

Sick of the future

◆ While nearly everyone recoils from over-applied perfume or gets a bit of a headache after a day of painting the hall, some people can't tolerate even a whiff of aftershave without nausea and cramps. In *Allergic to the 21st Century*, science writer Peter Radetsky explores the world of the chemically sensitive. He interviews dozens of patients and doctors, some of whom consider multiple chemical sensitivity (MCS) a disease of the body, while others believe it's a disease of the mind. Radetsky's writing is lively and emotive. And more of a conduit of ideas than a critical reporter, even the most cynical will not lightly dismiss MCS after reading this. Published by Little, Brown, \$24.95, ISBN 0316732214.

Feeling peckish

◆ Eat and be eaten is the watchword of nature, as Christopher McGowan explains in *The Raptor and the Lamb*, an excursion through the living world from bacteria to whales. Rattlesnakes and sharks play their glamorous roles, but so do the little black berries in the trick ending to this enjoyable and informative book by an experienced nature writer. Published by Henry Holt, \$25, ISBN 0805042989.

Isaac the torturer

Isaac Newton: The Last Sorcerer by Michael White, Fourth Estate/Helix, £18.99/\$25, ISBN 1857024168

PRINCIPIA is arguably the most significant publication in the history of science. Without doubt, Isaac Newton was the greatest scientist Britain has ever produced, if also an isolated, obsessive, cruel genius. Michael White's biography does describe the great man's scientific achievements, but the real focus is the events in Newton's tormented personal life.

Newton's early childhood was marked by rejection and hatred. His mother, Hannah, was widowed before Isaac was born, and when she remarried, her new husband refused to accept her three-year-old son into his home. He never forgot the pain of abandonment.

An embittered man, Newton lived a life full of vengeful disputes, including long-running battles with John Flamsteed over access to astronomical data, with Gottfried Wilhelm von Leibnitz over who invented calculus, and with Robert Hooke over virtually everything imaginable. White does

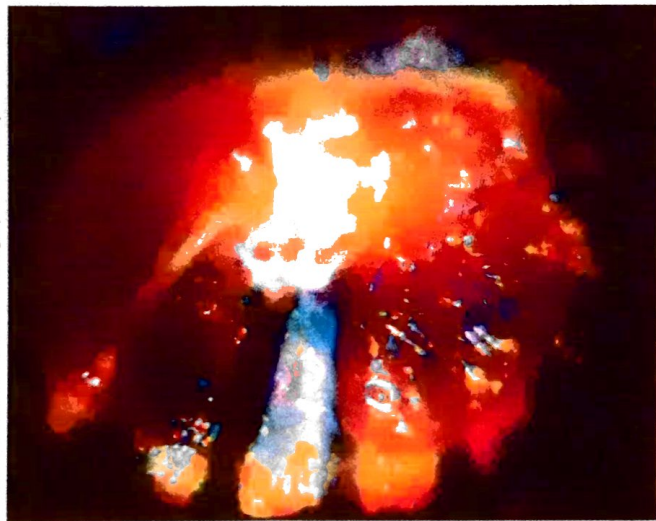
not skimp when describing these hostile conflicts.

As the subtitle suggests, there are descriptions of Newton's secret life-long fascination with alchemy throughout the book. Newton wrote more than a million words on the subject, but many other members of the Royal Society privately shared Newton's obsession. Alchemists tended to work in secret to avoid the wrath of the church and prosecution under an anti-alchemy law passed by Henry IV. Later monarchs were slightly more tolerant, hoping that discovery of the philosopher's stone might help the Crown to pay off its debts, but the law remained in force.

White gives enlightening accounts of Newton's exploits in alchemy and his scientific research, but he also attempts to go one step further by arguing that the former influenced and inspired the latter. His controversial argument is not wholly convincing, and merely distracts from an otherwise fascinating biography.

Even beyond the realm of science, Newton's life was eventful. He was Master of the Royal Mint for a while—until he reformed the nation's currency, Britain was on the point of economic collapse. Newton also frequented brothels and bars in the effort to hunt down counterfeiters, whom he would have hung, drawn and quartered. Here was a scientist who could explain gravity, create calculus, humiliate his rivals, dabble in alchemy and still have time to torture counterfeiters—those were the days. □

Simon Singh is a TV producer and author of *Fermat's Last Theorem* (Fourth Estate, 1997)



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Where does awareness dawn?

JOHN SEARLE is clear, challenging and profound, and his book *The Mystery of Consciousness* (Granta, £9.99, ISBN 1862070741) reflects its author. It offers an engaging debate between Searle and David Chalmers, Daniel Dennett, Roger Penrose and Israel Rosenfield. Searle also touches on the work of Gerald Edelman and Francis Crick.

Searle's main thesis is that consciousness is a unique feature of brain processes, but not reducible to the goings-on of individual neurons, in the same sense that the transparency of water is an emergent feature of water not reducible to the features of individual water molecules.

He insists that the mind cannot be understood as simply a program running on a computer called the brain. Brains do compute, but they do more. Computers simply manipulate symbols without understanding their meaning.

Yet Searle does not always hit the target. For example, he confuses giving an explanation with giving an ultimate explanation in criticising Edelman's contention that a brain process called "reentry mapping" gives rise to consciousness. Searle argues that, even if true, this does not tell us how the process gives rise to consciousness. But this is a higher-level question. You may explain why a ball thrown horizontally from a building reaches the ground at the same time as a ball that falls straight down by saying that the vertical acceleration due to gravity is a constant, independent of the horizontal speed. To say that one could say is to offer no criticism but only to ask for deeper, more general explanations. **NS+**

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