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consistently come out on top. (Skeptics who do not have access to a direct feed from a microphone need only make a digital copy from an analog tape and an analog copy from a digital tape, and see which sounds more like its original.) This is not to say that digital *per se* is perfect; some digital recorders are less perfect than others. But the amount of fidelity loss from a digital recording is invariably less than that from an analog tape recording.

Mr. Boyk—for whom I have great respect as a musician and critical listener—had the right idea here, but his methodology was flawed by the insertion, in the digital-playback part of this signal chain, of an amplifying device which was *not* in-circuit when his subjects listened to the direct feed. Thus, he was comparing the original signal feed with the sound of the digital recording *plus* whatever distortion the amplifying device may have introduced. Mr. Boyk has explained to me that the amplifying device was necessary in order to match the volume of the playback to that of the original, to validate the listening comparisons. He also claims that the signal distortion introduced by that device was “negligible,” but when we are dealing with systems having as low inherent distortion as do the better digital recorders, who is to say what is and is not negligible?

Several magazine reviewers have in fact criticized that specific amplifying device for adding certain “extramusical” colorations to the signal passing through it. Mr. Boyk’s tests would have had more validity had he first had his subjects compare the direct feed with the direct-feed-through-the-amplifier, before proceeding to the digital tests.

There are a number of valid criticisms which can be aimed at some digital recording systems, but I have personally used two of them whose reproduction, in direct and legitimate comparisons with original sound sources, was virtually indistinguishable from them. I have never heard analog reproduction of which that could be truthfully said.

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Thank you very much for your coverage of the experiment at CIT. It saved me a lot of uncertainty, by confirming my “a priori” logical reasoning.

The point is that for a long time I have been pondering over the rivalry of analog and digital recording and reproducing. The line of the reasoning was: “The sound is one of the sublime examples of continuity in nature. Digitalizing the sound means making it discrete.” The conclusion ran: “Hence, digitalized music must appear artificial, unnatural to the ear—for discrete is the opposite of continuous—regardless of the digital equipment or the frequency of digital chopping.” However, I wasn’t sure whether human nature would be able to get the distinction, in particular considering our most-contaminated-by-artificiality milieu.

Now, I am convinced that the appeal of digital recording consists mainly of its being novel, sophisticated and “scientific,” rather than of its being inherently superior to its old analog ancestor. I am not certain that the advantages of digital recording, such as absence of background noise, longevity of laser read discs and solid state, would be able to offset its artificiality. It is also doubtful whether the new recorder of “Phillips”/“Sony” tandem would have something more than initial market success.

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Dance of the Continents: Adventures with Rocks and Time—John W. Harrington. In very readable fashion this book tells how science is done and in the process leads the reader to “develop the ability to see the real world... and experience the thrill of knowing.” Begins in the field watching geologists at work. “Once we know what geologists do, we need to learn how they think. We’ll know we’re making progress when we discover that we have learned to read rocks and see time as they do... We will see how a time scale covering the last 4.5 billion years was assembled and calibrated. We will even begin to see the structures produced when continents break apart and then collide with one another.” JP Tarcher (HM), 1983, 254 p., illus., \$15, paper, \$9.50.

The Essential Guide to Nonprescription Drugs—David R. Zimmerman. Provides a comprehensive consumer guide to the selection of over-the-counter drugs marketed in the U.S. Evaluates active ingredients, rates 1,000 popular individual products, describes diseases and conditions whose symptoms respond to over-the-counter medication and explains how to judge whether or not the condition calls for a doctor’s visit. Har-Row, 1983, 886 p., \$27.50, paper, \$10.95.

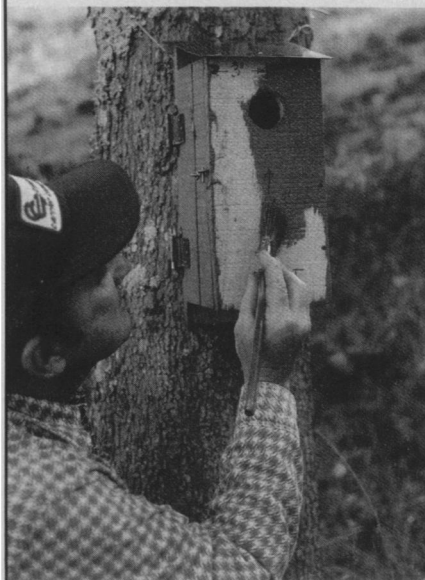
Hen’s Teeth and Horse’s Toes—Stephen Jay Gould. Another collection of essays on natural history by this outstanding scientist. This collection treats both the fascinating debates over evolutionary theory now occurring as well as the “purely political and nonintellectual controversy” stirred up by modern creationists. Norton, 1983, 413 p., illus., \$15.50.

Kennedy, Khrushchev and the Test Ban—Glenn T. Seaborg with Benjamin S. Loeb, foreword by W. Averell Harriman. Harriman, in the foreword, says, “It is important that the story of the Limited Test Ban Treaty be told, not only for its value as history but also for the guidance this experience can provide for the conduct of future East-West relations.” Atomic Energy Commission Chairman Seaborg’s detailed journal was the basis for this dramatic account of the delicate diplomacy that made the treaty possible. Originally published in hardback in 1981. U of Cal Pr, 1983, 320 p., illus., paper, \$7.95.

Wanderer on My Native Shore—George Reiger. An attempt to answer the hows and whys of life in coastal waters. It is a readable book about marine ecosystems from Key West to Maine, but it is also about people since we are now the dominant ingredient in every marine ecosystem. Beautiful drawings of the coastal inhabitants by Bob Hines. S&S, 1983, 286 p., illus., \$14.95.

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