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Science on the Air

Science News prints the latest written word of scientific development and noteworthy news. We've set this space aside to inform our readers of programs of scientific interest that are scheduled on television and radio. Check your local listings for exact times. (R) indicates a repeat broadcast.

- Sept. 8 (PBS) "Lucy in Disguise" is a documentary that focuses on the 3.5-million-year-old fossil found in Ethiopia by Donald Johanson and the Afar International Research Expedition. This film also takes a look at the modern multi-disciplinary approach to paleoanthropology—a new method of finding answers to questions about human evolution.
- Sept. 13 (PBS) "The River in the Desert" (R) is a film about the Colorado River that also explores the water crisis in the Southwest and the attitudes and historical forces that preceded it.
- Sept. 22 (PBS) "The Most Endangered

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Cover: Recent research indicates that clouds aid acid rain formation. Airborne measurements and mountaintop monitoring provide data for improving mathematical models that simulate the transport and transformation of pollutants in the atmosphere. (Photo: NCAR)



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Species . . . George Adamson" (R) is a warm and human look at a man who has lived most of his life in East Africa, devoting his energies to the care and survival of wild game.

Series

• (PBS) "National Geographic Society Specials" (R): Sept. 7 "National Parks: Playground or Paradise?" is a look at the new restrictions imposed on users of national parks; Sept. 14 "Gorilla" focuses on efforts being made to assure that the gorilla does not become extinct; Sept. 21 "Etosha: Place of Dry Water" is an observation of extraordinary animal behavior in a preserve surrounding a huge dry lake bed in the southwest African country of Namibia; Sept. 28 "Egypt: Quest for Eternity" is an investigation of spectacular monuments and temples celebrating Egyptian civilization and the threat to their legacy posed by time and nature.

• (PBS) "Hard Choices" (R) is a six-part series on the moral and ethical dilemmas that have resulted from dramatic new developments in biological science and medical technology. Sept. 3 "Boy or Girl: Should the Choice Be Ours?" is a look at emerging technologies that could allow parents to choose a child's sex and an examination of whether or not such a choice should be made; Sept. 10 "Genetic Screening: The Ultimate Preventive Medicine?" is an examination of the options that prenatal testing and genetic counseling provide and how these tests have affected parents of children with genetic diseases; Sept. 17 "Human Experiments: The Price of Knowledge" focuses on the rights and welfare of human subjects used in scientific experiments; Sept. 24 "Behavior Control" is a look at mind control and attempts to distinguish between the benign and the harmful.

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Commentary

B.F. Skinner and Old Age

One year ago, Harvard psychologist B.F. Skinner was to deliver a paper at the American Psychological Association annual meeting. Primarily for health reasons, Skinner never traveled to Los Angeles to deliver the paper, which posed the question, "Why do we not act to save our world?" It may very well have been the answer to that question that also influenced Skinner's decision to stay at home. "I'm very pessimistic ... we're not going to solve our problems, really," he said in an interview at that time.

But last week, the 78-year-old guru of behavioral psychology attended the 1982 APA meeting in Washington, D.C., and brought with him some down-home advice on a much more manageable topic: How to handle old age. Get plenty of rest, he told a bemused audience, but still maintain a stimulating environment that sharpens a naturally dulling memory. Don't waste your precious, dwindling intellectual capacity on chess or other complicated games, he cautioned. "Leisure should be relaxing ... read detective stories or watch TV."

Skinner's first-person manual on "Intellectual Self-Management in Old Age," perhaps portends the inevitable mellowing of a genius who actually did believe the

world could be saved if only people would follow his instructions and create a utopian society. Such a world, as described in his book *Walden II*, could result only from tightly controlled systems where people are motivated solely by rewards and punishments. Alas, Skinner conceded last year that psychologists and other human beings simply do not possess the means, or inclination, to implement such a scheme.

In the end, as Skinner himself suggests, it is the very reasoning of behaviorism that blocks this road to salvation. If, as the theory contends, people do not initiate actions on their own, but only act in ways that have been successful for their cultures in the past, they cannot change on the basis of predictions. For the behaviorist, problems such as pollution, energy depletion and other environmental hazards cannot be dealt with effectively because they have not *happened* yet — at least in the dire extremes that would trigger a behavior change in an entire society. "The future does not exist," Skinner says. "How can it affect contemporary behavior? You can't get four and a half billion people to change," he adds, particularly when only a relatively few of them are powerful enough to effect change — and those powerful few are too comfortable to

care about future problems.

So, at his APA lecture, Skinner turned his attention to the individual victories that can be won over old age. He advocated that elderly people tailor their intellectual style — perhaps by getting into a new field — to combat the "senile nattering and inconsistencies and repetition" that tend to creep into a person's advanced years. The difficulty is "not so much how to have ideas as how to have them when you can use them," he said. The minute you have a thought, he advised his listeners, write it down or record it on tape before you forget it.

Those who have been associated with him over the years know that Skinner shows no signs of the rather self-effacing image he described in his lecture. Despite his health problems, Skinner continues to influence and exude enthusiasm and affection for the discipline to which he has devoted his life. He simply does so with a bit more whimsy.

Later in the week, Skinner was scheduled to finally deliver the "Save Our World" paper at the meeting. But one senses that he doesn't let its message bother him quite as much anymore.

—Joel Greenberg



Books

Books is an editorial service for readers' information. To order any book listed or any U.S. book in print please remit retail price, plus \$1.00 handling charge for each book, to **Book Order Service**, Science News, 1719 N. Street, N.W., Washington, D.C. 20036. All books sent postpaid. Domestic orders only.

Caving: The Sierra Club Guide to Spelunking — Lane Larson and Peggy Larson. A guide for both the beginning and experienced caver. Illustrated with diagrams of caving techniques and equipment, this handbook for the spelunker covers roping and knots, rigging, harnessing and descending and ascending techniques, as well as the more exotic and hazardous skills of underwater diving in caves. Safety and first aid are reviewed and information is provided on the special meteorology of the cave environment. Sierra, 1982, 311 p., illus., paper, \$10.95.

Fire In America: A Cultural History of Wildland and Rural Fire — Stephen J. Pyne. Explores the efforts in America, starting with the Indians, to master this forbidding kind of fire and to use it to shape the landscape. Intended for the fire manager, the historian and the general reader. Princeton U Pr, 1982, 654 p., illus., \$35.

Grammatical Man: Information, Entropy, Language, and Life — Jeremy Campbell. Tells the story of information theory and how it evolved out of the ferment of scientific activity during World War II. The laws and theorems of this new science have stimulated exciting ideas in biology, language, probability theory, psychology, art, computers and the study of society. Helps the reader look at the world in a new and different way. S&S, 1982, 319 p., \$15.95.

Psychological Stress and Psychopathology — Richard W.J. Neufeld, Ed. Evaluates the association between psychological stress and disorders of psychopathology — chiefly schizophrenia and depression. McGraw, 1982, 360 p., \$26.95.

Space: The High Frontier in Perspective — Daniel Deudney. The author points out that the United States and the Soviet Union today spend 75 percent or more of their space research funds on military activities. "U.S. spending on military space research... is now crippling major civilian space activities. ... Many of the civilian space applications being squeezed by the military could have far-reaching benefits for understanding climate change, oceans, fisheries and earthquakes." Worldwatch Inst, Paper 50, 1982, 72 p., paper, \$2.

Synergetics: Explorations in the Geometry of Thinking — R. Buckminster Fuller with E.J. Applewhite, preface by Arthur L. Loeb. Arthur C. Clarke refers to this book as "the distilled wisdom of a lifetime spent contemplating the Universe from angles and directions never before suspected." One of the classics of scientific thought, this book explains Fuller's mathematical advances and practical inventions such as the Geodesic Dome and the Dymaxion House. Originally published in hardback in 1975. Macmillan, 1982, 876 p., illus., paper, \$12.95.

Wildflowers in Color — Arthur Stupka. Beautiful color illustrations depict the wildflowers in the area known as the Southern Appalachian Mountains. This region displays wildflowers common in much of the eastern U.S. Originally published in hardback in 1965. HarRow, 1982, 144 p., color illus., paper, \$6.95.

... Science on the Air

• (PBS) "NOVA" (R): Sept. 5 "The Cancer Detectives of Lin Xian" looks at the clues that Chinese scientists have uncovered in their pursuit of esophageal cancer in Lin Xian for 2,000 years; Sept. 12 "Termites to Telescopes" is a commentary on the nature of civilization by Philip Morrison, Institute Professor and professor of physics at the Massachusetts Institute of Technology; Sept. 19 "The Science of Murder" is an examination of the job of forensic scientists; Sept. 26 "Living Machines" explores design concepts once thought of as human inventions.

• (PBS) "Odyssey" (R): Sept. 2 "Maasai Women" is an exploration of the role of women, young and old, among the Maasai of Kenya; Sept. 9 "The Chaco Legacy" is a look at one of the most comprehensive building projects ever undertaken — a 900-year-old complex; Sept. 16 "Cree Hunters of the Mistassini" examines how the Cree Indians of Canada prepare for their annual northward trek to hunt and trap; Sept. 23 "Key to the Land of Silence" explains how Jean-Francois Champollion, in decoding the Rosetta Stone in 1799, revealed previously unknown information about life in ancient Egypt; Sept. 30 "The Sakuddei" looks at how an Indonesian tribe is being threatened by the Indonesian government's plans to improve conditions.