As Bourtchouladze, to her credit, notes further on, while this possibility *may* be good news for a person with a disease such as Alzheimer's, it will also be open to abuse in various forms.

Simply noting this possibility in the last two or three pages of the book does not give me any sense of security about possible abuse and potential control of individuals by drugs developed from this research. Given the quote by Jim Watson (of Watson and Crick fame) that "[Scientists] are like Michael Douglas's characters—a little evil and very competitive," little ease from this concern is provided (p. 165). Incidentally, Watson was involved in one of the laboratories in which Bourtchouladze did much of her groundbreaking research.

Research into this so-called CREB switch has become a commercial urgency! Already two pharmaceutical companies have been formed to "search for memory-improving drugs" (p. 170). I am not generally given to paranoia, but drugs that can turn genes on and off in the human brain in the hands of little evil scientists, funded by multinational companies driven by the need to make as much profit as possible worries me.

This book was written for anyone "curious to know how memories are made." It goes a long way toward satisfying this curiosity and makes public, perhaps unintentionally, the covert concerns that millions of humans have regarding "messing about with genes" and scientific discoveries possibly ending up in the wrong hands.

David Ehrlich: Citizen of the World

by Oliver Cotte. Sarah Mallinson, trans. Dreamland Editeur, Paris, 2002. 144 pp., illus. Paper. ISBN: 2-910-02780-5.

Reviewed by Martha Patricia Niño Mojica, Pontificia Universidad Javeriana de Bogotá, Colombia. E-mail: <ninom@javeriana. edu.co>.

This is a vital, illustrated, bilingual text written in French and English, in which experimental filmmaker Olivier Cotte documents and acknowledges David Ehrlich's 25-year period of continuous artistic production. Ehrlich is well known as an animator, professor, film director, sculptor, musician, activist and International Animated Film Association (ASIFA) promoter. This association has recognized his dedication, giving him a special award at the

Zagreb World Animation Festival Croatia 2002 for his exceptional contribution to the art of animation. Ehrlich has an extended filmography, composed of more than 35 films. Among his most recognized works are *Precious Metal* (1980), *Dissipative Dialogues* (1982), *Dryads* (1988), *A Child's Dream* (1990) and other works that have been screened and have received awards in a variety of film festivals.

The book starts with Ehrlich's biography, which consists of a chronological look at his broad interests: medical studies, international relations and languages, Indian aesthetics, sculpture, playwriting, painting, music, art therapy, philosophy and holographic film, and later on explains his interdisciplinary artistic practice and way of living. A chapter titled "An Aesthetic Study of the Films" analyzes key formal and conceptual aspects of his work, such as geometry, lines, points, fields, wipes, color, surface, editing, cycles, symmetry, perspective, music, holography, metamorphosis and the fascination with rhythmical transformations both methodic and intuitive that lean toward the sensuality of the forms. He was also a pioneer in experimental holography with his 1978 *Oedipus at Colonus*, a sculptural hologram shown at the International Animation Festivals in Annecy, France, and Zagreb, Yugoslavia.

The central part of the book consists of an aesthetic study of his films and an interview that depicts Ehrlich's family background, education, creative process, way of thinking, intentionality, his relationship to narration and abstraction, his starting point as an animator, and his religion, philosophy, ideas and artistic influences.

Ehrlich appreciates the importance of international collaboration. The work *Animated Self-Portraits* involved artists from Japan, Czechoslovakia, Yugoslavia, Estonia and the United States. The awardwinning *Academic Leaders Variations* was another international collaboration among 21 artists from Poland, China, Switzerland and the United States. He has done numerous workshops with children in the United States, Asia and Europe. In 1987 Ehrlich produced *The ASIFA Children's Film*, made by children in nine countries. Ehrlich speaks about the difficulties of his own creative process with an incredible openness, commenting on the contradictions that naturally arise from the collaboration of artists with divergent sociopolitical backgrounds,

among people from Estonia, the Czech Republic and Yugoslavia, and on his unsuccessful attempts to integrate Muslim and Jewish animators in one project that could not get enough funding to be accomplished because of its political implications.

The text ends with a contributions section that compiles descriptions of Ehrlich's personal character made by numerous directors, professors, friends and colleagues from all over the world. The reader gets little pieces of extra information as well as the contributors' extremely personal statements of gratitude that depict Ehrlich as an altruistic person whose socially engaged work has helped the development of the animators' community enormously.
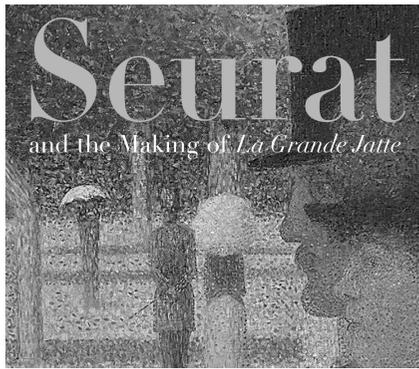
There are some small typographical errors, and the layout of the bilingual pages is sometimes difficult to read. I recommend the book for people who have an interest in experimental animation, in particular, or the visual arts, in general. However, it will be more easily understood by people who already know Ehrlich's work, because the static and 2D characteristics of the silent printed text cannot adequately represent his animated and colorful movies.

Seurat and the Making of La Grande Jatte

by Robert L. Herbert. Art Institute of Chicago, Chicago, IL, in association with University of California Press, Berkeley CA, 2004. 288 pp., illus. Paper. ISBN: 0-520-24211-4.

Reviewed by Roy R. Behrens, Department of Art, University of Northern Iowa, Cedar Falls, IA 50614-0362, U.S.A. E-mail: <ballast@netins.net>.

Largely due to one painting, *A Sunday on La Grande Jatte* (1884–1886), French Neo-Impressionist Georges Seurat is among history's best-known artists. That picture is surely a jewel in the crown of the Art Institute of Chicago, along with *American Gothic* by Grant Wood and the exquisite, dreamlike boxes of Joseph Cornell. In the summer of 2004, in part to mark the 80th anniversary of the painting's acquisition, the museum mounted an exhibition called *Seurat and the Making of La Grande Jatte,* which included along with that artwork a parade of historical artifacts that, in one way or another, contributed to *La Grand Jatte.* This large, impressive volume—a 288-page exhibition catalog, illustrated by hun-

dreds of images (including recent parodies) and enhanced by a medley of scholarly talks that touch on a wide range of issues (from aesthetic considerations to historiography)—was produced to accompany that showing. How wonderful to have at hand such diverse and detailed essays on one particular painter, and even more to learn so much about a single painting (by adjusting scans of the painting, for example, it is now possible to digitally "unage" its surface without physically "restoring" it, by making prints that are all but identical to its original condition). This approach is especially helpful in the case of Seurat, who does not easily fit in with the stereotype of a "Modern artist," whose aims are so often purported to be self-expression and unbridled spontaneity. Seurat, on the contrary, claimed to be as much a scientist as an artist (he relied on "the science of color," he said), with the result that the bulk of his paintings (like those, for example, of M.C. Escher or Victor Vasarely) are often dismissed as too static, as lacking in gestural freshness. As we learn from this volume, Seurat's creative process (and it *was* creative) was informed by an extraordinary discipline, as when he decided (based on the "scientific aesthetics" of Charles Blanc, Charles Henry and others) that certain angles are inherently related to certain emotions (upward angles, for example, are perceived as more cheerful than downward) and that a comparable "aesthetic protractor" might as readily be devised for color, intensity, value and other attributes of form. During Seurat's lifetime, people such as French novelist Victor Hugo (who often toyed with painting) were experimenting with chance and accidental strokes. But Seurat wavered rarely in his quest for an objective process, as shown by his marks that are visible now through infrared photography, X-radiography,

and other scientific ways to examine what exists beneath an opaque painted surface. We now have evidence of his use of grids, and of the countless revisions he made. A particularly wonderful part of this book is its account of the cultural contexts of La Grande Jatte (the island pictured by Seurat) and *La Grande Jatte* (the painting itself). Almost as if by sleight of hand—or would it be better to think of it as literary Pointillism—this book partly functions as a social history of the Art Institute of Chicago in the years since the painting was purchased in 1924.

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ARCHITECTURE'S NEW MEDIA: PRINCIPLES, THEORIES, AND METHODS OF COMPUTER-AIDED DESIGN

by Yehuda E. Kalay. MIT Press, Cambridge, MA, U.S.A., 2004. 521 pp., illus. Trade. ISBN: 0-026-11284-1.

Reviewed by Peter Anders, MindSpace.net, Midland, MI, U.S.A. E-mail: <ptr@ mindspace.net>.

The publication of Yehuda Kalay's *Architecture's New Media* is an important event in the history of design computation. Kalay, a professor of architecture at U.C. Berkeley, has been a proponent of computer-aided design (CAD) since its earliest years and has developed software now in use in various applications. His tenure in the field gives him a unique vantage point on CAD's development. In this, his first book on the subject, Kalay conveys a sense of personal history, presenting a summary of ideas and observations that have occupied him throughout his career.

Architecture's New Media is ambitious, accounting for several thematic strands that form the braid of architectural computation. These themes are presented in sections on communications, synthesis and evaluation, plus a more general section on the future of digital technology in architecture. Within these sections are chapters illustrating specific methods or principles that have informed design computation. For instance, within the section on synthesis we find separate chapters on procedural, heuristic and evolutionary methods, along with conventional, non-digital techniques. This nested framework gives the book its structure and focuses on important aspects of design technology. Unfortunately, the compartmentalization of topics at times results in disjointed, deliberate prose. Contiguous chapters often seem unrelated, commencing with historical throat-clearing that bogs down the narrative and undermines its arguments. Strapping CAD to the history of architecture puts the subject on a Procrustean bed, stretching and lopping it to suit a determinist history. From the book it would seem that CAD was simply the product of a gradual, progressive evolution. This is misleading: Computers do not extend the history of architecture so much as intervene and disrupt it. While the *mimesis* of architectural techniques has driven CAD development in the past, the book's assertions of continuity obscures the radical nature of the technology. Computers' underlying principles—mutable, algorithmic and abstract—challenge values of permanence, materiality and space that are fundamental to architectural practice. The unsettling, subversive potentiality of digital technology is lost with Kalay's narrative strategy.

Fortunately, the book's content belies historicizing, offering insights into digital technology along with stranger aspects of architectural media, such as evolutionary methods for "breeding" design solutions, virtual place-making and automated design agents. Illustrations, diagrams—even mathematical formulae—abound, making this book one of the most comprehensive on the subject to date. At roughly 500 pages, the book averages 10 pages for each year of design computation's history. That is *thorough*. The book's historical proximity to this period, however, leads