

Vachinery of the Mind

Inside the New Science of Artificial Intelligence

By George Johnson

A firsthand look at machines that are beginning to understand English, discover scientific theories on their own and create original works of art. We meet Eurisko, the program that discovered for itself such fundamental concepts as numbers and arithmetic — and went on to become national champion of a futuristic war game called Traveller. We make the acquaintance of Aaron, the artificially intelligent artist — the only computer program to have its own show at London's Tate Gallery. In *Machinery of the Mind* we see how these programs work — and how research in artificial intelligence (AI) is helping us better understand the workings of our own mental machinery. For in their efforts to simulate the mind, AI researchers are contributing to linguistics, philosophy, psychology, mathematics and even the arts. — *from the book*

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"Johnson's book is a status report on artificial intelligence. It accurately portrays the state of the art in a field that combines electrical engineering with psychology to produce something like applied philosophy. . . . this is a solid, well-researched, honest piece of work."

Lee Dembart, Los Angeles Times



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This Week

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Cover: Artist's conception of how a brown dwarf — a star with too little mass to ignite — might appear next to a brighter companion star. There has never been an undisputed siting of a brown dwarf. Still, many scientists believe they are abundant enough to account for the "missing mass" in the universe. (Illustration: Ron Miller)



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Geologists' award to Stefi Weisburd

Stefi Weisburd, earth sciences editor of SCIENCE NEWS, is the recipient of the Association of Engineering Geologists' Presidential Appreciation Award for 1986. This is the first time in its 29-year history that the award has been given to a journalist, according to Norman R. Tilford of Texas A&M University, president of the association.

Each year the presidential award goes to a person or organization "who has directly or indirectly advanced the science of geology," says Tilford. This year's award, he adds, is in appreciation of "the kind of coverage that SCIENCE NEWS, specifically Stefi Weisburd, has given to earth sciences."

Weisburd joined SCIENCE NEWS in Sep-

tember 1984. She had completed a four-month internship at Science News, and was an American Association for the Advancement of Science Mass Media Fellow at Business Week. A native of California, she received her masters degree in applied physics in 1983 from Stanford University and earned a bachelors degree in physics from the University of California at Berkeley in 1979. From 1979 to 1981, she served as an assistant project director for the Congressional Office of Technology Assessment in Washington, D.C.

The award was formally announced during the Association of Engineering Geologists' 29th annual meeting, Oct. 5-10, in San Francisco.



Stefi Weisburd

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