French and English. Mac & PC DVD-ROM.

ProbleMarket.com: Problem Stock Exchange
Davide Grassi and Igor Stromajer. Forum Ljubljana, 2002. 70 pp., illus. Paper. Book plus CD-ROM.

Routine Mapping
Jøran Rudi. NoTAM, Center for Information Technology Services, University of Oslo, Norway, 2001. DVD. (rcvd: 31 Jan 03)

Les Unités Sémiotiques Temporelles: Nouvelles clés pour l'écoute
Laboratoire Musique Informatique de Marseille. Marseille, France, 2003. Mac/PC CD-ROM.

Audio Compact Discs

Change
Larry Polansky. Frog Peak Music, Lebanon, NH, U.S.A., 2002.

Tang-go: The Best of Tangerine Dream (1990–2000)
Tangerine Dream. TDI Music, Bernau, Germany, 2002.

Vingt Chansons pour Jean Cocteau
Maurice Methot. CONR Music, Providence, RI, U.S.A., 2002.

Books

Art, Fact, and Artifact Production: Design Research and Multidisciplinary Collaboration
Lily Díaz-Kommonen. University of Art and Design, Helsinki, Finland, 2002. 271 pp., illus. Paper. ISBN: 951-558-107-9.

Art lyrique et art numérique: A propos d'une scénographie interactive de Norma de Bellini
Réunis et édités par Alain Bonardi. Série Conferénces et séminaires, no. 13. Université de Paris-Sorbonne. Observatiore Musical Français, 2002.

The Art of Humane Education
Donald Phillip Verene. Cornell Univ. Press, Ithaca, NY, U.S.A., 2002. 80 pp. Trade. ISBN: 0-8014-4039-4.

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