

come Eden restored." In the opinion of the British creationist E. H. Andrews, logical consistency demanded that anyone looking "forward to a miraculous end to this present age" not "rigorously exclude miracle from the process of creation."<sup>46</sup>

Finally, for fundamentalists seeking what the anthropologist Christopher P. Tourney calls "scientific sanctification," flood geology came with the endorsement of real scientists, who assured them that nature, like Scripture, argued for a nonevolutionary history of life.<sup>47</sup> The confluence of these largely religious factors in a culture increasingly tolerant of challenges to the authority of elites raised the folk science of flood geology to heights of popularity only dreamed of by George McCready Price. Its shocking success, limited though it may have been, shattered facile beliefs about the inevitability of secularization and scientific progress and called into question long-cherished convictions about the relationship between science and religion.

## SEVENTEEN



### Intelligent Design

Scientific creationism continued to flourish at the turn of the millennium, but by the mid-1990s the focus of attention among creationists and evolutionists alike was shifting to a new form of anti-evolutionism called "intelligent design." ID, as it came to be known, captured headlines for its bold attempt to rewrite the basic rules of science and its claim to have found indisputable evidence of a God-like being. Proponents, however, insisted that it was "not a religious-based idea, but instead an evidence-based scientific theory about life's origins—one that challenges strictly materialistic views of evolution." Although the intellectual roots of the design argument go back centuries, its contemporary incarnation dates from the mid-1980s. In 1984 three Protestant scientists, the chemist Charles B. Thaxton (b. 1939), the mechanical engineer Walter L. Bradley (b. 1943), and the geochemist Roger L. Olsen (b. 1950), brought out *The Mystery of Life's Origin*, in which they attributed the complex process of originating life to a divine creator. The most striking feature of their book was not its text but its foreword, contributed by Dean H. Kenyon (b. 1939), a professor of biology at San Francisco State University and the coauthor of a major text on the chemical origins

of life. Confessing that he no longer believed in naturalistic evolution, Kenyon joined the authors in identifying "a fundamental flaw" in current theories about the origins of life. "A major conclusion to be drawn from this work," he wrote, "is that the undirected flow of energy through a primordial atmosphere and ocean is at present a woefully inadequate explanation for the incredible complexity associated with even simple living systems, and is probably wrong."<sup>21</sup>

Two years later Michael Denton (b. 1943), an expatriate English physician and geneticist living in Australia, wrote an iconoclastic book, *Evolution: Theory in Crisis* (1986), questioning the validity of neo-Darwinism and arguing that evidence of divine design exists in nature. Although he had grown up in a religiously conservative family, he no longer maintained ties with organized religion or harbored any sympathy for scientific creationism. He did, however, see humans and other organisms as the products of God-ordained laws of nature.<sup>22</sup> *The Mystery of Life's Origin and Evolution: Theory in Crisis* attracted comparatively little public interest, but they both helped to lay the intellectual foundation for the ID movement of the 1990s.

The pronouncements of naturalistic evolutionists such as the outspoken Oxford biologist Richard Dawkins (b. 1941) also spurred design theorists to action. In *The Blind Watchmaker* (1986), hyped on the dust jacket as perhaps "the most important book on evolution since Darwin," Dawkins stressed the role of natural selection in creating organized complexity:

Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind's eye. It does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the blind watchmaker.

In an oft-quoted statement, Dawkins praised Darwin for making "it possible to be an intellectually fulfilled atheist," and he repeatedly went out of his way to bait creationists, whom he described as "ignorant, stupid or insane." He dismissed the first chapters of Genesis as just another creation myth "that happened to have been adopted by one particular tribe of Middle Eastern herders" and theistic evolution as a superfluous attempt to "smuggle God in by the back door." On one occasion he proposed that "a case can be made that faith is one of the world's great evils,

comparable to the smallpox virus but harder to eradicate." Little wonder one of Dawkins's patrons, the Microsoft millionaire Charles Simonyi (b. 1948), who endowed a professorship for Dawkins at Oxford, fondly called his beneficiary "Darwin's Rottweiler."<sup>23</sup>

### Pandas and People

In 1989 the Foundation for Thought and Ethics, a little-known Texas organization dedicated to the promulgation of "the Christian gospel" and the defense of "Judeo-Christian morality," published *Of Pandas and People: The Central Question of Biological Origins* (1989), the first book explicitly to promote "intelligent design." Written by the creationists Dean H. Kenyon and Percival Davis, this slim, illustrated volume was designed to supplement conventional high-school biology texts. Thaxton contributed to the project as an academic editor. Davis, a community-college biology teacher and the coauthor of a biology textbook that had sold a million copies, acknowledged (in a statement written with fellow creationists) that "We accept by faith the revealed fact that God created living things. We believe God simultaneously created those crucial substances (nucleic acids, proteins, etc.) that are so intricately interdependent in all of life's processes, and that He created them already functioning in living cells." Davis frankly admitted that his motives in writing *Pandas* were "religious," not scientific. "There's no question about it," he added for emphasis.<sup>24</sup>

The authors and their publisher, Jon A. Buell (b. 1939), a veteran of the Campus Crusade for Christ, hoped that *Pandas* would not only serve God but generate great wealth. Just before the Supreme Court's ruling in 1987 on the constitutionality of teaching creation science, Buell revealed his expectations in a letter seeking the collaboration of a secular publisher in distributing the book:

The enclosed projections showing revenues of over 6.5 million in five years are based upon modest expectations for the market, provided the U.S. Supreme Court does not uphold the Louisiana Balanced Treatment acts. If by chance it should uphold it, then you can throw out these projections. The nationwide market would be explosive.

Kenyon and Davis had originally conceived their book as a scientific brief for creationism. In the wake of the Supreme Court's negative decision on creation science, however, they quickly revised their manuscript,

substituting the phrases "intelligent design" and "design proponents" for the legally suspect terms "creation" and "creationists." A work they had initially called *Biology and Creation* now became *Of Pandas and People*. Using six case studies, Kenyon and Davis compared Darwinian and ID explanations to see which better matched the scientific data. Not surprisingly, intelligent design—defined as a frame of reference that "locates the origin of new organisms in an immaterial cause: in a blue-print, a plan, a pattern, devised by an intelligent agent"—always won. Despite Buell's extravagant prediction about the popularity of the book, it sold a disappointing 22,500 copies in five years.<sup>5</sup>

#### Putting Darwin On Trial

In 1991 the infant ID movement received a big boost when a law professor at the University of California, Berkeley, Phillip E. Johnson (b. 1940), published an iconoclastic book titled *Darwin on Trial*. A few years earlier, after experiencing a mid-life spiritual renewal, the Presbyterian lawyer had stumbled across Dawkins's *The Blind Watchmaker* and discovered, as he put it, that the argument for evolution was more rhetorical than factual. Being a lawyer, Johnson recognized the practice all too well. In *Darwin on Trial* he sought to expose the structural weaknesses of Darwinism by critically examining the evidence for the blind-watcher thesis. The heart of his critique of evolution was the assumption that naturalism is the only legitimate way of doing science. This bias, he argued, unfairly limited the range of possible explanations and ruled out, a priori, any consideration of theistic factors.<sup>6</sup>

Indeed, by the closing years of the twentieth century naturalistic methods reigned supreme within the scientific community, and even devout Christian scientists scarcely dreamed of appealing to the supernatural when actually doing science. "Naturalism rules the secular academic world absolutely, which is bad enough," Johnson lamented. "What is far worse is that it rules much of the Christian world as well." Even the founders of scientific creationism, who rejected much of the content of modern science, commonly acknowledged naturalism as the legitimate method of science. Because they narrowed the scope of science to exclude questions of origins, they typically limited it to the study of "present and reproducible phenomena" and left God and miracles to religion. In the early 1980s the Wheaton College philosopher Paul de Vries

(b. 1945) labeled this conciliatory division of labor "methodological naturalism." In contrast to "metaphysical naturalism," which denied the existence of a transcendent God, methodological naturalism implied nothing about God's existence.<sup>7</sup>

To combat this perceived evil, Johnson formulated a strategy called "the wedge." As he explained it:

A log is a seeming solid object, but a wedge can eventually split it by penetrating a crack and gradually widening the split. In this case the ideology of scientific materialism is the apparently solid log. The widening crack is the important but seldom-recognized difference between the facts revealed by scientific investigation and the materialist philosophy that dominates the scientific culture.

Johnson saw himself as "the leading edge of the Wedge of Truth," the one who would "make the initial penetration into the intellectual monopoly of scientific naturalism." Unable to find a major press willing to publish his manuscript, Johnson turned to the conservative publisher Regnery, which sold some 50,000 copies of the book before transferring rights to the evangelical InterVarsity Press, which sold hundreds of thousands more.<sup>8</sup>

As Johnson no doubt anticipated, he and his disciples took a beating from all sides: scientific creationists, theistic evolutionists, and, of course, naturalistic evolutionists. Although some young-earth creationists applauded the effort to discover evidence of God in nature, the leaders of creation science never warmed up to ID theory. They especially disliked the ID theorists' marginalization of biblical concerns in the interest of mounting a united attack against Darwinism. When the "Goliath" of naturalistic evolution "has been tumbled," reasoned the proponents of intelligent design, "there will be time to work out more details of how creation really did occur." One young-earth scientist on the staff of the Institute for Creation Research faulted ID for its "lack of reliance on the literal statements of Scripture" and its toleration of geological ages. Henry M. Morris, the grand old man of scientific creationism, admired the efforts of ID theorists to refute Darwinism but deplored their apparent lack of concern for theological niceties. He feared that many Christians would embrace ID as a way to avoid "having to confront the Genesis record of a young earth and global flood." He dismissed as "nonsense" the claim that the intelligent designer need not be God—or

even "a deity." Morris predicted that, despite having compromised on the plain meaning of the Bible, the proselytizers for ID theory would find no more favor with naturalistic evolutionists than he himself had.<sup>9</sup>

The theistic evolutionists and progressive creationists in the American Scientific Affiliation, who also believed in a divinely designed world, harbored reservations about ID theory for other reasons. Having long since come to terms with doing science naturalistically, reported the Gordon College chemist J. W. Haas, Jr. (b. 1930), editor of the evangelical journal *Perspectives on Science and Christian Faith*, "most evangelical observers—especially working scientists—[remained] deeply skeptical." Though supportive of theistic world views, they balked at being "asked to add 'divine agency' to their list of scientific working tools." To rely on intelligent design to explain complex biological organisms was, said Haas quoting Dawkins, "a pathetic cop-out of [one's] responsibilities as a scientist." Besides, Haas noted, ID theorists rarely applied their methods to disciplines outside of biology, leaving "the rest of us physicists, chemists, mathematicians, or geologists . . . to go our 'godless' ways in spite of the complexities we face at the quantum level or with the weather."<sup>10</sup>

The naturalistic evolutionist Stephen Jay Gould dismissed *Darwin on Trial* as "scarcely more than an acrid little puff," unworthy of a serious response. In a scathing review for *Scientific American*, Gould insisted that "science can work only with naturalistic explanations; it can neither affirm nor deny other types of actors (like God) in other spheres (the moral realm, for example)." When the editor of the magazine denied Johnson's request for "equivalent space" to respond to Gould, Johnson's allies saw the editor's action as a confirmation of their suspicions of official discrimination against theistic views.<sup>11</sup>

Without mentioning Johnson or ID specifically, Daniel C. Dennett (b. 1942), a philosopher at Tufts University, joined the chorus condemning arguments from design. In *Darwin's Dangerous Idea* (1995), which Dawkins warmly endorsed, Dennett portrayed Darwinism as "a universal solvent, capable of cutting right to the heart of everything in sight"—and particularly effective in dissolving religious beliefs. Creationists would have cheered his characterization of Darwinism, but certainly not his description of them. He despised creationists, arguing that "there are no forces on this planet more dangerous to us all than the fanaticisms of fundamentalism." Displaying a degree of intolerance more

characteristic of a fanatic fundamentalist than an academic philosopher, he called for "caging" those who would deliberately misinform children about the natural world, just as one would cage a threatening wild animal. "The message is clear," he wrote: "those who will not accommodate, who will not temper, who insist on keeping only the purest and wildest strain of their heritage alive, we will be obliged, reluctantly, to cage or disarm, and we will do our best to disable the memes [traditions] they fight for." With the bravado of a man unmindful that scarcely more than 10 percent of the public shared his enthusiasm for naturalistic evolution, he warned parents that if they insisted on teaching their children "falsehoods—that the Earth is flat, that 'Man' is not a product of evolution by natural selection—then you must expect, at the very least, that those of us who have freedom of speech will feel free to describe your teaching as the spreading of falsehoods, and will attempt to demonstrate this to your children at our earliest opportunity." Johnson could not resist titling his review of the book "Daniel Dennett's Dangerous Idea."<sup>12</sup>

In 1996, letters of protest poured onto the editor's desk of the Jewish magazine *Commentary* when it published a version of ID theory by the mathematician and novelist David Berlinski (b. 1942), an ethnic Jew with hedonist leanings. Berlinski's personal philosophy, he once quipped, was "having a good time all the time." The irascible Dennett ridiculed Berlinski's stylish essay as "another hilarious demonstration that you can publish bull\_\_\_t at will—just so long as you say what an editorial board wants to hear in a style it favors."<sup>13</sup>

### Revolutionary Science or Reactionary Religion?

From the beginning, ID theorists quarreled with their critics over the identity of intelligent design. Was it a revolutionary new scientific paradigm, or merely "the same old creationist bullshit dressed up in new clothes"? As early as 1989 the authors of *Pandas and People* insisted that intelligent design was not "merely fundamentalism with a new twist." It implied "absolutely nothing about beliefs normally associated with Christian fundamentalism, such as a young earth, a global flood, or even the existence of the Christian God." Hoping to distance themselves from the intellectually marginal creation scientists and to avoid endless niggling over the meaning of the Mosaic story of creation, design theorists carefully avoided any mention of Genesis or God, although, as one of

them confessed to some fellow Christians, referring to an intelligent designer was merely a "politically correct way to refer to God."<sup>14</sup>

Opponents of intelligent-design theory disparaged it as merely the latest "creationist alias." The anthropologist Eugenie C. Scott (b. 1945), director of the anticreationist National Center for Science Education and a self-described "evolution evangelist," called it a clever "soft-core anti-evolution strategy," which gave the (false) appearance of not being religious. Some critics belittled it as "stealth creationism." Despite the obvious differences between it and creation science (which required a recent special creation and a geologically significant flood), many publications, including the *New York Times*, used the terms interchangeably, as did one federal judge.<sup>15</sup>

To help in his effort "to reclaim science in the name of God," as one admirer described the ID movement, Johnson in the early 1990s began constructing a "big tent," under which a broad range of antievolutionists—from young-earth creationists to progressive creationists—could gather. The first formal meeting devoted to ID was hosted by Southern Methodist University (SMU) in 1992 and featured a debate between Johnson and Michael Ruse, the evolutionists' star witness in Little Rock a decade earlier. The mathematician William A. Dembski (b. 1960), the biochemist Michael J. Behe (b. 1952), and the philosopher of science Stephen C. Meyer (b. 1958) all read papers. While on sabbatical at University College London in 1987–1988 Johnson had gotten acquainted with Meyer, then studying at Cambridge University; back in the United States, Meyer had introduced Johnson to his circle of antievolutionist friends.<sup>16</sup>

In the summer of 1993 Johnson followed up on the successful SMU conference by inviting the seasoned antievolutionists Bradley and Kenyon to meet with Dembski, Behe, Meyer, and a few other ID sympathizers at the beach resort of Pajaro Dunes, on the California coast. Included in this group were two graduate students: philosopher of science Paul A. Nelson (b. 1958), the grandson of Byron C. Nelson, who had introduced Lutherans to flood geology, and the biochemist Jonathan Wells (b. 1942). Even in Johnson's eclectic circle, these two stood out. Unlike most of the other ID theorists, Nelson espoused young-earth creationism, though he left the meaning of "young" somewhat vague. A graduate student in the philosophy of biology at the University of Chicago, he was working on a critique of macroevolutionary theory.<sup>17</sup> Wells

was a seminary-trained minister and scholar in the Unification Church, founded by the Reverend Sun Myung Moon (b. 1920). Because of his opposition to the Vietnam War in the late 1960s, Wells had spent eighteen months in U.S. Army prisons. In a testimony telling how he came to oppose evolution, Wells acknowledged the influence of Moon, whom he called "Father":

Father's words, my studies, and my prayers convinced me that I should devote my life to destroying Darwinism, just as many of my fellow Unificationists had already devoted their lives to destroying Marxism. When Father chose me (along with about a dozen other seminary graduates) to enter a Ph.D. program in 1978, I welcomed the opportunity to prepare myself for battle.

Wells had earned a Ph.D. in religious studies at Yale University, focusing on historical reactions to Darwinism; at the time of the Pajaro Dunes get-together he was completing a second doctorate, in molecular and cell biology, at Berkeley.<sup>18</sup>

Shortly after this organizational meeting Dean Kenyon received a letter from the chairman of the biology department at San Francisco State University ordering him to cease teaching "creationism" in his classes. When Kenyon protested, he was, according to one account, "yanked from teaching introductory biology and reassigned to labs." The incident attracted national attention when Meyer wrote an exposé for the *Wall Street Journal* warning, according to the headline, of classroom "indoctrination." This piece caught the eye of Bruce Chapman (b. 1934), who had recently founded a think tank in Seattle. A Harvard graduate and conservative Episcopalian, Chapman had served as secretary of state for the State of Washington, run unsuccessfully as a liberal Republican candidate for governor of Washington, directed the U.S. Census Bureau in the early 1980s, and subsequently worked as a deputy assistant to President Ronald Reagan. In 1990, having veered to the right politically, Chapman founded the Discovery Institute, devoted to such issues as improving transportation and communication in the Northwest. The Bill and Melinda Gates Foundation liberally supported this initiative.<sup>19</sup>

When Chapman learned of Meyer's interest in starting a scientific research center, which had been developing in conversations with a conservative political scientist, John G. West (b. 1964), Chapman invited Meyer and West to create a unit within the Discovery Institute called the

Center for the Renewal of Science and Culture (CRSC). They would dedicate it to overthrowing "scientific materialism" and fomenting "nothing less than a scientific and cultural revolution." Their first challenge was to acquire the necessary funding, but by 1996 they were able to announce the receipt of "nearly a million dollars in grants" for the projected center. Among the biggest contributors were the Stewardship Foundation, established by the evangelical timber magnate C. Davis Weyerhaeuser (1909-1999), and the Maclellan Foundation of Chattanooga, Tennessee, which underwrote a number of Christian ministries. However, the most generous supporter by far was a reclusive southern Californian, Howard Fieldstead Ahmanson, Jr. (b. 1950), whose father had made a fortune in the savings and loan business and had become a high-profile patron of the arts in Los Angeles, where the Ahmanson Theatre was named after him. The junior Ahmanson, afflicted with Tourette syndrome, used his inherited wealth to underwrite various right-wing political and religious causes, often through an entity called Fieldstead & Company. As a young man he had come under the influence of the Reverend Rousas J. Rushdoony, the Armenian-American founder of Christian Reconstructionism. Rushdoony had earlier assisted John C. Whitcomb, Jr., and Henry M. Morris in publishing *The Genesis Flood*. The controversial Rushdoony advocated the establishment of a theocracy based on Old Testament law, which meant that homosexuals, adulterers, abortionists, heretics, disobedient children, and other miscreants would be subject to capital punishment, perhaps by stoning. Although Ahmanson testified in 1985 that "My goal is the total integration of biblical law into our lives," he stopped short of endorsing the stoning of homosexuals, whom he preferred to save, not kill. Until his death in 2001 Rushdoony ministered to Ahmanson's spiritual needs; Ahmanson, in turn, served on the board of Rushdoony's Chalcedon Foundation, to which he gave freely. Through Fieldstead & Company, Ahmanson promised to contribute \$750,000 over three years to help Chapman and Meyer's new center get underway. Despite its patron's inclinations, the Discovery Institute never advocated a Christian theocracy.<sup>20</sup>

By the close of 1996 the CRSC had appointed its first class of "research fellows," giving each of them a fancy title:

Meyer: C. Davis Weyerhaeuser Fellow in the Philosophy of Biology  
Dembski: Blaise Pascal Fellow in Probability and Information Sciences

Behe: Friedrich Wöhler Fellow in Biochemical Studies  
Wells: Karl Ernst von Baer Fellow in Developmental and Evolutionary Biology

Nelson: Robert Boyle Fellow in Theoretical Biology

Meyer and West served as co-directors; Johnson, as an advisor. In 1996, with financial assistance from the Stewardship Foundation, Nelson began editing a quarterly ID journal, *Origins & Design*. Its masthead predictably carried the names of the leading lights of ID theory, with Dembski, Meyer, and Wells as associate editors, and Behe, Denton, Johnson, Kenyon, and Thaxton all serving on the editorial advisory board.<sup>21</sup>

### Biochemistry and Probability

Until the mid-1990s no major academic or trade press had published a work supporting intelligent design or, indeed, creationism of any kind. That changed in 1996, when the Free Press of New York released Michael J. Behe's *Darwin's Black Box: The Biochemical Challenge to Evolution*. Behe, a Catholic biochemist at Lehigh University, had first become aware of the alleged difficulties of Darwinism through reading Denton's book. Later he discovered Johnson's *Darwin on Trial*, which confirmed his growing doubts about the adequacy of naturalistic evolution to explain molecular life. When a reviewer of Johnson's book in the journal *Science* treated it harshly, Behe rushed to the lawyer's defense with a letter to the editor. He subsequently began exchanging correspondence with Johnson himself and drafting his own book-length reply to naturalistic evolutionists such as Dawkins. In *Darwin's Black Box* Behe argued that biochemistry had "pushed Darwin's theory to the limit . . . by opening the ultimate black box, the cell, thereby making possible our understanding of how life works." The "astounding complexity of subcellular organic structure" led him to conclude—on the basis of scientific data, he asserted, "not from sacred books or sectarian beliefs"—that intelligent design had been at work. "The result is so unambiguous and so significant that it must be ranked as one of the greatest achievements in the history of science," he declared. "The discovery [of intelligent design] rivals those of Newton and Einstein, Lavoisier and Schroedinger, Pasteur and Darwin."<sup>22</sup>

As newspapers and magazines spread the news of Behe's discovery of what he called "irreducibly complex" organic structures—such as the

bacterial flagellum, which propels microscopic organisms—he won recognition as a modern-day William Paley (1743–1805), the famous natural theologian of the early nineteenth century. The influential evangelical magazine *Christianity Today* honored Darwin's *Black Box* with its "Book of the Year" award for 1997. Like so many other ID theorists, Behe distanced himself as far as possible from the scientifically disreputable scientific creationists, going so far as to concede the possibility that the universe had been around for billions of years and that life on earth had developed from a common ancestor. But such disclaimers scarcely deterred critics from deriding his views as "thinly veiled creationism." The great nemesis of theistic science, Dawkins, chided Behe on television for lazily relying on intelligent design when he should have gone looking for scientifically acceptable explanations of his data.<sup>23</sup>

Another ID celebrity to emerge in the mid-1990s was William Dembski, who had earned a Ph.D. in mathematics at the University of Chicago. In 1996 he acquired a second doctorate, in philosophy, from the University of Illinois in Chicago, as well as a master's degree in theology from Princeton Theological Seminary. About this time he also converted to Eastern Orthodoxy. By 2005 he had written or edited nearly a dozen books, including a scholarly monograph called *The Design Inference: Eliminating Chance through Small Probabilities* (1998) and a collection of essays edited with the agnostic philosopher Michael Ruse, *Debating Design: From Darwin to DNA* (2004). An expert in probability theory, Dembski focused on the unlikelyhood of organisms arising by accident, and especially on a method for detecting intelligence. Unlike Behe, who flirted with theistic evolution and the notion of common descent from a single organism, he unambiguously rejected both ideas. "*Design theorists are no friends of theistic evolution*," he insisted.

As far as design theorists are concerned, theistic evolution is American evangelicalism's ill-conceived accommodation to Darwinism. What theistic evolution does is take the Darwinian picture of the biological world and baptize it, identifying this picture with the way God created life. When boiled down to its scientific content, theistic evolution is no different from atheistic evolution.

Although he acknowledged that organisms had "undergone some change in the course of natural history," he believed "that this change has occurred within strict limits and that human beings were specially created."<sup>24</sup>

Along with his fellows in the ID movement, Dembski hoped to spark "an intellectual revolution" that would rewrite the rules of science to allow the inclusion of supernatural explanations of phenomena. Quoting the Russian communist Vladimir Lenin, he asked "*What is to be done?*" The answer: "*The ground rules of science have to be changed. We need to realize that methodological naturalism is the functional equivalent of a full blown metaphysical naturalism.*" If Carl Sagan (1934–1996) and other reputable researchers could undertake a Search for Extra-Terrestrial Intelligence (SETI) in the name of science, he reasoned, why should intelligent-design theorists be dismissed as unscientific for searching for evidence of intelligence in the biomolecular world?<sup>25</sup>

Should logical analogies fail to impress, he thought that perhaps concerns for cultural diversity might win ID a hearing. "In so pluralistic a society as ours," he asked rhetorically, "why don't alternative views about life's origin and development have a legitimate place in academic discourse?" Again, the answer was clear: The scientific establishment was allegedly biased toward atheistic materialism, a bias acknowledged by at least a few of America's scientific elite. The distinguished evolutionary biologist Richard C. Lewontin (b. 1929), for example, worried in the 1990s that the public might actually believe what Dawkins and other careless popularizers told them about evolution, which often rested on "unsubstantiated assertions or counter-factual claims." In an unfinished statement that conformed precisely to what the ID theorists were claiming, Lewontin described the workings of the modern scientific mind: "We take the side of science *in spite* of the patent absurdity of some of its constructs, *in spite* of its failure to fulfill many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism."<sup>26</sup>

After years of academic wandering, Dembski in 1999 landed a position at Baylor University, a Southern Baptist school in Texas. With the strong backing of the president, but unbeknown to the faculty, he established the Michael Polanyi Center, hailed as the "first intelligent design think-tank at a research university." When his new colleagues discovered that Dembski intended to turn Baylor into a hub for intelligent design, they protested vociferously, prompting the beleaguered president to turn to an external review committee for advice. Although the committee recommended against continuing the center, it found no reason to quarantine advocates of intelligent design. Dembski initially praised the

committee's report for marking "the triumph of intelligent design as a legitimate form of academic inquiry," but the president soon relieved Dembski of his position as director and ultimately closed the center. In 2004 Dembski, now a Baptist (despite his unhappy experience at Baylor), moved briefly to the Southern Baptist Theological Seminary in Louisville before settling down with a research professorship in philosophy at the Southwestern Baptist Theological Seminary in Fort Worth.<sup>27</sup>

#### Classroom Conflicts

Despite Dembski's early assurance that design theorists aimed "to convince the intellectual elite and let the school curricula take care of themselves," some of his associates focused on reforming the public schools of America, arguing disingenuously that in *Edwards v. Aguillard* the Supreme Court issued a "mandate" to teach "a variety of scientific theories about the origins of humankind." To avoid anticipated constitutional objections, Meyer and David K. De Wolf (b. 1949), a professor of law at the Jesuit Gonzaga University and a fellow at the Discovery Institute, collaborated with another lawyer in urging biology teachers to "teach the controversy" they were trying their best to create.<sup>28</sup>

Teachers who exposed their students to the supposed controversy often found themselves in serious trouble. In 1999 Rodney LeVake, a high-school science teacher and football coach in Faribault, Minnesota, used Denton's *Evolution: A Theory in Crisis* to, as he put it, take "an honest look at the difficulties and inconsistencies of the theory without turning my class into a religious one." For exposing his students to intelligent design and irreducible complexity, he was removed from the biology classroom and reassigned to other classes. In response, he charged the school district with religious discrimination and with violating his First Amendment guarantee of free speech. Creation-watchers described this as "the first time 'evidence against evolution' has been directly addressed in a court case," as well as the first time that "*employment discrimination*" had been alleged by a teacher accused of teaching intelligent design. LeVake sued the school district but repeatedly lost; he gave up after the U.S. Supreme Court refused to review his case.<sup>29</sup>

About the same time the superintendent of a school district near Seattle ordered Roger DeHart, an experienced biology teacher at Burlington-Edison High School, to quit promoting intelligent design

and using the book *Of Pandas and People*. Apparently, a parent had complained to the American Civil Liberties Union (ACLU), which threatened a lawsuit on the grounds that teaching ID was religious and thus illegal. When the school took his biology classes away from him, DeHart resigned and went to work for a Christian high school in southern California.<sup>30</sup>

ID enthusiasts, working independently of the Discovery Institute, scored their first political victory in August 1999, when the popularly elected Kansas State Board of Education voted 6-4 to delete the teaching of evolution—as well as the big-bang cosmology and long geological ages—from the recommended science standards. Leading the revolt against evolution was a small-town Baptist veterinarian on the board, who insisted that "the design and complexity of the cosmos requires an intelligent designer." The stunning decision made Kansas the Tennessee of the 1990s and prompted the Republican governor to denounce the board's action as "a terrible, tragic, embarrassing solution to a problem that did not exist." The Indian-born writer Salman Rushdie (b. 1947) wrote scathingly: "Thus, in one pan of the scales we now have General Relativity, the Hubble telescope and all the imperfect but painstakingly accumulated learning of the human race, and, in the other, the Book of Genesis. In Kansas, the scales balance." Not surprisingly, the leaders of the ID movement applauded the action in Kansas, with Phillip Johnson describing it as "a protest against enshrining a particular world view as a scientific fact and against making 'evolution' an exception to the usual American tradition that the people have a right to disagree with the experts."<sup>31</sup>

Although a new board rescinded the action two years later, in 2004 Kansas voters returned a majority of conservative Republicans to the supervisory body. The next year the board, again by a vote of 6-4, radically revised the science standards, calling for teachers to challenge evolution in the classroom and redefining science to allow for the possibility of supernatural explanations. Discarding the old definition of science as "the human activity of seeking natural explanations for what we observe in the world around us," the board described science as "a systematic method of continuing investigation that uses observation, hypothesis testing, measurement, experimentation, logical argument and theory building to lead to more adequate explanations of natural phenomena." The Discovery Institute's John West praised Kansas for having formu-



lated "the best science standards in the nation." Eugenie Scott of the National Center for Science Education dismissed them as a "playbook for creationism," while the conservative psychiatrist-columnist Charles Krauthammer (b. 1950) used even blunter words: "In order to justify the farce that intelligent design is science, Kansas had to corrupt the very definition of science, dropping the phrase 'natural explanations for what we observe in the world around us,' thus unmistakably implying—by fiat of definition, no less—that the supernatural is an integral part of science."<sup>32</sup>

Nearly as embarrassing for progressive Kansans was the notorious Mirecki affair at the University of Kansas. After organizing a special-topics course, "Intelligent Design, Creationism, and other Religious Mythologies," Paul Mirecki (b. 1950), an apostate Catholic serving as chair of the religious studies department, gloated online to a campus fellowship of atheists and agnostics that his course would annoy the "fundies"—slang for fundamentalists—and give them a "nice slap in their big, fat face." This indiscretion resulted in his being forced to cancel the course and give up his chairmanship. The president of the university, who had vocally criticized the antievolutionists in the state, now publicly chastised one of his own professors for his "repugnant and vile" remarks, which had aroused conservative critics. A few days later, things turned nasty when Mirecki reported that two men in a pickup had followed him down a country road before daylight and beaten him up. After getting checked out at a local hospital, he announced that he was "mostly shaken up" but suffering from "some bruises and sore spots." Later, he told reporters, "I got the hell beat out of me." Discrepancies in his account prompted right-wing critics to charge him with inventing the attack to deflect criticism and achieve martyrdom. The sheriff's office failed to validate or discredit his story.<sup>33</sup>

In another bitter state battle that began early in the new century, intelligent-design advocates, including representatives from the Discovery Institute, convinced the Ohio Board of Education to approve a lesson plan called "Critical Analysis of Evolution," which was strongly influenced by Jonathan Wells's controversial *Icons of Evolution: Science or Myth? Why Much of What We Teach about Evolution Is Wrong* (2000). According to this plan, students would be taught the so-called controversy, debating such questions as "whether microevolutionary processes are sufficient to explain macroevolution." But as one antievolutionist candidly admitted,

"Science will have very little to do with the arguments on what science standards will look like. Education will have little to do with it. It's basically how the politics works in a particular state." Despite the Discovery Institute's considerable investment and the support of a majority of the citizens of Ohio, opponents of Case Western Reserve University, success-fully convinced the board of education in 2006 to rescind its mandate to teach evolution critically.<sup>34</sup>

In Wisconsin in 2004, after months of wrangling, the school board of Grantsburg, a small town in the northwestern corner of the state, voted that "Students shall be able to explain the scientific strengths and weaknesses of evolutionary theory," adopting another euphemism recommended by the Discovery Institute. Although eager to expose students to intelligent design, the board, for legal protection, added that "This policy does not call for the teaching of creationism or intelligent design." This weakening of the language prompted the strongly antievolutionist school-board president, who also served as pastor of a local Baptist church, to vote against the watered-down measure. The activity in Grantsburg provoked a Democratic state representative to introduce a bill requiring that science instruction in Wisconsin be confined to material that is both "testable as a scientific hypothesis and describes only natural processes." William Dembski, exasperated but optimistic, predicted that "Wisconsin may well be evolution's Waterloo."<sup>35</sup>

### Intelligent Design Goes to Washington

In 2001 the intelligent-design forces scored a partial victory in the nation's capital when U.S. Senator Rick Santorum (b. 1958), a Catholic Republican from Pennsylvania, proposed an amendment to the administration-backed No Child Left Behind Act. The proposal, drafted by Phillip Johnson, stated that

It is the sense of the Senate that—

- (1) good science education should prepare students to distinguish the data or testable theories of science from philosophical or religious claims that are made in the name of science; and
- (2) where biological evolution is taught, the curriculum should help students to understand why this subject generates so much continuing

controversy and should prepare the students to be informed participants in public discussions regarding the subject.

Johnson hoped that the amendment would "make it very difficult for public school authorities to justify firing or disciplining a teacher who informs students of the weaknesses of the Darwinian theory, rather than teaching it in the authoritarian and dogmatic manner that Darwinians have been able to enforce up until now." Warmly endorsed by Democratic Senator Edward Kennedy (b. 1932) and others, the amendment sailed through the Senate on a vote of 91–8, but in committee negotiations between the House and Senate Santorum's suggestions got downgraded to an explanatory note attached to the bill.<sup>36</sup>

Shortly after drafting the Santorum amendment and just past his sixty-first birthday, Johnson suffered a debilitating stroke. He survived, but with a new vision of his purpose in life. He became more overtly religious and began emphasizing the biblical basis of antievolutionism. However, in contrast to the scientific creationists, who highlighted the first verse of Genesis, "In the beginning God created the heavens and the earth," Johnson stressed the first verse of the gospel of John, "In the beginning was the Word, and the Word was with God, and the Word was God." While still regarding evolution as "basically a hoax," he expanded his cultural crusade to attack what he perceived as the menace of feminism. His study of Scripture had led him to see that a "major teaching of Genesis is that the difference between the sexes is fundamental to our created selves." Contemporaries, he complained, "are so ignorant of the order of creation that they imagine that the distinctions of feminine and masculine natures are things that man invented and that man can abolish or alter."<sup>37</sup>

In 2004 the ID advocates published their first work in a peer-reviewed scientific journal. That summer the less-than-prestigious *Proceedings of the Biological Society of Washington* included an article by Meyer—a philosopher, not a scientist—arguing that "purposive or intelligent design" best explains "the origin of the complex specified information" involved in the so-called Cambrian explosion, when, an estimated 530 million years ago, a host of new animal phyla appeared on the scene. The merits of Meyer's achievement evaporated when officers of the society alleged irregularities in the handling of Meyer's manuscript by the managing editor of the journal, Richard M. von Sternberg (b. 1963), a research as-

sociate at the Smithsonian Institution who had personally guided the manuscript through the review process. Suspicion grew when skeptics discovered that one of Sternberg's interests was "baraminology," that is, the study of the originally created "kinds" mentioned in Genesis 1, and that in 2001 he had signed a public protest called "A Scientific Dissent from Darwinism," drafted by the Discovery Institute. An embarrassed Smithsonian scientist dismissed Meyer's article as "unscientific garbage," and institution officials clumsily tried to get rid of Sternberg as quickly as possible. A sympathetic *Wall Street Journal* editorial portrayed Sternberg as a martyr, as much for his religious as for his scientific beliefs. Sternberg himself filed a complaint with the Justice Department's Office of Special Counsel, established to protect whistle blowers, on the grounds that he had been subjected to religious discrimination. Although the agency found his charges to have some merit, it refused to pursue the matter further because he was not technically a federal employee.<sup>38</sup>

The Smithsonian had scarcely recovered from the Sternberg incident when the Discovery Institute proudly announced that the Smithsonian's Museum of Natural History was co-sponsoring the showing of a movie on intelligent design, "The Privileged Planet: The Search for Purpose in the Universe," for which the Seattle organization had paid \$16,000. Caught off guard by its unintended endorsement of ID, the Smithsonian honored its contract but bowed out of co-sponsoring the event.<sup>39</sup>

### Intelligent Design On Trial

The first major legal test of intelligent design began with the Dover (Pennsylvania) Area School District Board's decision to make students "aware of gaps/problems in Darwin's theory and of other theories of evolution including, but not limited to, intelligent design." To implement this action, the board instructed ninth-grade biology teachers to read the following statement to their classes:

The Pennsylvania Academic Standards require students to learn about Darwin's Theory of Evolution and to eventually take a standardized test of which evolution is a part.

Because Darwin's Theory is a theory, it is still being tested as new evidence is discovered. The Theory is not a fact. Gaps in the Theory exist for which there is no evidence. A theory is defined as a well-tested explanation that unifies a broad range of observations.

Intelligent design is an explanation of the origin of life that differs from Darwin's view. The reference book, *Of Pandas and People*, is available for students to see if they would like to explore this view in an effort to gain an understanding of what intelligent design actually involves. As is true with any theory, students are encouraged to keep an open mind.

In justifying this action, board member William Buckingham declared: "Two thousand years ago, someone died on a cross. Can't someone take a stand for him?" Sixty copies of *Pandas*, donated anonymously, appeared in the high-school library.<sup>40</sup>

Eleven upset parents, including Tammy J. Kitzmiller, the mother of a ninth-grader, asked the ACLU to intervene on their behalf. The school board acquired the *pro bono* services of the Thomas More Law Center, a public-interest law firm in Michigan established by the conservative Catholic pizza baron Thomas Monaghan (b. 1937) of Domino's fame. Although Discovery Institute fellows Meyer, Dembski, and Behe initially agreed to serve as expert witnesses for the defense, all but Behe eventually withdrew, and the institute refused to support the defendants. The trial began in a federal district court in Harrisburg on 26 September 2005. The case, like the creation-science trials of the 1980s, hinged on whether the recommendation of intelligent-design theory—as presented in *Of Pandas and People*—constituted the teaching of religion and therefore violated the establishment clause of the First Amendment of the Constitution of the United States. The defendants argued that the Santorum note attached to the No Child Left Behind Act justified their actions.<sup>41</sup>

The star witness for the defense, Behe, tried to educate the court on the differences between intelligent-design theory and young-earth creationism. When a lawyer for the plaintiffs read a passage from *Of Pandas and People* explaining that "Intelligent design means that various forms of life began abruptly through an intelligent agency with their distinctive features already intact, fish with fins and scales, birds with feathers, beaks and wings, etc.," Behe acknowledged that the statement was "somewhat problematic." When asked to describe the mechanism of intelligent design, he defined it vaguely as "intelligent activity." Intelligent design, he explained weakly, "does not propose a mechanism in the sense of a step by step description of how these structures arose."<sup>42</sup>

Another expert witness for the defense, Steve William Fuller (b. 1959),

from the University of Warwick in England, personified the strange alliance between some postmodern critics of science on the academic left and critics of evolution on the religious right. A self-described "social epistemologist," Fuller testified in his deposition that "there is nothing especially unscientific about aiming to change the ground rules of science." Miffed by the "guild-like arrogance of scientists," he insisted that they were "no less prone to errors of judgement than non-scientists." Arguing that "the appeal to the supernatural is neither sufficient nor necessary to count a form of inquiry as either religious or non-scientific," he concluded "that ID is a legitimate scientific inquiry that does not constitute 'religion' in a sense that undermines the pursuit of science more generally or, for that matter, undermines the separation of State and Church in the US Constitution." At the trial he declared that ID, despite its appeal to "supernatural causation," constituted legitimate "science," and he objected to the scientific community's "dogmatic" commitment to methodological naturalism, which he denied was "a ground rule of science."<sup>43</sup>

The six-week trial ended on a sour note when the presiding judge, John E. Jones III (b. 1955), discovered that the president of the Dover school board had misled the court by swearing under oath that he did not know where the money had come from to purchase scores of copies of *Pandas and People* for the school library. It turned out that a former board member, Buckingham, had raised \$850 for the books at the Harmony Grove Community Church—"an Independent, Fundamental, Bible Believing Church" that he attended—and had given a check for that amount to the board president. Buckingham, who had also denied knowledge of where the money had come from, attributed his faulty memory to an addiction to OxyContin.<sup>44</sup>

Just four days after the end of the trial—at the close of a divisive campaign—the citizens of Dover, irritated at becoming the Dayton of the North, went to the polls and voted out of office all of the old pro-ID school-board members. As the fundamentalist televangelist Pat Robertson (b. 1930) explained after the result became public, this may have been a foolhardy decision. Over his Christian Broadcasting Network he ominously warned "the good citizens of Dover": "If there is a disaster in your area, don't turn to God. You just rejected him from your city." A little later he offered some more spiritual advice to the people of Dover: "God is tolerant and loving, but we can't keep sticking our finger in his

eye forever. If they have future problems in Dover, I recommend they call on Charles Darwin. Maybe he can help them."<sup>45</sup>

On 20 December 2005, Judge Jones handed down his verdict, excoriating the Dover school board for its actions, which he described as a "breath-taking inanity." Although a conservative Republican, appointed to the bench by President George W. Bush, and a practicing Lutheran, Jones ruled that ID was "not science" because it invoked "supernatural causation" and failed "to meet the essential ground rules that limit science to testable, natural explanations." The board's promotion of it thus violated the establishment clause of the First Amendment to the U.S. Constitution, requiring the separation of church and state. Clearly upset by the shenanigans of the school board, he accused the self-righteous Buckingham of outright lying. He rejected as "utterly false" the assumption "that evolutionary theory is antithetical to a belief in the existence of a supreme being and to religion in general." His conclusion: "it is unconstitutional to teach ID as an alternative to evolution in a public school science classroom." In a parting shot, the judge assigned the school board responsibility for paying the plaintiffs' legal fees, estimated at one million dollars.<sup>46</sup>

Responses varied predictably. Overwhelmingly, the science community expressed jubilation, as did the plaintiffs and their lawyers. Tammy Kitzmiller, the parent whose name headed the list of plaintiffs, proposed making bumper stickers promoting "Judge Jones for President." The losers tended to attack the judge. Buckingham called him a liar. John West of the Discovery Institute, furious that the judge had attacked the scientific status of ID rather than ruling narrowly on the board's particular action, denounced Jones as "an activist federal judge" intent on preventing "criticism of Darwinian evolution through government-imposed censorship." The president of the Southern Baptist Convention's Ethics and Religious Liberty Commission called the decision "a poster child for a half-century secularist reign of terror"—and predicted an end to Jones's career advancement. Behe offered a less apocalyptic response, laconically describing the decision as "a real drag." Senator Santorum, an erstwhile supporter of Jones's who had earlier praised the Dover school board for its courageous advocacy of ID, severed his connection with the Catholic law firm that had defended the board and repudiated efforts to promote ID for religious reasons. Although the ruling applied only to the middle district of Pennsylvania, legal and educational experts expected that its influence would be felt nationwide.<sup>47</sup>

### Designing Catholics

In 1996 Pope John Paul II (1920–2005) brought cheer to liberal Roman Catholics when he informed the Pontifical Academy of Sciences that evolution was "more than just a hypothesis." This pope's openness to evolution prompted the Jewish cosmologist Lawrence M. Krauss (b. 1954) to write a commentary for the *New York Times* in 2005 contrasting the Discovery Institute's hostility to evolution with the Catholic church's welcoming attitude. Miffed by Krauss's comments, officers at the Discovery Institute arranged for the cardinal archbishop of Vienna, Christoph Schönborn (b. 1945), to write an op-ed piece for the *Times* dismissing the late pope's statement as "rather vague and unimportant" and denying the truth of "evolution in the neo-Darwinian sense—an unguided, unplanned process of random variation and natural selection." The cardinal, it seems, had received the backing of the new pope, Benedict XVI, the former Joseph Ratzinger (b. 1927), who in the mid-1980s, while serving as prefect of the Sacred Congregation of the Doctrine of the Faith, successor to the notorious Inquisition, had written a defense of the doctrine of creation against Catholics who stressed the sufficiency of "selection and mutation." Humans, he insisted, are "not the products of chance and error," and "the universe is not the product of darkness and unreason. It comes from intelligence, freedom, and from the beauty that is identical with love." Recent discoveries in microbiology and biochemistry, he was happy to say, had revealed "reasonable design."<sup>48</sup>

High-profile Catholic scientists in America rushed to prevent the anticipated damage to the church's less-than-pristine reputation in scientific matters. The Arizona-based Jesuit priest George V. Coyne (b. 1933), astronomer to the Vatican, bemoaned the cardinal's darkening of "the already murky waters" surrounding the debate over evolution. The distinguished geneticist Francisco J. Ayala (b. 1934), a former Dominican priest, expressed regret that the Austrian archbishop had reified "a conflict that does not exist" and, in so doing, had shown disrespect for the late pope's irenic opinions. Kenneth R. Miller (b. 1948), a prominent professor of biology at Brown University and author of *Finding Darwin's God: A Scientist's Search for Common Ground between God and Evolution* (1999), worried that the cardinal's message might "have the effect of convincing Catholics that evolution is something they should reject." A leading critic of intelligent design, and of fellow Catholics Behe and Kenyon, Miller faulted the design theorists for requiring "us to believe

that the past was a time of magic in which species appeared out of nothing." Together with Krauss, Ayala and Miller wrote an open letter to Benedict XVI, imploring him to clarify the church's position before further damage occurred.<sup>49</sup>

Similar expressions of concern came from liberal Catholic theologians, such as Georgetown University's John F. Haught (b. 1942), who had been striving for years to harmonize Darwinism and Christianity and who had agreed to testify for the plaintiffs in the Dover trial. Faulting Schönborn for failing "to distinguish neo-Darwinian biology from the materialist spin that many scientists and philosophers place on evolutionary discoveries," he urged the cardinal to pay greater attention to "the nuances of Catholic thought" and avoid creating controversy where none need exist.<sup>50</sup>

Despite such criticisms and concerns, Benedict XVI backed his outspoken cardinal, insisting that the universe was the result of an "intelligent project." Schönborn himself barely budged. Denying that he had based his criticisms of Darwinism on "intelligent design theory," he "happily concede[d] that a metaphysically modest version of neo-Darwinism could potentially be compatible with the philosophical truth (and thus Catholic teaching) about nature." Nevertheless, he continued to insist that "modern science is often . . . ideology, not science." As evidence, he quoted the Cornell biologist-historian William B. Provine (b. 1942), along with Dawkins and Dennett one of the unholy trinity of evolutionary atheists. "Modern science directly implies that the world is organized strictly in accordance with deterministic principles or chance," Provine asserted. "There are no purposive principles whatsoever in nature. There are no gods and no designing forces rationally detectable."<sup>51</sup>

#### A Public-Relations Victory

Despite minuscule support for intelligent design among practicing scientists and denunciations of the movement by such prestigious bodies as the American Association for the Advancement of Science and the National Academy of Sciences, Johnson and the creators of the "wedge" strategy succeeded beyond all but their own expectations in convincing the public and press that a serious scientific controversy existed about the status of Darwinism. The editor of *Science* worried that the growing popularity of ID and other alternatives to science might be signaling

"twilight for the Enlightenment." During the early twenty-first century news media around the world advertised such headlines as "New Theory of Life's Origin" (*New York Times*) and "Darwinism under Attack" (*Chronicle of Higher Education*). A *National Geographic* cover asked "Was Darwin Wrong?" *Time* proclaimed the outbreak of the "Evolution Wars." *Newsweek* announced the conflict with the headline, "Doubting Darwin." For three days in a row in the summer of 2005 the *New York Times* ran page-one stories about ID. Even the Marxist monthly *Political Affairs* paid a back-handed compliment to the design theorists in a cover article on "The Intelligent Design Scam," which warned: "The gurus of ID are far from knuckle-walking Neanderthals or ignorant snake-handling God-shouters."<sup>52</sup>

Scientific attacks on ID often generated the greatest publicity for the movement. Thus on one occasion Dembski effusively thanked Richard Dawkins for aiding the cause. "I know that you personally don't believe in God, but I want to thank you for being such a wonderful foil for theism and for intelligent design more generally," wrote Dembski via e-mail. "In fact, I regularly tell my colleagues that you and your work are one of God's greatest gifts to the intelligent-design movement. So please, keep at it!"<sup>53</sup>

During the 2004 presidential campaign a reporter for the journal *Science* asked candidates George W. Bush (b. 1946) and John F. Kerry (b. 1943) whether "intelligent design" or other scientific critiques of evolutionary theory [should] be taught in public schools." Both deferred to local control, with the former adding that "Of course, scientific critiques of any theory should be a normal part of the science curriculum." A year later, President Bush, who had been discussing ID in his weekly Bible study sessions at the White House, publicly endorsed the teaching of both design and evolution. Shortly thereafter Senate Majority Leader William H. Frist (b. 1952), an Ivy League-educated cardiac surgeon from Tennessee, and Secretary of Education Margaret Spellings (b. 1957), an architect of the No Child Left Behind Act, seconded the president's call.<sup>54</sup>

As the ID enthusiasm swept the country, notable academics entered the fray. Huston Smith (b. 1919), a revered expert on world religions, and Alvin Plantinga (b. 1932), a highly regarded philosopher of religion, lent moral support to the design camp; while the equally distinguished philosopher of science Elliott Sober (b. 1948) and the Pulitzer

Prize-winning lawyer-historian Edward J. Larson (b. 1953) rose to the defense of testable science.<sup>55</sup> Major academic presses—including Harvard, Oxford, MIT, and Rutgers—rushed books on the controversy into print. Cambridge University Press brought out two books by Dembski (one of them co-edited), and Michigan State University Press published one co-edited by Meyer. Palgrave Macmillan issued a Discovery Institute-funded history of “evolutionary ethics, eugenics, and racism in Germany” suggestively titled *From Darwin to Hitler*.<sup>56</sup>

“Is intelligent design’s appeal international?” mused Dembski in the fall of 2002. “Does it cross religious boundaries? Or is it increasingly confined to American evangelicalism?” Already signs indicated that ID would not long remain a Yankee idiosyncrasy. That very year Dembski and others organized the International Society for Complexity, Information, and Design (ISCID), with fellows representing the United States, Canada, the United Kingdom, Australia, New Zealand, Finland, Germany, and Korea. Intelligent Design and Evolution Awareness (IDEA) clubs, originally founded in California, were springing up in Asia and Africa. Within a year European evolutionists were issuing dire warnings about a new wave of antievolutionism sweeping across the Atlantic, and in 2005 the International Council for Science, representing academies of science worldwide, repudiated creationism and ID as “pseudoscience.”<sup>57</sup>

Unfortunately, it is impossible precisely to assess the popularity of intelligent design. Some supporters of ID like its emphasis on the evidence of divine design in nature but have little or no appreciation for the radical methodological claims central to the movement. Many people find it difficult to distinguish ID from biblical or scientific creationism. A few years ago, while flying across the country, I sat next to a well-educated businessman who happened to be reading Phillip Johnson’s *Darwin on Trial*. When I innocently inquired about the content of the book, the gentleman assured me that Johnson (who never appealed to Noah’s flood) undermined the case for evolution by showing how fossils originated in the biblical deluge. Despite such lingering confusion about the differences between “intelligent design” and “creation science,” there was no denying that the coterie of design theorists associated with the Discovery Institute had captured worldwide attention.<sup>58</sup>

## EIGHTEEN



### Creationism Goes Global

Despite growing evidence to the contrary, evolutionists in the late twentieth and early twenty-first centuries clung to the belief that creationism could be geographically contained. In 1986 the usually reliable American paleontologist and anticreationist Stephen Jay Gould, then visiting Auckland, assured New Zealanders that they had little to fear from scientific creationism. Because the movement was so “peculiarly American,” he thought it stood little chance of “catching on overseas.” Fourteen years later he was still assuring listeners that creationism was not contagious. “As insidious as it may seem, at least it’s not a worldwide movement,” he said. “I hope everyone realizes the extent to which this is a local, indigenous, American bizarrité.”<sup>71</sup> Although Gould remained oblivious to it, the worldwide growth of creationism by 2000 had already proven him utterly wrong. Antievolutionism had become a global phenomenon, as readily exportable as hip-hop and blue jeans. In the past few decades it has quietly spread from America throughout the world and from evangelical Protestantism to Catholicism, Eastern Orthodoxy, Islam, Judaism, and even Hinduism.

American and Australian organizations deserve much of the credit—or blame—for this unexpected development. For years the Institute for Creation Research (ICR) led the way. Like generations of Christian missionaries before them, its best-known speakers, Henry M. Morris and Duane Gish, carried the message from southern California to Asia, Africa, Europe, and South America. After Morris's retirement his youngest son, John, assumed the presidency of the institute. In 2000, however, John's older brother, Henry III (b. 1942), reputed to have been the senior Morris's first choice as his successor, joined the institute as executive vice president for strategic ministries. An ordained Baptist minister and sometime lecturer on creation, Henry III in 2005 moved to Dallas, where he served as the ICR's head of distance education. By then the ICR was publishing books in some two dozen different languages (including several in Chinese). Its "Back to Genesis" radio program, started in 1987, was being carried by over 600 stations worldwide.<sup>2</sup>

Another old-line creationist organization, the Seventh-day Adventist Geoscience Research Institute, headquartered in Loma Linda, California, also developed a worldwide ministry. By 2005 it was operating branch offices in France and Argentina, working closely with creationist groups in Brazil and Korea, and publishing magazines in both Spanish and Portuguese.<sup>3</sup>

But the movement's most robust institution was Answers in Genesis (AiG), a Kentucky-based operation (located just south of Cincinnati) begun in 1994 by the Australian Ken Ham. A sometime biology teacher and a charismatic public speaker with a "machine-gun style of delivery," Ham helped to organize the Creation Science Foundation (CSF) in Australia before joining the staff of the ICR, where he enjoyed spectacular success with his "Back to Genesis" seminars. After seven years with the ICR, he left to establish Answers in Genesis as an "outreach" of the CSF. As creationism's newest star, he packed in audiences almost everywhere he went, speaking to well over 100,000 people a year. In less than a decade he and his AiG colleagues had created a network of AiG organizations in Australia, New Zealand, Canada, the United Kingdom, Japan, and South Africa, with Cincinnati as the hub. The organization distributed books in Afrikaans, Albanian, Chinese, Czech, English, French, German, Hungarian (Magyar), Italian, Japanese, Polish, Portuguese, Romanian, Russian, and Spanish—and maintained Web sites in Danish, Dutch, Greek, and Korean as well. Its popular *Creation* magazine ap-

peared in Spanish as *Creación*, whereas its technical counterpart, *Tf: The In-Depth Journal of Creation*, became "the world's premier refereed Creation publication." Its 90-second radio spots, *Answers . . . with Ken Ham*, could be heard on approximately 700 English-language stations around the globe. It employed scores of skilled employees, and looked forward to the opening in 2007 of a \$25-million, state-of-the-art creation museum, funded by repeated appeals to the creationist community.<sup>4</sup>

Late in 2005 the AiG confederation crumbled. A simmering disagreement between long-time associates Ham and Wieland over vaguely stated "differences in philosophy and operation" led to the creation of two blocs. Ham in effect retained leadership of the U.S. and U.K. branches, while Wieland stayed on as managing director of the Australian branch and maintained affiliations with the small AiG offices in Canada, New Zealand, and South Africa. The magazine *Creation* remained with the Australians, who renamed themselves Creation Ministries International. Ham's group kept the name AiG but launched a new magazine, *Answers*. AiG continued to expand its staff and began working more closely with scientists at the ICR, including Andrew Snelling, who in the late 1990s had fallen out with Wieland and gone to work for the ICR. Ham also recruited Kurt Wise as a consultant, especially to help with the concluding phases of the museum project. To foster global outreach, Ham hired David R. Crandall (b. 1942) to fill the new position of international director of AiG Worldwide. For over a decade Crandall had headed up global affairs for the Gospel Literature Service, a ministry of the fundamentalist General Association of Regular Baptist Churches, and from time to time had collaborated with AiG in translating and distributing creationist literature. With his close connections to translation teams in more than a hundred countries, Crandall greatly expanded AiG's international network.<sup>5</sup>

### Australia and New Zealand

No country outside the United States gave creationism a warmer reception than Australia, which spawned an internationally successful creationist ministry and at times even welcomed creation science into the classrooms of state-supported schools. As late as 1984 one of the best-informed students of Australian fundamentalism predicted that "because of the different national traditions and educational systems, the

[creationist] controversy is not likely to become as intense in Australia as in USA." But already young-earth creationists, led by Ham and Wieland, a physician, had organized the CSF, which from its headquarters in Brisbane quickly became the center of antievolutionism in the South Pacific. Queensland offered a unique opportunity for Australian creationists, in part because Protestantism in the state had become heavily Americanized since World War II and because "creation" already appeared in the official science syllabus for public schools. In 1997 the CSF changed its name to Answers in Genesis, reflecting not only its close ties to Ham's American-based organization but an emphasis on the biblical arguments for creationism. "Unshackled by constitutional restraints" on the teaching of religion in public schools, as one critic put it, Australian creationists were "not as coy as their American counterparts in declaring their evangelical purposes." This situation "led in Australia to a cruder, more forthright, aggressive, and less subtle form of creation science than is the case in the USA."<sup>6</sup>

Despite being dismissed by Australian intellectuals as "an American anti-intellectual anachronism" and "a reversion to America's Deep South of the '20s," creationism left an indelible mark on significant segments of Australian culture. Religiously, its influence could be seen most clearly within the evangelical wing of Protestantism, where it played a dramatic but ultimately divisive role, pitting Christian against Christian over the meaning of Genesis. The teaching of creationism flourished especially among the rapidly increasing number of private Christian schools, which typically received state aid on a per capita basis. In a telephone poll conducted in 1986 a Sydney television station asked over 30,000 persons whether schools should teach "that God created the world in 6 days." Sixty-five percent of the respondents, living in one of the world's most sophisticated cities, answered in the affirmative. Ironically, attacks by skeptics often gave the creationists their greatest publicity. With Ham in the United States Australian creationists turned for star power to a chess-playing physical chemist from New Zealand, Jonathan D. Sarfati (b. 1964), whose *Refuting Evolution* (1999) had sold 350,000 copies by early 2005. Antievolutionists in Australia celebrated in August 2005, when the minister of education, a Christian physician named Brendan Nelson (b. 1958), came out in favor of exposing students to both evolution and intelligent design. "As far as I'm con-

cerned," he explained, "students can be taught and should be taught the basic science in terms of the evolution of man, but if schools also want to present students with intelligent design, I don't have any difficulty with that. It's about choice, reasonable choice." The evangelical Campus Crusade for Christ quickly took advantage of the moment, distributing thousands of copies of the DVD "Unlocking the Mystery of Life: Intelligent Design" to schools throughout the country. With respect to creationism, Australia seemed to be growing more like "the USA with Kangaroos" every year.<sup>7</sup>

Similar developments occurred in New Zealand, only more slowly and with less fanfare. A rightward shift politically and religiously had created by the 1980s a fertile field in which creationism could grow. The booming home-schooling and Christian-school movements provided a ready market for creationist texts from America. "Born-again Christians" enrolled in teachers colleges in such numbers that they came to occupy one of every ten slots. In 1981 the Auckland Department of Education issued a two-model text, written by a Baptist biology teacher, "to assist senior students studying human evolution." The Science Teacher's Resource Centre of the Auckland College of Education distributed the book, which sold well enough to require a second printing. In the early 1970s creationism in New Zealand had a profile lower than American football. Two decades later both creationists and their critics were estimating that approximately 5 percent of the population had joined the cause. In 1992 New Zealand creationists set up a branch of the CSF called Creation Science (NZ), which later evolved into AIG-New Zealand. In 1995 the *New Zealand Listener* surprised many of its readers by announcing that "God and Darwin are still battling it out in New Zealand schools." In contrast to the common image of a thoroughly secular educational system, the popular magazine revealed that "specialists with science degrees" had been promulgating creationism in the country's classrooms, where they often discovered a sympathetic audience, particularly among Maori and Pacific Islanders, who tended to view evolution with suspicion. As one Maori leader observed, "the ultimate in alienation would be to be a Maori and an EVOLUTIONIST." Elite academics did not like what was happening—"I loathe creationism . . . and I detest people who promulgate such wicked confusions," fumed one scientist—but their efforts to staunch the flow of creationist ideas from the United



States and Australia met with mixed success. Against the odds—and the assurances of Gould—scientific creationism had established a beachhead deep in the Antipodes.<sup>8</sup>

#### Canada

One writer has claimed that “there are possibly more creationists per capita in Canada than in any other Western country apart from the US.” Though counterintuitive, that statement may well be true. In 1993 *Maclean's*, “Canada’s Weekly Newsmagazine,” shocked many readers when it carried a public-opinion poll showing that “even though less than a third of Canadians attend a religious service regularly . . . 53% of all adults reject the theory of scientific evolution.”<sup>9</sup> Readers might have been less surprised had they had known that what had come to be known as creation science had originated with the Canadian George McCready Price in the Maritime provinces early in the twentieth century.

Creationism first drew national attention in Canada in the early 1990s, when the news media discovered that the public schools of Abbotsford, a community outside of Vancouver in British Columbia, had been using creationist materials in science courses since the late 1970s and had been inviting creationists into the classrooms. In 1983 the school board had actually instructed science teachers not to “promote” evolution. Critics, who saw this as an improper attempt to interject religion into science classes, became even more agitated when the provincial minister of education came out in support of having students hear “both sides” of the debate. In the end, though, the ministry compelled the school district to abide by the established guidelines barring the teaching of religious dogma and specifically forbade instruction advocating “the theories of Divine Creation, creation science and ‘intelligent design theory.’”<sup>10</sup>

The controversial subject next captured Canadian headlines in 2000, when Stockwell Day (b. 1950), a Pentecostal lay preacher from Alberta and a member of the conservative Canadian Alliance, challenged Prime Minister Jean Chrétien, a Roman Catholic, for his job. Reporters, who nicknamed Day’s campaign jet Prayer Force One, revealed that several years earlier he had declared “that the Earth is 6,000 years old, humans and dinosaurs roamed the planet at the same time and that Adam and

Ev were real people.” Shortly before the election, Day bravely defended his beliefs, claiming that “There is scientific support for both creationism and evolution. . . . I don’t think I should have to debate the interpretation of Genesis any more than I would expect Jean Chrétien or Joe Clark [a former prime minister and a Catholic] to debate Catholic teaching on transubstantiation or the Immaculate Conception.”<sup>11</sup>

Day lost the election by a large margin, but antievolution sentiment remained strong in parts of Canada. In the wake of the flap over Day, the *Ottawa Citizen* reported that a new science curriculum for the province of Ontario barely mentioned the controversial word “evolution” and then only in describing an advanced course for students hoping to study biology or biochemistry at the university level. “The science curriculum in elementary schools doesn’t mention evolution in living things at all,” wrote the reporter. “Ontario hasn’t banned evolution in other grades and courses, but science teachers say the curriculum they must teach is already so large there’s no room for extras such as evolution.” If even science teachers in the province regarded evolution as an “extra,” it is small wonder that the public attached little importance to it.<sup>12</sup>

Meanwhile, organized creationism, though not nearly as vigorous as in the United States, continued to grow, with associations springing up in virtually every province. In 1999 Answers in Genesis absorbed the old Creation Science Association of Ontario and opened a new “nationwide ministry,” AiG-Canada. The long-standing Creation Science Association of Alberta continued to publish the *Creation Science Dialogue*, proudly advertised as “Canada’s own creation magazine.” The Alberta group also featured the botanist Margaret Helder (b. 1943), “probably the most prominent woman in creation science,” as one of its officers.<sup>13</sup>

#### The United Kingdom

In 1992 Creation Science Movement (CSM), the descendant of the Evolution Protest Movement, celebrated its diamond jubilee as the world’s oldest antievolution organization. Leaders took understandable pride in the fact that “we have *survived* (the fittest?) while other UK organisations such as the Victoria Institute have *evolved* to promote theistic evolution and still others such as the Newtonian Scientific Association have become *extinct*.” Membership had doubled in recent years and now included “four professors at British universities . . . and eighty members

with the title 'Doctor.'" Its missionary outreach extended to Eastern Europe. To help celebrate its fiftieth birthday, the CSM invited the celebrity speaker Ken Ham for a lecture tour, which attracted some 3,000 listeners. The following summer Ham returned with fellow Australian Andrew Snelling to conduct a series of "Back to Genesis" seminars, attended by 7,000 people. This "phenomenal" turnout represented what one witness described as "the largest concentrated creation outreach ever in the United Kingdom." In 2000 the CSM opened its Genesis Expo in Portsmouth, where visitors could take in various creationist dioramas and "a clutch of real fossilised dinosaur eggs," all intended to provide evidence of a Designer devoid of religious dogma. "We don't want to be written off as religious fundamentalists," said the head of the movement, "—even though we are!"<sup>14</sup>

By this time, however, the CSM was at risk of falling behind the invading forces of Ham's AiG as "the best publicized" creationist movement in the United Kingdom. England, "once a great missionary-sending country," had become a mission field. In 2000 AiG announced that the "former Atheist," A. J. (Monty) White, would head up the ministry's British operation, headquartered in Leicester. Whereas other creationist groups, such as the Biblical Creation Society (regarded by some as the "eggheads" of British creationism), aimed at an intellectual audience and consequently experienced little growth, the AiG reached out to "the ordinary person in the pew" with an unabashedly religious message—and boomed. Even more populist was the Noah's Ark Farm Centre near Bristol, built by Anthony Bush, a farmer and lay minister in the Church of England who constructed a fourteen-foot scale model of the ark.<sup>15</sup>

Despite the splash that creationism was making among evangelical Christians in the United Kingdom, few nonbelievers gave it a thought before 2002, when a creationist "scandal" broke in the press. It all began when Emmanuel College, a well-regarded state-supported technical school in Gateshead, rented out its auditorium for a creationist conference featuring Ken Ham. As reporters began investigating, they discovered that, as one reporter put it, "Fundamentalist Christians who do not believe in evolution have taken control of a state-funded secondary school in England." Indeed, the principal of the school as well as the head of science were both creationists. Although the national curriculum required schools to teach evolution, it did not prohibit the teaching

of creationism. Thus, in theory at least, teachers were free to include creationism in their classes. But when the head of the school said that it would be "fascist" to ignore creationism, he inflamed an already combustible situation.<sup>16</sup>

Reporters also learned that £2 million for the school had come from a recently knighted multimillionaire, Peter Vardy, described in the press as a "Christian fundamentalist car dealer," who served on Emmanuel's board of directors. "The creationist lobby has become increasingly notorious in the US," noted one surprised journalist, "but until recently it has been relatively weak in Europe." Because Tony Blair's Labour government had promoted the partnership between the state and private enterprise, some critics blamed the prime minister for once again foolishly following the Americans. "US-Style Creationism Spreads to Europe," warned one alarmed science editor. A broad range of concerned citizens, from the Cambridge physicist and Anglican priest John Polkinghorne (b. 1930) to the unbelieving Oxford evolutionist Richard Dawkins (b. 1941), expressed outrage that young-earth creationism had infiltrated British schools in what Dawkins described as an act of "educational debauchery." Ironically, in a letter of protest to Blair, who supported the Gateshead experiment, Polkinghorne and a group of Christian colleagues laid some of the blame for the debacle at the feet of Dawkins, who loudly and repeatedly proclaimed the hostility of science toward religion:

The resurgence of Young Earth Creationism is a relatively recent phenomenon, currently very widespread in America. In the UK it was until recent years fairly limited; but the situation is changing, stimulated by imports of US literature and by visiting speakers. The problems are exacerbated by certain popularisers of science portraying science as an irreligious activity, contrary to evidence about the religious beliefs of many of its practitioners, both past and present.

Ken Ham and his associates at Answers in Genesis reveled in the unexpected publicity. "It's exciting," they said, "to see how God's *enemies* are bringing national attention—free of charge—to AiG's efforts to defend the authority of God's Word, and to call the languishing church in Britain back to its roots in Genesis!"<sup>17</sup>

In 2004 British antievolutionists brought together a young-earth cre-

ationist and an intelligent-design (ID) theorist in a barnstorming tour of the United Kingdom by the ID guru Phillip Johnson and the Australian flood geologist Andrew Snelling. In a whirlwind three-week effort co-sponsored by the CSM and the Elim Pentecostal Church, the traveling duo spoke to some 8,000 people in eleven cities. Scotland, where 35 percent of early teenagers believe that Christianity is necessarily creationist, turned out the most enthusiastic audiences.<sup>18</sup>

By late 2005 antievolutionism in the United Kingdom had grown to such proportions that the retiring president of the Royal Society, Britain's national academy of science, devoted his farewell address to warning that "the core values of modern science are under serious threat from fundamentalism." Within months the BBC startled the nation when it announced the results of a poll showing that "four out of 10 people in the UK think that religious alternatives to Darwin's theory of evolution should be taught as science in schools." The survey, conducted in connection with a broadcast ominously called "A War on Science," revealed that only 48 percent of Britons believed that the theory of evolution "best described their view of the origin and development of life." Twenty-two percent said that "creationism" best described their views, 17 percent favored "intelligent design," while 13 percent remained undecided. Teachers reported strong creationist sentiment among students in both secondary and medical schools. A sixth-form biology teacher in London complained that "the vast majority" of her brightest students, including many headed for careers in the health professions, rejected evolution. Often they came from Pentecostal, Baptist, or Muslim families. "It's a bit like the southern states of America," she noted.<sup>19</sup>

#### Western Europe

Outside the United Kingdom creationism caused few ripples but ran deeper than many Europeans suspected—or were willing to admit. Although pan-European creationist conferences date back to the mid-1980s, they remained relatively small affairs, attracting between 100 and 150 attendees. However, Ulrich Kutschera (b. 1955), an evolutionary biologist at the University of Kassel in Germany, warned in 2003 that antievolutionism was rapidly spreading on the continent. A recent poll of adult Europeans had revealed that only 40 percent believed in natu-

ralistic evolution, 21 percent in theistic evolution, and 20 percent in a recent special creation, while 19 percent remained undecided or ignorant. The highest concentrations of young-earth creationists were found in Switzerland (21.8 percent), Austria (20.4 percent), and Germany (18.1 percent).<sup>20</sup>

For years German-speaking antievolutionists had derived inspiration from Arthur E. Wilder-Smith, an Englishman who occasionally lived in Switzerland and wrote several books in German. By the 1990s, however, Werner Gitt (b. 1937), a German engineering professor at the Physikalisch-Technische Bundesanstalt (German Federal Institute of Physics and Technology) in Braunschweig, was assuming leadership, largely through the publication of several influential creationist books, which circulated in a dozen languages. Gitt served as one of the leaders of Wort und Wissen (Word and Knowledge), the largest creationist society in Germany with a membership of 230 and a mailing list of 7,000, all of whom received the group's quarterly publication, *Wort und Wissen—Info*. Heading the nondenominational society was the theologian Reinhard Junker (b. 1941), coauthor with the young-earth microbiologist Siegfried Scherer (b. 1955) of the popular creationist textbook *Evolution: Ein kritisches Lehrbuch* (1998). Described by Kutschera as "the most important production of the European anti-evolutionists," this attack on macroevolution outsold many mainstream textbooks, totaling more than 40,000 copies by 2004. Translations into Russian, Serbian, Finnish, and Portuguese were already available, and others were planned. Although some public schools adopted it, the German ministry of education refused to add it to the official list of approved textbooks. However, the venerable botanical journal *Flora*, edited in Germany, gave it a positive review, leading Kutschera to conclude in 2003 "that anti-evolutionism in German-speaking countries has already infiltrated some academic circles." Closely related to *Wort und Wissen* was the Swiss society ProGenesis, publisher of *Factum Magazin* and developer of a theme park, Genesis-Land, which, when completed, would feature a large-scale model of Noah's ark.<sup>21</sup>

Outside of the German-speaking countries the strongest support for creationism in western Europe came from the Netherlands, where creationists had been active since the 1970s and where over half the population professed to believe in God and 8 percent subscribed to the iner-

rancy of the Bible. An evangelical school in Amersfoort published the creationist journal *Bijbel en Wetenschap (Bible and Science)*. In 1995 the editor, Johan Bruinsma, a retired professor from an agricultural university in Wageningen, hosted the European Creationist Congress. By this time the creationists possessed sufficient political clout to prompt a national debate over whether the state examinations in biology should include questions on evolution, which, if done, would virtually force Christian schools to begin teaching the subject. The resolution was to include questions on evolution only for university-bound pupils—and to formulate the questions diplomatically, so as not to antagonize the creationists.<sup>22</sup>

In the spring of 2005 a science writer in Amsterdam published an article in *Science* provocatively titled, "Is Holland Becoming the Kansas of Europe?" The Dutch science and education minister, Maria van der Hoeven (b. 1949), a Catholic member of the Christian-Democratic Party, had triggered a fierce debate in parliament by suggesting that the teaching of intelligent design might help to heal religious rifts. "What unites Muslims, Jews, and Christians is the notion that there is a creation," she said optimistically. "If we succeed in connecting scientists from different religions, it might even be applied in schools and lessons." She and her staff were already in conversation with Gees Dekker (b. 1959), a world-class nanophysicist and evangelical Christian at Delft University of Technology, who, though hardly a creationist, had coedited a collection of essays on intelligent design and had reportedly claimed that design in nature is "almost inescapable." The threat of state-supported antievolutionism created an intense backlash. The Dutch biochemist Piet Borst (b. 1934) exclaimed that, "even in Holland, there are plenty of people ready to castrate Darwin." Perhaps so, but van der Hoeven in the end made it clear that she was no longer willing to wield the knife.<sup>23</sup>

Neighboring Belgians, assisted by the English creationist David Rosevear, had organized CreaBel (Creationisten Belgie) in 1991. But the movement never flourished in the linguistically divided country, except among the small minority of non-Catholics who joined evangelical Protestant churches.<sup>24</sup> The same was true in the nearby Scandinavian countries, where Lutheranism nominally dominated a highly secular landscape. For over two decades Swedish and Danish creationists quietly

maintained small societies and published inconspicuous journals. In 2002, however, Marianne Karlsmose (b. 1973), the young head of what was then called the Christian People's Party, generated considerable publicity by suggesting that Danish schools teach both creation and evolution. Although nothing came of her proposal, it did alert Danes to the presence of indigenous creationism.<sup>25</sup>

Most French, it seems, have cared little about the creation-evolution debate. One group that has is the 600-member Cercle d'étude historique et scientifique, founded in 1971 by the followers of the late Fernand Crombette (1880–1970), a fundamentalist Catholic priest. As biblical literalists, group members reject evolution and the antiquity of humans. The growth of antievolutionism in France prompted a Dominican priest-engineer, Jacques Arnould (b. 1961), to publish a critique called *Les créationnistes* (1996).<sup>26</sup> Among French Protestants the geneticist André Eggen (b. 1965) took the lead, founding the young-earth association Au commencement . . . (In the Beginning . . .) in 1998 and frequently lecturing on biblical creationism in France and the French regions of Switzerland.<sup>27</sup>

Creationism fared somewhat better in Italy, where a newly formed society in the early 1990s, the Centro Studi Creazionismo (CSC), quickly enrolled 450 members and brought out a journal, *Eco creazionista*. A decade later Answers in Genesis found sufficient interest to develop an Italian Web site, *Risposte nella Genesi*. Most Italian academics ignored the rumblings of creationism, although one of them, Giuseppe Sermonetti (b. 1925), a retired geneticist from the Universities of Palermo and Perugia, published a book in 1999 quaintly titled *Dimenticare Darwin (Forget Darwin)*. The CSC's goal of introducing "into both public and private schools the biblical message of creationism and the scientific studies that confirm it" seemed remote until early in 2004, when the right-wing political party Alleanza Nazionale began dismissing evolution as a "fairy tale" and linking Darwinism to Marxism. About the same time the Italian minister of education, universities, and research, Letizia Moratti (b. 1949), shocked the nation with her plan to eliminate the teaching of evolution to students ages 11 to 14. An estimated 46,000 to 50,000 irate Italians, including hundreds of prominent scientists, rose up to protest what they regarded as "part of a growing antiscientific trend in our country." After being forced to back away from her proposal, Moratti tried to

salvage her political future by appointing one of the protestors, the Nobel laureate Rita Levi-Montalcini (b. 1909), to head a committee to investigate the teaching of evolution in Italy. To defend Darwinism against creationism and to restore "sanity" to science education, concerned Italian scientists in 2005 formed the Society for Evolutionary Biology.<sup>28</sup>

### Eastern Europe

The Berlin Wall symbolically separating the Soviet bloc from western Europe came tumbling down in 1989, allowing not only democracy and capitalism but conservative Christianity to sweep into the formerly communist East. Within a few years creationist missionaries, often affiliated with the Institute for Creation Research or Answers in Genesis, had successfully planted new societies in Poland (the Polish Anti-Macroevolution Organization), Hungary, Romania, and Serbia, as well as in the former Soviet Union. As early as 1986 *The Mystery of Life's Origin*, coauthored by Charles Thaxton, appeared in a Romanian translation; and Thaxton subsequently spent six years in the Czech Republic promoting creationism and Christianity. The fifty-member Hungarian Christian Scientific Society did not get off the ground until the spring of 2002, but quickly laid plans to bring out a twice-yearly creationist magazine, aimed not only at Hungarian residents but at ethnic Hungarians living in Romania. The Romanian Foundation for Creation Research featured one of the few eastern Europeans active internationally, Emil Silvestru (b. 1954), an expert on the geology of caves. By the turn of the millennium he was working full time for Answers in Genesis, speaking on the radio, lecturing to churches and universities, and translating AiG books and pamphlets, such as the ever-popular *Dinosaurs in the Bible*, into Romanian. In cooperation with such groups as the Romania Home Schooling Association, Romanian creationists organized camps for young people and fossil-collecting trips. A major breakthrough came in 2005 when the Romanian ministry of education granted permission for teachers in both public and Christian schools to elect to use a creationist alternative to the standard biology textbook.<sup>29</sup>

In 2004 the Serbian government moved even further toward embracing creationism, if only temporarily, when the minister of education, Ljiljana Colic (b. 1956), an Orthodox Christian on the faculty of

philology at the University of Belgrade, informed primary-school teachers that they should no longer have students read a "dogmatic" chapter on Darwinism in the commonly used eighth-grade biology textbook. Colic also expressed support for the teaching of creationism. Her instructions ignited a firestorm of protest, prompting Prime Minister Vojislav Kostunica to rein in his maverick minister and eventually resigning in her resignation. Although a prominent bishop in the Serbian Orthodox Church spoke out in favor of evolution, the flap in the Balkan republic led some secularists to fear "an increase in the influence of the Serbian Orthodox Church in education and everyday life there."<sup>30</sup>

Creationism in Russia suffered a mortifying scandal when the leader of the Russian Creation Science Fellowship, Dmitri A. Kouznetsov, spectacularly fell from grace. During the early 1990s the energetic Kouznetsov, who claimed three earned doctorates, had emerged as a creationist superstar. In 1992 and 1994 he organized international creation-science symposia in Moscow, the second of which attracted some 400 Russian scientists—and Olga A. Polykovskaya, a Pentecostal from the Russian ministry of education, who called for the teaching of creationism "to create a logical balance in science education." Later in 1994, the department of extracurricular and alternative education of the Russian ministry of education cosponsored another creationist conference, at which a deputy minister of education, Alexander Asmolov (b. 1949), urged that creationism be taught to help restore academic freedom in Russia after years of state-enforced scientific orthodoxy. As one academician allegedly said, "no theory should be discounted after the long Communist censure."<sup>31</sup>

Asmolov recruited Duane Gish, who had visited Russia at least four times, to help prepare materials suitable for classroom use. Subsequently, another deputy minister sent Gish the following letter of appreciation:

I would like to thank you for your interest in education in Russia. . . . The issue of alternative education, and the opportunity to look at the subject of origins in a new way is opening new possibilities within our education system.

Your prospectus on curriculum development for the Russian Department of Education, "Examining Two Worldviews on the Subject of Origins: Searching for Truth about Origins" is creating a desire within the Department to use such materials as supplementary education in Russia.

The Institute for Creation Research subsequently reported that the Russian ministry of education had given Gish "a mandate" to write a text for use in Russian public schools.<sup>32</sup>

By this time Kouznetsov's career was unraveling quickly. In 1994 a Swedish biologist at Uppsala University, Dan Larhammar (b. 1956), subjected one of Kouznetsov's papers to a meticulous examination and discovered "undocumented experiments, unreasonable precisions, and nonexistent references." An Italian researcher, Gian Marco Rinaldi (b. 1942), probing further, pegged the number of fictitious papers at nearly fifty. When the *Bible-Science News*, checking up on these reports, failed to locate some of the literature the Russian had cited, even creationists began abandoning their Russian hero. If the allegations of impropriety "are proven correct, Kouznetsov [sic] has committed a gross breach of honesty," concluded the *Bible-Science News*. "One simply does not invent references, no matter what the motivation. Even a single fictitious reference is inexcusable." As Kouznetsov's creationist career crashed, he reinvented himself as an archaeological chemist and began investigating the Shroud of Turin, which had allegedly wrapped Jesus during his three-day stay in the tomb. Working out of the legitimate-sounding "Sedov Biopolymer Research Laboratories," which turned out to be his own private facility, he resumed his old habits, using fake samples from non-existent museums. By 1997 he had moved to the United States, where he was arrested for passing bad checks in Connecticut and, the following year, spent five months in jail.<sup>33</sup>

With Kouznetsov's demise, Russian creationists struggled to rebuild their infrastructure. Out of the ashes of the Russian Creation Science Fellowship there arose, in 2000, a new organization, the inter-confessional Society for Creation Science, led by Alexander Lalomov (b. 1959), a submarine geologist with the Geological Institute of the Russian Academy of Sciences. In 2002 he and his colleagues began publishing *Sotvorenie (Creation)*, the first Russian creation-science journal, which carried both original contributions from Russians and translations of English articles. By 2005 their popular book *Origin of Life: Facts, Hypotheses, Proofs* had sold some 30,000 copies, and production had begun on a series of short video programs, based on the book, to be shown on state-owned television. A biology textbook, encompassing both creation and evolution, sold some 10,000 copies, despite not receiving the approval of the ministry of education.<sup>34</sup>

Several other organizations also contributed to the rapid spread of creationism in Russia. In the early 1990s Roger Oakland of Understand the Times, a ministry based in Santa Ana, California, began frequent visits to Russia to promote biblical creationism. A former biology teacher from the Canadian prairies, he wrote one book, *The Evidence for Creation*, of which some 300,000 copies were sold or given away throughout the former Soviet Union. Oakland often collaborated with the Kindness Foundation, founded in 1990 by the aforementioned Olga Polykovskaya (later Polykovskaya-Lutsenko). A sometime employee of the ministry of education, she set up nearly two dozen Christian Resource Centers, which distributed creationist materials to teachers around the country. In 2000 the foundation and the Russian ministry of education jointly sponsored a celebration of 2,000 years of Christianity, which included creationist speakers from the United States and the United Kingdom. By this time the British Creation Science Movement was making all of its pamphlets available electronically in Russian, and Answers in Genesis was rapidly translating its materials into Russian.<sup>35</sup>

Despite opposition from the scientific establishment and from some Russian Orthodox leaders who bristled at the influx of fundamentalist "Western Christianity," Bible-based creationism carved out at least a modest foothold in the formerly atheistic country. By the late 1990s reports were reaching North America "that Russian scientists desperately need resources to stem the rising tide of creationism in their country." One observer described St. Petersburg as being "flooded with Russian translations of books and pamphlets about 'creation science.'" In contrast to the United States, where liberal churches counterbalanced fundamentalist ones, "in Russia, great numbers of American conservative Christian missionaries are fueling a new fundamentalism at the same time that official church/state separation in education has come to an end." In January 2005 even the traditionally hostile Russian Orthodox Church gave voice to creationists at an international conference on faith and science organized by the church's religious education department.<sup>36</sup>

Russian antievolutionists frequently collaborated with likeminded colleagues in Ukraine, which seemed equally open to creationism. In 2002, for example, the Ministry of Education and Science, the Academy of Pedagogical Science, and the Kindness Foundation jointly sponsored a meeting in Kiev, which included a lecture by Gish on "freedom of

choice and tolerance in the educational system (with special emphasis on inclusion of creation science).” Joining the ICR scientist on the platform were the secretary of the Ministry of Education and Science and the president of the Russian Academy of Education. By this time Sergei Golovin (b. 1960), founder of the young-earth Christian Center for Science and Apologetics, who started out holding “secret, underground meetings, with students, professors, and colleagues,” had emerged as the leading creationist in Ukraine. A geophysicist, Golovin claimed to have completed a doctoral dissertation at Simferopol State University before being forced out of the program because of his creationist beliefs. Linking Darwinism with communism, he traced increased lawlessness to the acceptance of evolution. “When people believe they are nothing more than evolved animals, they tend to behave accordingly, and to act increasingly less human,” he wrote, echoing many an American fundamentalist. In 1995 he began publishing a children’s magazine, *Creator*; he later produced a video series, *Science and the Bible*. In the early twenty-first century he led out in organizing a little-known International Association for Creation Science, which brought together creationists from Russia and Ukraine.<sup>37</sup>

#### Latin America

After a very slow start in Latin America, creationists witnessed “an explosion” of interest in the late 1990s, paralleling that of evangelical Christianity generally. In 1992 a Christian radio station in Texas had begun broadcasting the ICR’s “Back to Genesis” spots as “De Regreso a Génesis.” Within a decade over 200 Spanish-speaking radio stations in twenty countries were carrying the program. In Mexico, Ruben Berra, a nondenominational Christian educator and lay preacher in Cuernavaca, assumed a leadership role. Berra, who had formerly served as an agricultural specialist for the Mexican government and as a consultant to the United Nations Food and Agriculture Organization, organized creationist conferences and founded a society. With his support AiG in 2000 embarked on a “big push into Spanish-speaking countries,” organizing “el Ministerio Respuestas en Génesis,” introducing *Creación* magazine, and launching a new Spanish newsletter, *Respuestas Actualizadas (Answers Update)*. During a visit to Mexico that year Ken Ham spoke to around 4,000 people in just one morning. Armando Alducin, the charismatic pastor

of a Mexican megachurch in Cuernavaca, endorsed the movement, and the editor of the most widely read Christian magazine in Mexico invited Ham to contribute a regular column on creation. Shortly thereafter AiG hired Berra as their “first Spanish speaker” and sent him on the road to evangelize Latin America; his daughter, Katia Berra, joined the organization as a full-time translation coordinator.<sup>38</sup>

Bolivia also gave creationists a warm welcome. In 1993 over 1,000 people went to hear a visiting ICR scientist speak at Ekklesia, “the largest evangelical church in downtown La Paz.” The following year big crowds turned out to see Gish, who returned in 1997 to lecture in three Bolivian cities. By this time there were active creationist societies not only in Bolivia but in Ecuador and Peru as well. A visit to Peru in 2004 by Gish, the ICR’s “international ambassador,” provided the occasion for the organization of the Centro Creacionista Latinoamericana Canopy. In the southern cone of South America, the epicenter of creationism was Argentina, which greeted visiting lecturers warmly and where, as mentioned earlier, the Seventh-day Adventists operated a branch of the Geoscience Research Institute.<sup>39</sup>

Nowhere in South America did antievolutionists make deeper inroads than in Brazil, where, according to a survey in 2004, 31 percent of the population believes that “the first humans were created no more than 10,000 years ago,” and the overwhelming majority favors teaching creationism in the public schools. Between 1994 and 1999 Brazilian creationists brought Gish down for three separate tours, during the last of which an estimated 10,000 Brazilians turned out to hear the veteran crusader. Brazil boasted two creationist societies, both dating back to the 1970s: the Associação Brasileira de Pesquisa da Criação (Brazilian Association for Creation Research) and the Sociedade Criacionista Brasileira (Brazilian Creation Society), publisher of the twice-yearly *Revista Criacionista (Creation Magazine)* and distributor of the Geoscience Research Institute’s Portuguese publication, *Ciências das Origens*. In the early 2000s the Seventh-day Adventist Rui Corrêa Vieira served as president of the thousand-member Brazilian Creation Society. At their Centro Universitário Adventista de São Paulo, the Adventists ran the Núcleo de Estudo das Origens (Nucleus of Origin Studies) and offered a graduate course on the “Science of Origins.”<sup>40</sup>

Few Brazilians paid much attention to the developing creationist movement—even when the evangelical governor of the state of Rio de

Janeiro, Antonio Garotinho Matheus, recommended in 2002 that public schools offer nonmandatory instruction in religion. Two years later his wife, Rosângela Rosinha Matheus, who had succeeded him as governor, announced that these lessons would focus on creationism and hired hundreds of teachers to provide the instruction. "I do not believe in the evolution of species," declared Rosinha Matheus. "It's just a theory." Daniel Sottomaioir, head of the skeptical Round Earth Society in Brazil, tried to mount a protest, but, in contrast to Italy, only three Brazilian scientists, including Ennio Candotti, president of the Brazilian Society for the Advancement of Science, joined him. The Catholic majority in the country, explained the disappointed Sottomaioir, had become confused and overwhelmed by the aggressive Protestants who "imported creationism from the U.S."<sup>41</sup>

#### Asia

In Asia the Koreans have emerged as *the* creationist powerhouse, propagating the message at home and abroad. Since its founding in the winter of 1980–1981 the Korea Association of Creation Research, warmly supported by many Christians in the country, has flourished. Early on, members wrote a creationist textbook, *The Natural Sciences* (1990), and began teaching creation science, starting in the evangelical Christian Myong Ji University. During a single year, 1992, the energetic association conducted 1,500 seminars in Seoul alone. Within fifteen years of its founding the association had spawned sixteen branches in Korea, recruited several hundred members with doctorates of one kind or another, and published dozens of creationist books and a bimonthly magazine, *Creation*, with a circulation of 4,000. By 2000 the membership stood at 1,365, giving Korea claim to being the creationist capital of the world, in density if not in influence.<sup>42</sup>

In 2000 the Korea Association of Creation Science made history by dispatching the first creation-science missionary, Kwang Ho Jun (1958–2005), formerly with the U.S. National Institutes of Health, to Muslim Indonesia, where the association had been sending lecturers for some time. Since the 1980s the group had also been proselytizing among Koreans on the West Coast of North America, where the association established several branch chapters. In 1997 Paul Seung-Hun Yang (b. 1955), a physicist and historian of science who served as a vice president of

the association, left Korea for British Columbia, Canada, to set up the creationist Vancouver Institute for Evangelical Worldview, under the auspices of a group of Christian scholars in Korea.<sup>43</sup>

Creationism took hold elsewhere in east and southeast Asia—in Hong Kong, Taiwan, the Philippines, and Japan, where Answers in Genesis in 1998 established AiG/Japan with offices in the Tokyo suburb of Nagasaki. Because of its hostility to Christian proselytizers, the People's Republic of China posed a huge challenge to creationists. In 1993 John Morris spoke at the Beijing Convention Center—but only by promising that he would not mention creation or Christianity. The Institute for Creation Research reported that although the talk was announced "as a critique of *American* education," young Morris had fooled his hosts by actually lecturing on Mount St. Helens and catastrophism while mentioning in passing "that much significant information had been censored out of his training in geology." From time to time *People's Daily*, the official newspaper of the Communist Party of China, covered the creation-evolution controversy in the United States; in the late 1990s the party-owned Central Compilation and Translation Press in Beijing published Chinese translations of both Phillip E. Johnson's *Darwin on Trial* and Michael Behe's *Darwin's Black Box*.<sup>44</sup>

South Asia proved to be almost as impenetrable as China, although many Muslims in India, Pakistan, and Bangladesh presumably rejected evolution. Back in the 1960s Hannington Enoch, the Christian head of the department of zoology at Presidency College, University of Madras, had joined both the Creation Research Society and the Evolution Protest Movement, serving for a time as vice president of the latter. His book *Evolution or Creation* (1966) was, as far as he knew, the only volume published in India presenting the facts against the theory of evolution.<sup>45</sup> By the 1990s creationist missionaries, such as the peripatetic Gish, were visiting India, but the customary reports of throngs of eager listeners did not follow. As late as 2005 Jyoti P. Chakravarty, founder of the small Calcutta-based Creation Science Association of India, could not identify any other "creationist group in South Asia." His nondenominational Christian organization published the quarterly *CSAI Journal* and laid plans for a first-ever creation conference on Indian soil.<sup>46</sup>

American devotees of the Calcutta-born Srila Prabhupada (1896–1977), a Hindu swami who moved to the United States in the mid-1960s and founded the so-called Hare Krishna movement, developed a cri-



tique of evolution based largely on their reading of the *Bhagavad Gita*. Prabhupada denounced Darwin and his followers as "rascals" and dismissed Darwinism as "nonsense." But unlike Christian creationists, Hindu creationists have insisted on the *antiquity* of humans, who they believe appeared fully formed as long, perhaps, as trillions of years ago. Although the leading American advocates of Vedic creationism, such as Michael A. Cremo and Richard L. Thompson, have enjoyed brisk sales of their writings, they have failed to exert much of an influence on Hindus in South Asia, who remain largely oblivious to the purported threat of Darwinism.<sup>47</sup>

#### Africa

Organized creationism remained relatively weak in sub-Saharan Africa, partly because so many Africans found the notion of ape ancestors offensive and conservative Christianity had grown so strong that creationists rarely found an evolutionist establishment to attack. In Kenya, for example, where Pentecostals and Seventh-day Adventists flourished along with Catholics and Anglicans, primary-school students learned about Moses and Darwin side by side in the public schools. Not surprisingly, a recent poll of adolescents showed that 68 percent of them believed "that Christianity is necessarily creationist." According to one observer, "within many home and church environments in Kenya there is no recognition that there are any views of origins which are consistent with Christian commitment other than that of creationism."<sup>48</sup>

In the early 1990s Mishaal Iroto Akpan (b. 1964), a young bishop in the Pentecostal Church of God in Christ, founded an African Creation Science Foundation in Lagos, Nigeria. For a time, reported Akpan, the organization "made great impact in the High Institutions in Nigeria and other West African countries." It sponsored five regional conferences and published a newsletter, *Origins Quarterly*. However, by the late 1990s the foundation, like Nigeria generally, had fallen on hard economic times and had suspended operations.<sup>49</sup>

The comparatively prosperous Republic of South Africa welcomed creationism the most enthusiastically of any sub-Saharan country. In 1948 the pro-apartheid National Party inaugurated a program of Christian National Education acceptable to the Reformed church. As a matter of course, South African students, including those in teacher-training

schools, learned only the Genesis story of creation. After Nelson Mandela and the African National Congress came to power in 1994, the restrictions against the teaching of evolution eased to the point that South African creationists were soon complaining that it had become "almost impossible to get attention for a creationist point of view in present day South Africa, which has a communist government after the last election." If anything, however, organized creationism became more visible than ever. In 1995, for instance, the Seventh-day Adventist creationist Walter J. Veith became professor and chair of zoology at the University of the Western Cape, a platform he used for denouncing evolution. Two years later, when the Australian creationist Andrew Snelling visited South Africa, Trans World Radio broadcast his lectures throughout Africa; and in 2002 Answers in Genesis established an office near Cape Town, headed by the zoologist Johan Kruger. Nevertheless, organized creationism below the Sahara remained relatively weak.<sup>50</sup>

#### The Islamic World

For decades creationism remained largely confined to Christian enclaves. But in the mid-1980s the Institute for Creation Research received an unexpected call from the Muslim minister of education in Turkey reportedly saying that "he wanted to eliminate the secular-based, evolution-only teaching dominant in their schools and replace it with a curriculum teaching the two models, evolution and creation, fairly." Although Turkey had been officially secular since Mustafa Kemal Atatürk's reforms in the early 1920s, most Turks remained devoutly Muslim. Because they followed the Qur'an in believing that Allah had created the world in six days (at an unspecified time in the past), many Muslims found the arguments of Western creationists appealing. During the late 1970s and early 1980s, for instance, the controversial Islamic leader and alleged antiscularist Fethullah Gülen (b. 1941) repeatedly denounced Darwinism as incompatible with Islam. As a result of the contact between the ministry of education and the ICR, several American creationist books—stripped of references to the Bible—were translated into Turkish, and complimentary copies of *Scientific Creationism* were sent to every science teacher in the public schools of Turkey. In 1992 Turkish creationists organized a major conference in Istanbul, with Duane Gish

and John Morris—Henry's son, who for years had been traveling to Turkey in search of Noah's ark—as keynote speakers.<sup>51</sup>

In 1990 a small group of young Turks in Istanbul formed the Science Research Foundation (the Bilim Araştırma Vakfı or BAV), dedicated to promoting an immaterial cosmology and opposing evolution. At the center of the organization was "the mysterious Harun Yahya," who, reported one suspicious Westerner, "had never been seen and was thought to be a corporate alias for the BAV staff."<sup>52</sup> Harun Yahya (Aaron John in English) was the pen name of Adnan Oktar (b. 1956), a talented artist who had moved from his native Ankara in 1979 to study interior design at Mimar Sinan University in Istanbul. Deeply spiritual, young Oktar took offense at the Marxism and Darwinism that flourished on campus. In reaction, he wrote a little book called *The Evolutionary Theory*, which he gave away to fellow students. Within a few years he had gathered around him a coterie of twenty to thirty young people who shared his scientific and religious values.

In the mid-1980s he decided to study philosophy at Istanbul University, where his activities attracted the attention first of the media, then of the authorities. In the summer of 1986 police arrested him on trumped-up charges, reportedly related to his having said "I am a member of the Turkish nation, and of the community of Ibrahim." Following a brief imprisonment, he was committed to a psychiatric hospital, where, he reports, "he was chained to bed by his ankles and exposed to cruel treatments." Although he was originally diagnosed as a paranoid schizophrenic, a state forensic council eventually ruled that he was merely a "passionate idealist." While being held against his will, he vowed "to eradicate the evolution theory and materialism from the Turkish society." The creation of BAV in 1990 only heightened suspicions about Oktar's activities, especially since he tended to recruit his disciples from the families of the well-to-do into a cult-like organization. In 1991 the police, who regarded BAV as a criminal organization because of its success in raising money, rounded up more than a hundred members and hauled them off to jail for interrogation. Oktar himself was charged with possession and use of cocaine, which he claimed had been planted in one of the books in his library by the security forces, who, he said, also spiked his food with cocaine. After his release, he went into virtual seclusion in a beautiful fenced-in villa, provided by his followers, which he had designed and built high in the Asian hills overlooking the Bosphorus.

On occasion he visited "The Farm," a palatial BAV-owned resort outside of Istanbul. He typically refused to give interviews, fearing that anything he said might be used against him. Despite such precautions, in November 1999 he was rearrested and charged with financial corruption and the use of blackmail to support his organization. For seven days, while the authorities pressured him to sign a confession, he was made to sit on a cold stone floor, handcuffed and sleepless. In the quintessential embarrassment for an imam, secular newspapers attempted to link him to a beautiful woman with Mafia ties.<sup>53</sup>

Despite such harsh treatment, Oktar did not remain silent. Book after book appeared listing Harun Yahya as author. The total eventually approached 200, an output that led critics to suspect that one person was not doing all of the writing. Among the most scandalous of his books was *The Holocaust Hoax*, which described "the so-called 'Holocaust'" as "a hoax and a propaganda vehicle employed by the Zionists who sought the support of world public opinion in order to establish the state of Israel." But the book that more than any other made Harun Yahya's reputation was *The Evolution Deceit: The Collapse of Darwinism and Its Ideological Background* (1997). In it he explained his antipathy toward evolution: It denied the existence of Allah, abolished moral values, and promoted communism and materialism. Oktar rejected not only materialism but matter itself, arguing, in language reminiscent of the Christian Scientist Mary Baker Eddy, that "all the events in the world are but mere imagination." The "external world," he insisted, "is a collection of images perpetually presented to our soul by Allah." By the end of 2000 BAV and other sympathetic groups had given away millions of copies of *The Evolution Deceit*, with special gift editions going to such celebrities such as William J. Clinton, Al Gore, and Richard Gere. Within a few more years translators had produced versions in some twenty languages, from Arabic to Urdu.<sup>54</sup>

In 1998, in the wake of a change in government that brought evolution back into the classroom, BAV, supported by wealthy members and supporters, launched what it called "a great intellectual campaign against Darwinism." Having laid a foundation by distributing copies of *The Evolution Deceit* "in every corner of Turkey," BAV organized a series of well-funded creationist conferences throughout the country, beginning with a high-profile meeting in Istanbul in April 1998. Announcing "The Collapse of the Theory of Evolution: The Fact of Creation," this

event featured the Americans Duane Gish and Kenneth Cumming from the ICR as well as the Turkish scientist Cevat Babuna from Istanbul University. "On the day of the conference," reported the ICR,

many full-page ads had been placed in several of Turkey's leading newspapers. Every city bus had a poster in the back window, and two days prior to the meeting, about 200,000 copies of an 80-page booklet were given to every subscriber of each of two newspapers! Both Dr. Gish and Cumming were guest speakers on TV talk shows and interviewees in news columns of the national papers. As a result, the auditorium was filled to overflowing with 1,200 in the main auditorium and an estimated 300 in an overflow lounge with closed circuit TV.

Just three months later BAV brought over a half-dozen American creationists, including the "famous geologist" John Morris, for an equally successful follow-up conference. Within a year the foundation had sponsored sixty conferences in every region of Turkey, drawing audiences of from a few hundred to several thousand. One of the most popular speakers was the ophthalmologist Ömer Cenker Ilicali, who had received advanced training in the United States.<sup>55</sup>

Although Oktar and his associates in the BAV regarded themselves as peace-loving "moderate Muslims," eager to engage the modern scientific and aesthetic world, their critics denounced them as a dangerous fundamentalist cult. Leading the response were fellows of the Turkish Academy of Sciences (TÜBA) and a handful of other scientists, quietly backed by secularists in the military. At a time when political assassinations sometimes made headlines, both sides had reason to fear physical violence. Indeed, the outspoken evolutionist Ümit Sayın, a physician-scientist who had been harassed by BAV, worried that the conflict might "become a civil war . . . very bloody . . . a life-and-death thing." At times BAV posted photographs of evolution activists in public places and denounced them as "Maoists." In 1999 six of the targeted evolutionists, including Sayın, successfully sued BAV for defamation, winning several thousand dollars in damages. Despite this symbolic victory, the evolutionists lost the larger battle against Islamic creationism. "There is no fight against the creationists now. They have won the war," announced a dejected Sayın in 2004. "In 1998, I was able to motivate six members of the Turkish Academy of Sciences to speak out against the creationist movement. Today, it's impossible to motivate anyone. They're afraid

they'll be attacked by the radical Islamists and the BAV." The schools no longer taught evolution, and many of the country's political leaders had come to regard evolution as a "hoax."<sup>56</sup>

By the early twenty-first century BAV was becoming increasingly active on the international scene. This resulted partly from its aggressive translation program but also from its unprecedented use of the internet. As one observer noted, the latter made Oktar "the first Islamic intellectual who has based his career on the use of this most-up-to-date technology." Initially, BAV focused its missionary activities on Muslims in the Turkic Republics and in the Balkans, but it quickly expanded to reach Muslims throughout the world. Its stable of lecturers, which included Ilicali, carried the creationist message to Singapore, Brunei, and Malaysia. In 2003 BAV announced "The British Expedition: Challenging Darwinism in Its Homeland," for which it teamed up with Muslim student organizations at five English universities. The following year the Durban-based Al-Ansaar Foundation sponsored a series of conferences "based on the works of Harun Yahya" in the leading cities of South Africa, including Durban, Cape Town, and Johannesburg.<sup>57</sup> Immediately after Islamic terrorists destroyed the World Trade Center in New York City on September 11, 2001, killing thousands, Oktar denounced not only such terrorism but anti-Semitism, arguing that he opposed Zionism, not Jews.<sup>58</sup>

For years BAV maintained a cozy relationship with Christian young-earth creationists, feting them at conferences, translating their books, and carrying their message to the Islamic world. But the partnership between the equally uncompromising Christian and Muslim fundamentalists remained understandably unstable. The evangelistic Henry Morris, though pleased that the Qur'an taught a six-day creation, expressed revulsion at its denial "that Jesus was the Son of God." As he noted in language hardly calculated to win Muslim friends: "Mohammed is dead and Jesus is alive! . . . Does Mohammed love us? Does Allah love us? Absolutely not!" His advice for Muslims was "to accept Christ as Savior." Oktar, for his part, appreciated the ICR's active opposition to evolution and its friendly responses to his requests for assistance, but, as a believer in the infallibility of the Qur'an, he did not subscribe to a young earth, twenty-four-hour creation days, or a global flood. In contrast to Morris, he accepted the Big Bang cosmogony, a four-billion-year-old earth, and the evidence of radiometric dating. He regarded the original units of plants and animals (created, according to the Qur'an, by Allah) as an

open scientific question, and he limited the deluge of Noah to the region of Mesopotamia.<sup>59</sup>

Philosophically and theologically, Oktar thus remained much closer to the advocates of intelligent design than to the young-earth creationists. At first the leading ID theorists responded coolly to BAV's overtures, but in time the intelligent designers came to embrace BAV so warmly that they identified Harun Yahya's Web site as "An Islamic Intelligent Design Site." In May 2005 the Turkish writer Mustafa Akyol (b. 1972), a BAV fellow traveler who had broken with Oktar, testified in Topeka in favor of intelligent design and against Darwinism before the Kansas State Board of Education. His testimony in the American heartland enhanced his growing reputation among neo-conservatives as a spokesman for moderation and ecumenism, but the local press treated him rudely—one magazine depicted "the Turkish connection" as an ape man—and Oktar publicly rebuked him for espousing the intelligent-design heresy. "No Muslim would ever say, 'There is Intelligent Design' instead of 'Allah created,'" declared the aroused (and perhaps envious) BAV leader. Islamic proponents of intelligent design, he wrote in a scarcely veiled reference to Akyol,

seek to imitate the style employed by their Western counterparts, and are careful to avoid any reference to the name of Allah. . . . However, it is unacceptable for anyone who claims to be a Muslim to constantly avoid saying, "Allah created" and instead using terms such as 'A power created' or 'the work of intelligent design.' That is an approach no Muslim can adopt.

For Oktar, intelligent design had become just "another of Satan's snares." By this time (if not earlier) he was beginning to identify with the Mahdi, a savior who, according to some prophetic Islamic writers, would appear on earth just before the Prophet Jesus returned to usher in the end of time.<sup>60</sup>

Even beyond the influence of BAV, Darwinism and Darwinists did not fare well in the Islamic world. In a particularly notorious case in Sudan in 1989, shortly after a military coup brought the National Islamic Front into power, security officers, apparently tipped off by a fellow faculty member, arrested and tortured Farouk Ibrahim el Nur, a Muslim biologist at the University of Khartoum, for teaching evolution. "I was flogged, kicked, hit in the face, head, and other parts of the body by professional torturers," he reported after his release from prison. "I was

threatened with death, humiliated and subjected to other types of torture." A less serious but equally revealing incident occurred in Saudi Arabia in 2001. After a religious court denounced the Japanese game of Pokemon, Muslim authorities declared a "fatwa" against it, because, as one sheik explained, the game's characters seem to have been based on the heretical views of Charles Darwin.<sup>61</sup> Among Muslims in southeast Asia, antievolution sentiment was just as strong. When reformers in Malaysia altered the public-school curriculum in the 1980s to be more favorable to Islam, they eliminated any teaching of evolution while stressing the divine origin of humans. Thus, "in effect," wrote one unhappy educator, "Malaysian school science is a creationist science."<sup>62</sup>

### The Jewish World

In the Jewish world antievolutionist activity remained limited to small pockets within the Orthodox community, and until the late twentieth century even Orthodox Jews rarely paid any attention to Christian creationists—or, for that matter, to any kind of scientific argument against evolution. The ultra-orthodox lived in a Torah-based society, culturally isolated from the modern world. One of the first signs of engagement with science came in 1976 with the appearance of *Challenge: Torah Views on Science and Its Problems*, edited by two Orthodox Jews in England, the rabbi Aryeh Carmell and the physicist Cyril Domb, for the Association of Orthodox Jewish Scientists. Among the contributors to this volume—and the first Jew to attract serious interest among young-earth creationists—was the MIT-trained physicist Lee M. Spetner (b. 1927), whose later book, *Not by Chance: Shattering the Modern Theory of Evolution* (1996), was hailed by one creation scientist as having "dealt a death-blow at the heart of the neo-Darwinian story." Spetner, having spent nearly two decades with the Applied Physics Laboratory of Johns Hopkins University, had moved in 1970 to Israel, where he engaged in weapons research—and indulged his hobby of searching for apparent flaws in the theory of evolution. Inspired by the writings of the rabbi David Luria (1798–1855), who relied on Talmudic and Midrashic sources to calculate the number of originally created species of beasts and birds (365 each), Spetner came up with what he called the "nonrandom evolutionary hypothesis." Like Christian young-earth creationists, Spetner accepted the evidence for "microevolution," which he attributed to Lamarckian-like

inheritance of acquired characteristics, but rejected "macroevolution," that is, "the grand sweep of evolution" based on common descent. Spetner's hypothesis, gushed Carl Wieland, the founder of the Creation Science Foundation, had "blown the whole evolutionary mechanism out of the water once and for all."<sup>63</sup>

In 2000 a group of Jewish antievolutionists in Israel and the United States formed the Torah Science Foundation (TSF), reminiscent of the Creation Science Foundation in Australia. Behind this initiative lay the influence of the Lubavitcher rebbe Menachem Mendel Schneerson (1902–1994), once described as "the most powerful Orthodox leader in centuries." The Ukrainian-born Schneerson, who moved to Brooklyn, New York, in 1941, liked to stress the uncertainty of modern science; an ultra-literalist, he defended geocentricity in the name of the Torah. On the question of evolution, Schneerson rivaled the young-earth creationists in audacity, suggesting that God may have created fossils less than 5,800 years ago. Wanting, like so many Christian fundamentalists, not "to cast aspersions on science or to discredit the scientific method," he insisted that evolution had nothing to do with science. Writing to a worried follower in 1962, he declared: "If you are still troubled by the theory of evolution, I can tell you without fear of contradiction that it has not a shred of *evidencia* to support it. . . . [It] is devoid of any real scientific basis." The Hasidic rabbi's views, reprinted in *Challenge*, gave direction to the Torah Science Foundation; indeed, one member testified that no one exerted a greater influence on Torah science than Schneerson. One leader, Herman Branover (b. 1931), professor of physics at Ben-Gurion University and a member of the Lubavitch sect, served for a time as Schneerson's chief scientific spokesman and took "the Rebbe's teachings on the relationship between Torah and Science to wide audiences in the United States, Israel and the former Soviet Union."<sup>64</sup>

As early as 1984 another TSF leader, the Jerusalem-based Sarah Idit (Susan) Schneider (b. 1951), fused the Torah and scientific creationism into something she called "Evolutionary Creationism." Although she rejected "creationism" on the grounds that "it does not incorporate traditional Torah commentaries and perspectives on the subject," she, like Spetner, followed the scientific creationists in distinguishing between microevolution (acceptable) and macroevolution (unacceptable). Her reading of the Torah led her to deny a common ancestry among "the broad categories of animal types," especially between men and monkeys,

and to assert God's role as the creator of Adam less than 5,800 years ago. The head of the TSF, Eliezer (Eduardo) Zeiger, a professor of ecology and evolutionary biology at the University of California, Los Angeles, advocated something very similar, which he dubbed "*Kosher Evolution*." Like Schneider and Spetner, he adopted the now-common creation-science ploy of accepting microevolution while rejecting macroevolution. Yet Zeiger, too, insisted on distinguishing his views from scientific creationism by stressing the former's "access to the inner wisdom of the Torah, which includes Kabbalah and Chassidic philosophy." Although he (and Spetner) joined forces with the intelligent-design theorist William A. Dembski for a 2005 conference on Torah and science, Zeiger rejected intelligent design, which he criticized for trying "to prove the existence of a creator using the scientific method."<sup>65</sup>

Antievolution sentiment occasionally intersected with popular culture in Israel. In 1992, for example, a brouhaha erupted over a Pepsi Cola advertising campaign, which depicted a monkey evolving into an Israeli man holding a refreshing can of Pepsi. The Religious Council of Jerusalem condemned Pepsi, with one rabbi declaring that "Judaism does not view the connection of humanity with monkeys as much of an honour for mankind." The very next year the *Jerusalem Post* reported that one ultra-orthodox party was threatening to withdraw its kosher certificate from a dairy that was using dinosaur symbols to promote its products. According to a spokesman for the party, parents were complaining that the dinosaur stickers distributed by the dairy were prompting their children to turn to encyclopedias to learn more about the extinct animals. Such reference works were causing problems, explained the spokesman, because they claimed that dinosaurs were "100 million years old, while we believe God created the world 5,753 years ago." Less extreme voices called for toleration of the dinosaurs. "If the haredim want to ignore scientific proof of the existence of dinosaurs, that is their right," observed one Conservative rabbi. "But it is the obligation of the secular public and the enlightened religious public to strongly reject any attempt at extortion or coercion."<sup>66</sup>

Although secular schools in Israel routinely taught evolution, ultra-orthodox (Haredi) institutions often insisted on the recent creation of earth's first inhabitants and typically ignored modern science altogether. The ultra-orthodox also monitored discussions of evolution in the public sphere. In the spring of 2005 a group of nearly two dozen re-

spected ultra-orthodox rabbis plastered a Jerusalem neighborhood with posters denouncing one of their own, Rabbi Nosson Slifkin, who taught a course in biblical and Talmudic zoology at a yeshiva near Jerusalem. Slifkin, who hoped to reconcile modern science and the Torah, argued for the compatibility of evolution and Judaism, insisting that scientific data gave "clear proof to the naked eye that the world is much more than 5,765 years old." The offended rabbis wrote an open letter denouncing Slifkin for teaching "that the world is millions of years old—all nonsense!—and many other things that should not be heard and certainly not believed." They also banned his books, declaring that they "may not be possessed or distributed."<sup>67</sup>

### Identity Creationism

The creationism of ultra-orthodox Jews represents one manifestation of what the anthropologist John Barker has called "identity creationism." Like indigenous peoples in the Americas, Australia, and elsewhere, the Jews traced their origins back to a unique event described in their holy book. The Native American writer Vine Deloria, Jr. (1933–2005), who regarded the creationist-evolutionist debate as mere "quarrel within the Western belief system," described such creation stories as offering "a third way"—the first two being creationism and Darwinism—of explaining origins. Dismissing the scientific account of Native Americans emigrating from Asia to North America across a prehistoric land bridge as a "myth," Deloria relied instead on oral tradition "that the Earth was a special project of either mother nature or god." The indigenous peoples in Canada, known as the First Nations, likewise privileged their sacred histories. The Nuxalk of British Columbia, for example, believed that "the founding ancestors of family lines came down from the heavenly house of the Creator at the beginning of time to settle in various sites in the Bella Coola valley." Unlike Christian creationists, explains Barker, the Nuxalk never tried to force their religious beliefs on others. Perhaps because of that difference, and because of their attitude toward multiculturalism, many scientists seemed much more tolerant of aboriginal creationism than of Christian creationism.<sup>68</sup>

Another variant of identity creationism took hold among the Black Muslims. Elijah Muhammad (1897–1975, born Elijah Poole), a leader of the Nation of Islam, traced the origins of the self-created Black Na-

tion or "original man" back tens of trillions of years. These people not only made the universe but produced the white race, from which descended "monkeys, apes, and swine." Elijah Muhammad claimed that Allah told him that 6,600 years ago a devilish god-man named Yakub, a native of Arabia nicknamed the "big head scientist," used his knowledge of genetics to initiate a brutal, 600-year-long breeding experiment on the Aegean island of Patmos that resulted in a race of pale-white devils known as Caucasians. Malcolm X (1925–1965, born Malcolm Little), a disciple of Elijah Muhammad's, popularized this creation story in his best-selling autobiography.<sup>69</sup>

### Creationism Floods the Earth

At first few observers noticed the spread of creationism outside the United States. However, in 2000 the British magazine *New Scientist* devoted a cover story to warning the public that it was time to "Start Worrying Now," because "From Kansas to Korea, Creationism Is Flooding the Earth." Although the unexpected development seemed almost "beyond belief," the magazine described creationism as "mutating and spreading" around the world, "even linking up with like-minded people in the Muslim world." Just five years later representatives from national academies of science around the world joined in signing a statement supporting evolution and condemning the global spread of "theories not testable by science."<sup>70</sup> Contrary to almost all expectations, geographical, theological, and political barriers had utterly failed to contain creationism.