ed me that the Lawrence-Mayer version was generally the more reliable, but, like the Reeve, it often seemed rather free spirited.

In this new translation, Harvard University political scientists Mansfield and Winthrop adopt a decidedly literal approach, striving above all to translate the French faithfully. (I regret that they did not use the more literal title for Tocqueville's classic, *On Democracy in America*, to signal their fidelity, but sticking to the traditional English title was probably necessary to avert confusion.) They seek "to convey Tocqueville's thought as he held it rather than to restate it in comparable terms of today," and to provide a readable text in terms of "what can easily be read now, not what we might normally say." In a long introduction—which is a short book in itself—they provide the best entry point into Tocqueville's thought now available in English.

As Tocqueville attempts to analyze with impartiality the new regime of democracy and the old regime of aristocracy, his key terms include *la liberté*, *l'individualisme*, and *l'égalité*. One sentence uses all three words, and the three versions of the sentence suggest the different spirits animating the translators. Tocqueville writes: "*Les Américains ont combattu par la liberté l'individualisme que l'égalité faisait naître, et ils l'ont vaincu*." Reeve-Bradley: "The Americans have combated by free institutions the tendency of equality to keep men asunder, and they have subdued it." Lawrence-Mayer: "The Americans have used liberty to combat the individualism born of equality, and they have won." Mansfield-Winthrop: "The Americans have combated the individualism to which equality gives birth with freedom, and they have defeated it."

In retrospect, I am glad that I was introduced to this classic in the melodious, freer translation of Reeve and Bradley. But I would now direct new readers to Mansfield-Winthrop, where they are assured of getting much closer to the original thought. A rare spirit such as Tocqueville's, after all, induces respect; one wishes to fit one's mind as exactly as possible into the nuances of his thinking. It is not often that scholars of high stature show such reverence for greatness in others that they submit their own egos to full and faithful service, but that is the gift Mansfield and Winthrop render Tocqueville, and the noble service they render us.

—Michael Novak

COMRADES AT ODDS: The United States and India, 1947–1964.
By Andrew J. Rotter. Cornell Univ. Press. 337 pp. $55 hardcover, $19.95 paper

Since India gained independence in 1947, its relations with the United States have been stormy. The years 1947 to 1964, during which Jawaharlal Nehru led India, were particularly contentious. The strains stemmed from the wars in Korea and Vietnam, U.S. reliance on nuclear weapons, decolonization, rising nationalism (often with anti-American overtones) in Asia and Africa, and New Delhi's refusal to accept the American view of the Cold War as a Manichaean struggle against evil incarnate. Washington also stirred feelings of anger and betrayal by embracing Pakistan as a Cold War ally and by supplying it with military arms—weapons that New Delhi rightly understood were likely to be used against India, not the Soviet Union. Little wonder that historians addressing Indian-American relations have chosen such titles as *Estranged Democracies*, *The Cold Peace*, and now *Comrades at Odds*.

Rotter, a historian at Colgate University, places these mostly familiar events in a fresh light by concentrating on their cultural contexts. In his thematic approach, each chapter uses case studies to illustrate the differences growing out of a specific cultural construct. Race, religion, gender, class (or caste), and "governance" take their places alongside the more traditional categories of strategy and economics.

For Rotter and other practitioners of the "new" international history, culturally induced perceptions take precedence over political and security issues. Stereotypes, images, and clichés replace power and economics as tools of analysis. Missionaries stand alongside pres-

idents, authors wield more influence than industrialists, travelers rate more attention than generals. In Rotter's treatment, for example, Katherine Mayo, author of the travelogue *Mother India* (1927), earns more index citations than U.S. Secretary of State John Foster Dulles.

Comrades at Odds illustrates both the virtues and the shortcomings of the new history. Rotter offers a subtle reading of heretofore-neglected source materials, and he adds to our understanding of the cultural side of this difficult relationship. But he sometimes must stretch to argue for the importance of cultural factors. One need not understand the differing roles of family in India and the United States, for instance, to fathom why conservative members of the U.S. Congress abhorred Indian socialism. *Comrades at Odds* provides valuable insights, but it will not supplant the work of more traditional scholars such as Robert McMahon, Dennis Merrill, Dennis Kux, and H. W. Brands.

—Robert M. Hathaway

Science & Technology

COSMIC EVOLUTION:
The Rise of Complexity in Nature.
By Eric Chaisson. Harvard Univ. Press. 274 pp. $27.95

If you want to patent a perpetual motion machine, be sure you have a working model. The U.S. Patent Office, flooded with doodlings by hopeful inventors, has long since decided that it won't examine claims for a *perpetuum mobile* without the article in hand.

Which, of course, rules out a patent, because a perpetual motion machine falls afoul of that ultimate trump card, the Second Law of Thermodynamics. "If your theory is found to be against the Second Law of Thermodynamics," Sir Arthur Eddington once mused, "I can give you no hope; there is nothing for it but to collapse in deepest humiliation."

Roughly speaking, the Second Law states that the disorder in the universe—its entropy—is always increasing. An ordered state, such as a box with hot air on one side and cold air on the other, will quickly deteriorate and become lukewarm throughout. But how can a universe slouching toward disorder have such orderly structures as galaxies, stars, bacteria, and people? To Harvard University astrophysicist Chaisson, this interplay between order and disorder, between energy and entropy, holds the answer to the age-old question, "What is life?"

As Chaisson describes in *Cosmic Evolution*, the Second Law has a little loophole—not really an exception, but a means for eking out an existence in a universe that's inexorably falling apart. Energy lets us make order out of disorder. An air conditioner, plugged into a wall socket, can turn a zone of lukewarm air into one with hot air on one side and cold air on the other, reversing the disorder, at least locally. Organisms do this too, taking in energy in the form of food, which keeps their bodies from literally disintegrating. So Chaisson defines life as an "open, coherent, space-time structure maintained far from thermodynamic equilibrium by a flow of energy through it." This definition covers not only bacteria and people, but stars, galaxies, and planets as well. To Chaisson, the Earth is a living object that differs only in degree from an ostrich or an aardvark.

The problem with such a broad definition of life is that it becomes meaningless; cosmic evolution parallels biological evolution only in the most general sense. Still, Chaisson does give the theory some numerical muscle. He analyzes the flows of energy through various objects and shows how these flows seem to be related to the complexity of the objects. The greater the energy flow, the greater the complexity. Though following the nuances of the argument requires a basic grounding in physics, Chaisson's approach leaves one wondering, perhaps absurdly: Are hummingbirds "higher" than humans on the evolutionary ladder? Are jet engines