it seems, preferred precepts to examples.

"You know what precepts we gave you through the Lord Jesus," says Paul in I Thessalonians. "For this is the will of God, your sanctification: that you abstain from unchastity; that each one of you know how to take a wife for himself... that no man transgress and wrong his brother in this matter." Other lists of precepts can be found throughout the New Testament. Often the precepts stand alone, but sometimes they are supported by illustrations, as when James cites Job for his patience. But such examples hardly constituted comprehensive biographies.

"Why, then, no lives?" asks Wilken. "The most obvious reason was that the gospels stood in the way. The supreme model for Christian life was Jesus.... At this early stage of Christian history, it would have been presumptuous to bring other persons into competition with the primal model." That changed, however, with the Council of Nicaea, called in A.D. 325 to settle the question of whether Christ was different in substance from God. The council's (and Christian orthodoxy's) an-

swer was that Jesus as the Son of God was "begotten not created, one in being with the Father." By making Jesus seem less "human," Wilken says, this created "a vacuum... that could be filled with other human faces."

The publication of *The Life of Antony*, a biography of the founder of Egyptian Christian monasticism written by Athanasius (A.D. 293-373), bishop of Alexandria, marked the beginning of a new era. A multitude of lives of saints appeared during the next three centuries. "The hagiographers, for the first time in Christian history, turn to living persons, or those who have recently died, as models of the virtuous life," writes Wilken. "By displaying men and women from their own time, and often from their own communities, these lives proclaim that holiness is possible, virtue is attainable, perfection is within your grasp. They teach, in [Henri] Bergson's phrase, a morality of aspiration, not of obligation." They also, in their diversity, implicitly suggest "that there is no single standard, no one catalogue of virtues, no one way to serve God."

## Tocqueville's Faith

"Tocqueville on Religious Truth & Political Necessity" by Cynthia J. Hinckley, in *Polity* (Fall 1990), Northeastern Political Science Assoc., Thompson Hall, Amherst, Mass. 01003.

In his classic Democracy in America (1835-40), Alexis de Tocqueville contended that the influence of religion was very important to society, but whether it was a true faith was not. "Society has no future life to hope for or to fear; and provided the citizens profess a religion, the peculiar tenets of that religion are of little importance to its interests," he wrote. Many scholars have concluded that Tocqueville favored convenient myth rather than genuine religion. But Hinckley, a political scientist at California State University, San Bernardino, disagrees. "Tocqueville never thought that belief in the social utility of religion could substitute for faith," she says.

The French visitor was struck by the usefulness of religion to American democ-

racy. "[I]f it does not impart a taste for freedom, it facilitates the use of it," he wrote. Religion imposes "a salutary restraint" on the human intellect, which makes men less likely to submit, in fear, to servitude. It also checks certain "very dangerous propensities"—toward self-absorption and "an inordinate love of material gratification"—fostered by "equality of conditions."

But, Hinckley observes, it was Christianity as practiced in America that provided "the type of moral climate that Tocqueville found so favorable to liberty," and he "gives every indication [of thinking] that truth and utility converge in Christianity." In his view, she says, society, particularly American society, had no need to determine which of the many religious sects

possessed the truth, because they all were within what he called "the great unity of Christendom, and Christian morality is everywhere the same."

Tocqueville may or may not have been a believing Roman Catholic, Hinckley says, but "he unequivocally accepted as true the essential Christian teachings, such as the existence of a God, the immortality of the soul, the sacredness of the Gospels, and the rightness of Christian ethics." Tocqueville, however, was plagued by religious doubt, and some scholars have concluded he was a religious skeptic. But Hinckley says his correspondence makes clear that his anguish was not that of "a skeptic trying to believe in God, but [that] of a believer deprived by his Creator of the unwavering certitude that characterizes faith of the highest order."

Tocqueville thought that only a very few

men-persons of rare intellect such as Blaise Pascal—"are capable of genuine belief," Hinckley writes. "The rest of humanity has no choice but to accept religious dogma on faith, summoning as much belief as one can for that which one can never know." Most people thus turn to organized religion, which renders "eternal truths...intelligible to the crowd." Although it "may not be the highest form of religion," organized religion, "unlike genuine religion....links the many to the divine." Tocqueville's distinction between genuine religion and its lower reflection has been misconstrued by scholars as "a distinction between organized religion and civil (mythical) religion," Hinckley contends. Tocqueville's real message, she says, "is that liberal democracy needs religion, that is, citizens who believe to the extent they are capable of belief."

## SCIENCE & TECHNOLOGY

## Collision Course

"Accidents of Birth" by Willy Benz, in *The Sciences* (Nov.-Dec. 1990), 2 E. 63rd St., New York, N.Y. 10021.

Scientists hoped that the 1969–72 Apollo moon missions would yield piles of new information about the solar system. And they have. We now know that the moon is some 4.4 billion years old (about the same age as Earth) and that it once had a magnetic field. But the 700 pounds of rocks that astronauts scooped off the moon's surface have provided no answer to a fundamental puzzle, writes Benz, a Harvard astronomer: How was the moon formed?

The relatively small moons orbiting most other planets in the solar system probably are debris left over from the planets' formation, Benz says. But the Earth's moon is too large to be a "left-over." Scientists have speculated that it is, variously, a piece of the Earth's mantle that was flung into orbit long ago; a "companion planet" formed alongside the Earth; or an interplanetary wanderer captured by the Earth.

Each of these theories has major flaws,

however. If the moon was a wanderer, for example, how was it forced to settle into orbit? Now, a surprising new consensus is forming about the origins of the moon. It grows out of a new theory of planetary formation called "catastrophism."

Aided by computer models developed by George W. Wetherill of the Carnegie Institution and others, scientists came to realize during the 1980s that the creation of the solar system was much more violent and chaotic than anybody had previously imagined. Some 4.6 billion years ago, Benz writes, a vast cloud of gas and dust rotating around the galaxy became unstable—"perhaps jostled by the shock wave of a nearby supernova"—collapsed under its own weight, and burst out again, forming the sun. The remaining dust and gas circled the young star, much like the rings that now girdle Saturn. The tiny particles stuck together, eventually forming trillions of "rocky conglomerates," many of them