

ample, Munsterberg and Arnheim), which had imagined the possibilities of sound film, most contemporary film theory hardly considers voice, music and sound; it is as if film were solely visual. Moreover, this imbalance between discussions of hearing and seeing is evident in the field of perceptive and cognitive theory, which also privileges visual topics such as the “intelligent eye” or “eye and brain.” Kahn’s book makes a timely and valuable contribution to closing this deficit in the way that sound has been something of a neglected orphan in the larger considerations of twentieth-century arts.

MUSIC, COGNITION, AND COMPUTERIZED SOUND: AN INTRODUCTION TO PSYCHOACOUSTICS

edited by Perry R. Cook. MIT Press, Cambridge, MA, U.S.A., 1999. ISBN: 0-262-03256-2.

Reviewed by Paul Hertz, Academic Computing and Network Services, Northwestern University, 2129 North Campus Dr., Evanston, IL 60208-2850, U.S.A.. E-mail: <paul-hertz@nwu.edu>.

Developed from a series of lectures at the Stanford Center for Computer Research in Music and Acoustics (CCRMA) *Music, Cognition, and Computerized Sound* offers a coherent panorama of the field of psychoacoustics as it pertains to music and computerized sound. The contributors—among them Max Mathews, Roger Shepard, John Chowning and John Pierce—are recognized authorities in the field of computer-synthesized sound and the nature of acoustical and musical perception. The CD-ROM accompanying the book contains audio samples for each chapter, plus source codes (contributed by the editor) for all the samples.

Although specifically intended as a course book for psychoacoustics, with a closing chapter on the effective design of experiments and an appendix of exercises, this book should prove valuable to a wide audience. Computers provide what seems the ultimate level of control over sound synthesis, but it is often hard to know where to begin. Anyone who has ever confronted the problem of determining which parameters of a synthesized sound are acoustically perceptible or meaningful will appreciate the clarity with which the introductory chapters

distinguish the physical parameters of sound from the perception of sound. Building on established research into the fundamentals of acoustic perception, the book proceeds to more complex issues of voice articulation and synthesis, perceptual streaming, musical memory and the haptics of sound production. Computer musicians will find material to suggest diverse directions for experimentation, and multimedia artists working with sound will discover new methods for generating sounds, with the potential for weaning themselves from straight playback of sampled sound and working with real-time synthesis. Some of the perceptual effects documented in the text and on the CD are remarkable in themselves, such as Shepard and Risset tones or the complex effects of perceptual streaming. The level of detail of many of the chapters, particularly when supplemented by the source code, is sufficient to get one started in a variety of sound synthesis techniques. The brief list of bibliographic references at the end of each chapter will lead the reader onwards.

While this book is most valuable as a guide to the uses of state-of-the-art technology for acoustic research, it also sheds light on how human cognitive abilities shape musical structures. Choices of rhythm, melodic variation, chord structure, timbre, orchestration and even the evolution of musical styles over time are partially determined by the nature of the human auditory system. A welcome result of reading this book may be that readers learn to hear natural and musical sounds with a new appreciation of the complex dynamics of sound production, sound perception and the inner logic of music.

THE TULIP

by Anna Pavord. Bloomsbury Publishing, New York, N.Y., U.S.A., and London, U.K., 1999. 439 pp. Trade, \$40.00. ISBN: 1-58234-013-7.

Reviewed by George Gessert, 1230 W. Broadway, Eugene, OR 97402, U.S.A. E-mail: <ggessert@igc.org>.

One of the many changes that World War II brought about was drastic simplification of the way we see ornamental plants. Before the war, plant breeding and art were so closely allied that some writers, artists and plant breeders claimed garden varieties of plants as works of fine art. After the war, art and

plant breeding went their separate ways. Ornamental plants became decorative objects and consumer products, and genetics, which had previously belonged to everyone, became the more-or-less exclusive property of science, business, agriculture and medicine.

The dissociation of art and genetics trivialized not only ornamental plants, but writing about ornamental plants. This genre, which had always been somewhat rarefied, became more than ever a vehicle of escape—an escape into charm and detail, into a parallel universe where nothing uninvited can intrude, not even the last half century. Controversy does not ruffle this realm, and taste is so entirely individual that it is tasteless to discuss.

While no contemporary books explore genetic art as straightforwardly as did Sacheverell Sitwell’s *Old Fashioned Flowers*, published in 1939, several excellent ornamental plant histories that engage aesthetic issues have recently appeared. For example, Jack Goody’s *The Culture of Flowers* examines the class underpinnings of ornamental plant cultivation, Peter Valder’s *The Garden Plants of China* explores a major non-Western gardening tradition, and Gerd Krussmann’s *The Complete Book of Roses* traces the co-evolution of roses and human cultures. Now, Anna Pavord reaffirms some of the connections between art and ornamental plants in an excellent new book, *The Tulip*. She tells the story of tulips with a scholarly thoroughness unlikely to be rivaled anytime soon, and yet the book has the wit and charm of the very best garden writing. I feel that *The Tulip* is, quite simply, the best history of any single breeding complex ever published.

There are some 120 species of tulips, most of them native to central Asia. The first clear evidence of their presence in gardens comes from thirteenth-century Persian poems. Two centuries later, the Turks had glorious tulip gardens in Istanbul, and eventually gardeners there grew more than 1,000 named varieties. Connoisseurs favored extremely elongated petals that tapered to needle-like points, completely unlike the rounded, blocky flowers preferred today. The story of the tulip under cultivation is a story of aesthetic change, as the plant moved from Islamic to Christian civilization in the sixteenth century, and then from scholars’ gardens to those of aristocrats to the allotment gardens of the first plant breeders (who were known as florists). Each of these moves resulted in

major alterations in the plant. Since about 1850, tulips have become “democratized” and available to all.

Along the way, we see tulips reflected in tile-making, herbals, prints and flower painting. Tulips contributed to the rise of Dutch flower painting because the flower arrived in Europe just as the genre was emerging. In the early 1600s, tulips were so expensive that paintings of the most coveted varieties, even by the best artists, were cheaper than actual plants. Tulip owners wanted records of their treasures, and bargain-conscious collectors acquired paintings in lieu of the real thing.

Pavord delights in quirks and excesses. Some seventeenth century *wunderkammer* were gardens of living rarities, with tulips as centerpieces. Men bankrupted themselves for tulips, and from 1634 to 1637 the entire Dutch economy fell hostage to the plant. At the height of “tulipmania,” single bulbs sold for more than the cost of the most expensive houses in Amsterdam. According to the “Parallel Universe School” of garden writing, tulipmania was inexplicable madness, but Pavord sees it as an expression of capitalism. Today, we associate booms with trade in real estate, stocks or precious metals, but under the right circumstances, almost any commodity will do.

In Europe, tulips reached their aesthetic height under the guidance of florists. These were urban artisans who devoted their spare time to plant breeding, meeting in taverns to discuss horticulture and debate aesthetic ideals. Over many decades (and many beers), the ideal tulip form became defined as some variation on a partial sphere. Floristry peaked in the early nineteenth century, after which passions and rivalries began to focus more on sports than plant breeding. By 1900, mass-produced tulips had crowded out the works of dreamstruck amateurs.

In addition to being a superb history, *The Tulip* is a visual treat. It has 149 full-page illustrations of tulips and tulip-inspired works of art, most of which are in full color. This book should be in the library of anyone interested in connections between art and biology.

TURN-OF-THE-CENTURY VIENNESE PATTERNS AND DESIGNS

by Koloman Moser. Dover Publications, Mineola, NY, U.S.A., 1998. ISBN: 0-486-40269-X.

Reviewed by Roy R. Behrens, 2022 X Avenue, Dysart, IA 52224-9767, U.S.A. E-mail: <ballast@netins.net>.

Koloman Moser (1868–1918), although overshadowed by his colleagues Josef Hoffmann and Gustav Klimt, was an unjustly neglected participant in the Vienna School of Arts and Crafts (which he attended and later directed), the Vienna Secession and the Wiener Werkstatte (Vienna Workshop). Moser was both prolific and versatile, producing paintings, glassware, ceramics, jewelry, metalwork, leatherwork, furniture, textiles, carpets, clothing, posters and lettering (including his wedding invitation), and was a founding contributor to *Ver Sacrum* (Sacred Spring), the famous *Secessionstil* magazine. *Turn-of-the-Century Viennese Patterns and Designs*, a large format, 64-page paperbound album, is an unabridged republication of *Flaschen-schmuck* (Flat Ornament), a portfolio of 60 full-page all-over pattern designs (half in color, half in black and white) for textiles, wallpaper, rugs and wall hangings, that was published originally in 1901–1902. This instructive, historic collection, like so many of Dover’s art-related books, belongs to the Pictorial Archives series, meaning that portions of the book can be reproduced by authors, artists and designers without payment or permission.

For a free catalog of the Dover Pictorial Archive, write to: Dover Publications, 31 East 2nd Street, Mineola, NY, U.S.A., 11501.

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FONTS AND LOGOS: FONT ANALYSIS, LOGOTYPE DESIGN, TYPOGRAPHY, TYPE COMPARISON, AND HISTORY

by Doyald Young. Delphi Press, Sherman Oaks, CA, U.S.A., 1999. ISBN: 0-9673316-0-9.

Reviewed by Roy R. Behrens, 2022 X Avenue, Dysart, IA 52224-9767, U.S.A. E-mail: <ballast@netins.net>.

Seven years ago, the author of this book produced an exquisite, slightly shorter work on logotypes and letterforms, in which he shared what he had gained from 40 years as a type designer and 25 as a teacher of typography at the Art Center College of Design. In this equally elegant sequel, he provides both

an overview of typography and a technical guide for decisions about legibility, font design, the compatibility of type styles and the function of type within logos. Anyone who loves letters will delight in the myriad forms that appear in the book’s diagrams and exemplars.

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THE SWASTIKA: SYMBOL BEYOND REDEMPTION

by Steven Heller. Allworth Press, New York, NY, U.S.A., 2000. ISBN: 1-58115-041-5.

Reviewed by Roy R. Behrens, 2022 X Avenue, Dysart, IA 52224-9767, U.S.A. E-mail: <ballast@netins.net>.

Throughout world history, among all sorts of people—the Greeks, Celts, Chinese, Indians and Native Americans—the swastika has been employed as an inspirational symbol, a mark that has no connection at all to the Third Reich and the horrors of the Holocaust. In the July/August 2000 issue of *PRINT*, the newsstand graphic design magazine, Jewish author and New York Times art director Steven Heller discusses his interest since childhood in the swastika and explains why he thinks he is right to insist, as he argues in this book, that it should never be used in this culture “as anything other than an icon of evil.”

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AUDIO COMPACT DISCS

EREIA

performed by Doctor Nerve and the Sirius String Quartet, composed by Nick Didkovsky. Cuneiform Records, Silver Spring, MD, U.S.A., 2000.

Reviewed by Curtis Bahn, Integrated Electronic Arts at Rensselaer (iEAR Studios), DCC 135, 110 8th Street, Rensselaer Polytechnic Institute, Troy, NY 12180. E-mail: <crb@rpi.edu>.

Dr. Nerve: Greg Anderson, bass; Leo Ciesa, drums; Nick Didkovsky, electric