

# What Is the Koran?

by TOBY LESTER



*Researchers with a variety of academic and theological interests are proposing controversial theories about the Koran and Islamic history, and are striving to reinterpret Islam for the modern world. This is, as one scholar puts it, a "sensitive business"*

**I**N 1972, during the restoration of the Great Mosque of Sana'a, in Yemen, laborers working in a loft between the structure's inner and outer roofs stumbled across a remarkable gravesite, although they did not realize it at the time. Their ignorance was excusable: mosques do not normally house graves, and this site contained no tombstones, no human remains, no funereal jewelry. It contained nothing more, in fact, than an unappealing mash of old parchment and paper documents—damaged books and individual pages of Arabic text, fused together by centuries of rain and dampness, gnawed into over the years by rats and insects. Intent on completing the task at hand, the laborers gathered up the manuscripts, pressed them into some twenty potato sacks, and set them aside on the staircase of one of the mosque's minarets, where they were locked away—and where they would probably have been forgotten once again, were it not for Qadhi Isma'il al-Akwa', then the president of the Yemeni Antiquities Authority, who realized the potential importance of the find.

Al-Akwa' sought international assistance in examining and preserving the fragments, and in 1979 managed to interest a visiting German scholar, who in turn persuaded the German government to organize and fund a restoration project. Soon after the project began, it became clear that the hoard was a fabulous example of what is sometimes referred to as a "paper grave"—in this case the resting place for, among other things,

tens of thousands of fragments from close to a thousand different parchment codices of the Koran, the Muslim holy scripture. In some pious Muslim circles it is held that worn-out or damaged copies of the Koran must be removed from circulation; hence the idea of a grave, which both preserves the sanctity of the texts being laid to rest and ensures that only complete and unblemished editions of the scripture will be read.

Some of the parchment pages in the Yemeni hoard seemed to date back to the seventh and eighth centuries A.D., or Islam's first two centuries—they were fragments, in other words, of perhaps the oldest Korans in existence. What's more, some of these fragments revealed small but intriguing aberrations from the standard Koranic text. Such aberrations, though not surprising to textual historians, are troublingly at odds with the orthodox Muslim belief that the Koran as it has reached us today is quite simply the perfect, timeless, and unchanging Word of God.

The mainly secular effort to reinterpret the Koran—in part based on textual evidence such as that provided by the

over even earlier, washed-off versions. What the Yemeni Korans seemed to suggest, Puin began to feel, was an *evolving* text rather than simply the Word of God as revealed in its entirety to the Prophet Muhammad in the seventh century A.D.

Since the early 1980s more than 15,000 sheets of the Yemeni Korans have painstakingly been flattened, cleaned, treated, sorted, and assembled; they now sit ("preserved for another thousand years," Puin says) in Yemen's House of Manuscripts, awaiting detailed examination. That is something the Yemeni authorities have seemed reluctant to allow, however. "They want to keep this thing low-profile, as we do too, although for different reasons," Puin explains. "They

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Yemeni fragments—is disturbing and offensive to many Muslims, just as attempts to reinterpret the Bible and the life of Jesus are disturbing and offensive to many conservative Christians. Nevertheless, there are scholars, Muslims among them, who feel that such an effort, which amounts essentially to placing the Koran in history, will provide fuel for an Islamic revival of sorts—a reappropriation of tradition, a going forward by looking back. Thus far confined to scholarly argument, this sort of thinking can be nonetheless very powerful and—as the histories of the Renaissance and the Reformation demonstrate—can lead to major social change. The Koran, after all, is currently the world's most ideologically influential text.

### Looking at the Fragments

**T**HE first person to spend a significant amount of time examining the Yemeni fragments, in 1981, was Gerd R. Puin, a specialist in Arabic calligraphy and Koranic paleography based at Saarland University, in Saarbrücken, Germany. Puin, who had been sent by the German government to organize and oversee the restoration project, recognized the antiquity of some of the parchment fragments, and his preliminary inspection also revealed unconventional verse orderings, minor textual variations, and rare styles of orthography and artistic embellishment. Enticing, too, were the sheets of the scripture written in the rare and early Hijazi Arabic script: pieces of the earliest Korans known to exist, they were also palimpsests—versions very clearly written

don't want attention drawn to the fact that there are Germans and others working on the Koran. They don't want it made public that there is work being done *at all*, since the Muslim position is that everything that needs to be said about the Koran's history was said a thousand years ago."

To date just two scholars have been granted extensive access to the Yemeni fragments: Puin and his colleague H.-C. Graf von Bothmer, an Islamic-art historian also based at Saarland University. Puin and Von Bothmer have published only a few tantalizingly brief articles in scholarly publications on what they have discovered in the Yemeni fragments. They have been reluctant to publish partly because until recently they were more concerned with sorting and classifying the fragments than with systematically examining them, and partly because they felt that the Yemeni authorities, if they realized the possible implications of the discovery, might refuse them further access. Von Bothmer, however, in 1997 finished taking more than 35,000 microfilm pictures of the fragments, and has recently brought the pictures back to Germany. This means that soon Von Bothmer, Puin, and other scholars will finally have a chance to scrutinize the texts and to publish their findings freely—a prospect that thrills Puin. "So many Muslims have this belief that everything between the two covers of the Koran is just God's unaltered word," he says. "They like to quote the textual work that shows that the Bible has a history and did not fall straight out of the sky, but until now the Koran has been out of this discussion. The only way to break through this wall is to prove that the Koran has a history too. The Sana'a fragments will help us to do this."

Puin is not alone in his enthusiasm. "The impact of the Yemeni manuscripts is still to be felt," says Andrew Rippin, a professor of religious studies at the University of Calgary, who is at the forefront of Koranic studies today. "Their variant readings and verse orders are all very significant. Everybody agrees on that. These manuscripts say that the early history of the Koranic text is much more of an open question than many have suspected: the text was less stable, and therefore had less authority, than has always been claimed."

## Copyediting God

**B**Y the standards of contemporary biblical scholarship, most of the questions being posed by scholars like Puin and Rippin are rather modest; outside an Islamic context, proposing that the Koran has a history and suggesting that it can be interpreted metaphorically are not radical steps. But the Islamic context—and Muslim sensibilities—cannot be ignored. "To historicize the Koran would in effect delegitimize the whole historical experience of the Muslim community," says R. Stephen Humphreys, a professor of Islamic studies at the University of California at Santa Barbara. "The Koran is the charter for the community, the document that called it into existence. And ideally—though obviously not always in reality—Islamic history has been the effort to pursue and work out the commandments of the Koran in human life. If the Koran is a historical document, then the whole Islamic struggle of fourteen centuries is effectively meaningless."

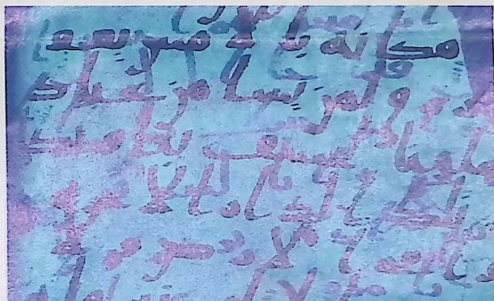
The orthodox Muslim view of the Koran as self-evidently the Word of God, perfect and inimitable in message, language, style, and form, is strikingly similar to the fundamentalist Christian notion of the Bible's "inerrancy" and "verbal inspiration" that is still common in many places today. The notion was given classic expression only a little more than a century ago by the biblical scholar John William Burgon.

The Bible is none other than *the voice of Him that sitteth upon the Throne!* Every Book of it, every Chapter of it, every Verse of it, every word of it, every syllable of it . . . every letter of it, is the direct utterance of the Most High!

Not all the Christians think this way about the Bible, however, and in fact, as the *Encyclopaedia of Islam* (1981) points out, "the closest analogue in Christian belief to the role of the Qur'an in Muslim belief is not the Bible, but Christ." If Christ is the Word of God made flesh, the Koran is the Word of God made text, and questioning its sanctity or authority is thus considered an outright attack on Islam—as Salman Rushdie knows all too well.

The prospect of a Muslim backlash has not deterred the critical-historical study of the Koran, as the existence of the essays in *The Origins of the Koran* (1998) demonstrate. Even in the aftermath of the Rushdie affair the work contin-

ues: In 1996 the Koranic scholar Günter Lüling wrote in *The Journal of Higher Criticism* about "the wide extent to which both the text of the Koran and the learned Islamic account of Islamic origins have been distorted, a deformation unsuspectingly accepted by Western Islamicists until now." In 1994 the journal *Jerusalem Studies in Arabic and Islam* published a posthumous study by Yehuda D. Nevo, of the Hebrew University in Jerusalem, detailing seventh- and eighth-century religious inscriptions on stones in the Negev Desert which, Nevo suggested, pose "considerable problems for the traditional Muslim account of the history of Islam." That same year, and in the same journal, Patricia Crone, a



TOP: YEMENI KORAN FRAGMENTS, AS THEY WERE FOUND IN 1972. BOTTOM: A PAGE FROM PERHAPS THE WORLD'S OLDEST EXTANT KORAN, FROM BEFORE 750 A.D. ULTRAVIOLET LIGHT REVEALS EVEN EARLIER KORANIC WRITING UNDERNEATH

historian of early Islam currently based at the Institute for Advanced Study, in Princeton, New Jersey, published an article in which she argued that elucidating problematic passages in the Koranic text is likely to be made possible only by "abandoning the conventional account of how the Qur'an was born." And since 1991 James Bellamy, of the University of Michigan, has proposed in the *Journal of the American Oriental Society* a series of "emendations to the text of

the Koran"—changes that from the orthodox Muslim perspective amount to copyediting God.

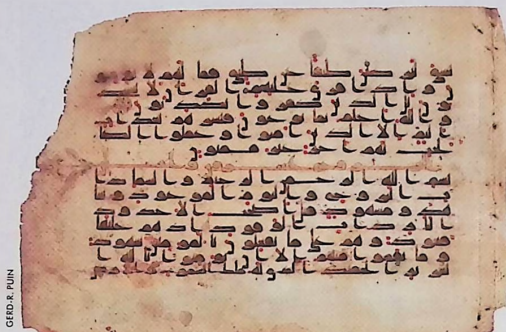
Crone is one of the most iconoclastic of these scholars. During the 1970s and 1980s she wrote and collaborated on several books—most notoriously, with Michael Cook, *Hagarism: The Making of the Islamic World* (1977)—that made radical arguments about the origins of Islam and the writing of Islamic history. Among *Hagarism's* controversial claims were suggestions that the text of the Koran came into being later than is now believed ("There is no hard evidence for the existence of the Koran in any form before the last decade of the seventh century"); that Mecca was not the ini-

Muhammad lived two years longer than the Muslim tradition claims he did, and that the historicity of his migration to Medina is questionable. But Crone has continued to challenge both Muslim and Western orthodox views of Islamic history. In *Meccan Trade and the Rise of Islam* (1987) she made a detailed argument challenging the prevailing view among Western (and some Muslim) scholars that Islam arose in response to the Arabian spice trade.

Gerd-R. Puin's current thinking about the Koran's history partakes of this contemporary revisionism. "My idea is that the Koran is a kind of cocktail of texts that were not all understood even at the time of Muhammad," he says. "Many of them may even be a hundred years older than Islam itself. Even within the Islamic traditions there is a huge body of contradictory information, including a significant Christian substrate; one can derive a whole Islamic *anti-history* from them if one wants."

Patricia Crone defends the goals of this sort of thinking. "The Koran is a scripture with a history like any other—except that we don't know this history and tend to provoke howls of protest when we study it. Nobody would mind the howls if they came from Westerners, but Westerners feel deferential when the howls come from other people: who are you to tamper with *their* legacy? But we Islamicists are not trying to destroy anyone's faith."

Not everyone agrees with that assessment—especially since Western Koranic scholarship has traditionally taken place in the context of an openly declared hostility between Christianity and Islam. (Indeed, the broad movement in the West over the past two centuries to "explain" the East, often referred to as Orientalism, has in recent years come under fire for exhibiting similar religious and cultural biases.) The Koran has seemed, for Christian and Jewish scholars particularly, to possess an aura of heresy; the nineteenth-century Orientalist William Muir, for example, contended that the Koran was one of "the most stubborn enemies of Civilisation, Liberty, and the Truth which the world has yet known." Early Soviet scholars, too, undertook an ideologically motivated study of Islam's origins, with almost missionary zeal: in the 1920s and in 1930 a Soviet publication titled *Ateist* ran a series of articles explaining the rise of Islam in Marxist-Leninist terms. In *Islam and Russia* (1956), Ann K. S. Lambton summarized much of this work, and wrote that several Soviet scholars had theorized that "the motive force of the nascent religion was supplied by the mercantile bourgeoisie of Mecca and Medina"; that a certain S.P. Tolstov had held that "Islam was a social-religious movement originating in the slave-owning, not feudal, form of Arab society"; and that N.A. Morozov had argued that "until the Crusades Islam was indistinguishable from Judaism and . . . only then did it receive its independent character, while Muhammad and the first Caliphs are mythical figures." Morozov appears to have been a particularly flamboyant theorist: Lambton wrote that



FROM THE YEMENI HOARD: PROBABLY A NINTH- OR TENTH-CENTURY KORAN

tial Islamic sanctuary ("[the evidence] points unambiguously to a sanctuary in north-west Arabia . . . Mecca was secondary"); that the Arab conquests preceded the institutionalization of Islam ("the Jewish messianic fantasy was enacted in the form of an Arab conquest of the Holy Land"); that the idea of the *hijra*, or the migration of Muhammad and his followers from Mecca to Medina in 622, may have evolved long after Muhammad died ("No seventh-century source identifies the Arab era as that of the *hijra*"); and that the term "Muslim" was not commonly used in early Islam ("There is no good reason to suppose that the bearers of this primitive identity called themselves 'Muslims' [but] sources do . . . reveal an earlier designation of the community [which] appears in Greek as 'Magaritai' in a papyrus of 642, and in Syriac as 'Mahgre' or 'Mahgraye' from as early as the 640s").

*Hagarism* came under immediate attack, from Muslim and non-Muslim scholars alike, for its heavy reliance on hostile sources. ("This is a book," the authors wrote, "based on what from any Muslim perspective must appear an inordinate regard for the testimony of infidel sources.") Crone and Cook have since backed away from some of its most radical propositions—such as, for example, that the Prophet

he also argued, in his book *Christ* (1930), that "in the Middle Ages Islam was merely an off-shoot of Arianism evoked by a meteorological event in the Red Sea area near Mecca."

Not surprisingly, then, given the biases of much non-Islamic critical study of the Koran, Muslims are inclined to dismiss it outright. A particularly eloquent protest came in 1987, in the *Muslim World Book Review*, in a paper titled "Method Against Truth: Orientalism and Qur'anic Studies," by the Muslim critic S. Parvez Manzoor. Placing the origins of Western Koranic scholarship in "the polemical marshes of medieval Christianity" and describing its contemporary state as a "cul-de-sac of its own making," Manzoor orchestrated a complex and layered assault on the entire Western approach to Islam. He opened his essay in a rage.

The Orientalist enterprise of Qur'anic studies, whatever its other merits and services, was a project born of spite, bred in frustration and nourished by vengeance: the spite of the powerful for the powerless, the frustration of the "rational" towards the "superstitious" and the vengeance of the "orthodox" against the "non-conformist." At the greatest hour of his worldly-triumph, the Western man, coordinating the powers of the State, Church and Academia, launched his most determined assault on the citadel of Muslim faith. All the aberrant streaks of his arrogant personality—its reckless rationalism, its world-dominating phantasy and its sectarian fanaticism—joined in an unholy conspiracy to dislodge the Muslim Scripture from its firmly entrenched position as the epitome of historic authenticity and moral unassailability. The ultimate trophy that the Western man sought by his dare-devil venture was the Muslim mind itself. In order to rid the West forever of the "problem" of Islam, he reasoned, Muslim consciousness must be made to despair of the cognitive certainty of the Divine message revealed to the Prophet. Only a Muslim confounded of the historical authenticity or doctrinal autonomy of the Qur'anic revelation would abdicate his universal mission and hence pose no challenge to the global domination of the West. Such, at least, seems to have been the tacit, if not the explicit, rationale of the Orientalist assault on the Qur'ān.

Despite such resistance, Western researchers with a variety of academic and theological interests press on, applying modern techniques of textual and historical criticism to the study of the Koran. That a substantial body of this scholarship now exists is indicated by the recent decision of the European firm Brill Publishers—a long-established publisher of such major works as *The Encyclopaedia of Islam* and *The Dead Sea Scrolls Study Edition*—to commission the first-ever *Encyclopaedia of the Qur'an*. Jane McAuliffe, a professor of Islamic studies at the University of





Toronto, and the general editor of the encyclopedia, hopes that it will function as a "rough analogue" to biblical encyclopedias and will be "a turn-of-the-millennium summative work for the state of Koranic scholarship." Articles for the first part of the encyclopedia are currently being edited and prepared for publication later this year.

The *Encyclopaedia of the Qur'an* will be a truly collaborative enterprise, carried out by Muslims and non-Muslims, and its articles will present multiple approaches to the interpretation of the Koran, some of which are likely to challenge traditional Islamic views—thus disturbing many in the Islamic world, where the time is decidedly less ripe for a revisionist study of the Koran. The plight of Nasr Abu Zaid, an unassuming Egyptian professor of Arabic who sits on the encyclopedia's advisory board, illustrates the difficulties facing Muslim scholars trying to reinterpret their tradition.

### "A Macabre Farce"

"THE Koran is a text, a literary text, and the only way to understand, explain, and analyze it is through a literary approach," Abu Zaid says. "This is an essential theological issue." For expressing views like this in print—in essence, for challenging the idea that the Koran must be read literally as the absolute and unchanging Word of God—Abu Zaid was in 1995 officially branded an apostate, a ruling that in 1996 was upheld by Egypt's highest court. The court then proceeded, on the grounds of an Islamic law forbidding the marriage of an apostate to a Muslim, to order Abu Zaid to divorce his wife, Ibtihal Yunis (a ruling that the shocked and happily married Yunis described at the time as coming "like a blow to the head with a brick").

Abu Zaid steadfastly maintains that he is a pious Muslim, but contends that the Koran's manifest content—for example, the often archaic laws about the treatment of women for which Islam is infamous—is much less important than its complex, regenerative, and spiritually nourishing latent content. The orthodox Islamic view, Abu Zaid claims, is stultifying; it reduces a divine, eternal, and dynamic text to a fixed human interpretation with no more life and meaning than "a trinket . . . a talisman . . . or an ornament."

For a while Abu Zaid remained in Egypt and sought to refute the charges of apostasy, but in the face of death threats and relentless public harassment he fled with his wife from Cairo to Holland, calling the whole affair "a macabre farce." Sheikh Youssef al-Badri, the cleric whose preachings inspired much of the opposition to Abu Zaid, was exultant. "We are not terrorists; we have not used bullets or machine guns, but we have stopped an enemy of Islam from poking fun at our religion. . . . No one will even dare to think about harming Islam again."

Abu Zaid seems to have been justified in fearing for his life

and fleeing: in 1992 the Egyptian journalist Farag Foda was assassinated by Islamists for his critical writings about Egypt's Muslim Brotherhood, and in 1994 the Nobel Prize-winning novelist Naguib Mahfouz was stabbed for writing, among other works, the allegorical *Children of Gabalawi* (1959)—a novel, structured like the Koran, that presents "heretical" conceptions of God and the Prophet Muhammad.

Deviating from the orthodox interpretation of the Koran, says the Algerian Mohammed Arkoun, a professor emeritus of Islamic thought at the University of Paris, is "a very sensitive business" with major implications. "Millions and millions of people refer to the Koran daily to explain their actions and to justify their aspirations," Arkoun says. "This scale of reference is much larger than it has ever been before."

### Muhammad in the Cave

MECCA sits in a barren hollow between two ranges of steep hills in the west of present-day Saudi Arabia. To its immediate west lies the flat and sweltering Red Sea coast; to the east stretches the great Rub' al-Khali, or Empty Quarter—the largest continuous body of sand on the planet. The town's setting is uninviting: the earth is dry and dusty, and smolders under a relentless sun; the whole region is scoured by hot, throbbing desert winds. Although sometimes rain does not fall for years, when it does come it can be heavy, creating torrents of water that rush out of the hills and flood the basin in which the city lies. As a backdrop for divine revelation, the area is every bit as fitting as the mountains of Sinai or the wilderness of Judea.

The only real source of historical information about pre-Islamic Mecca and the circumstances of the Koran's revelation is the classical Islamic story about the religion's founding, a distillation of which follows.

In the centuries leading up to the arrival of Islam, Mecca was a local pagan sanctuary of considerable antiquity. Religious rituals revolved around the Ka'ba—a shrine, still central in Islam today, that Muslims believe was originally built by Ibrahim (known to Christians and Jews as Abraham) and his son Isma'il (Ishmael). As Mecca became increasingly prosperous in the sixth century A.D., pagan idols of varying sizes and shapes proliferated. The traditional story has it that by the early seventh century a pantheon of some 360 statues and icons surrounded the Ka'ba (inside which were found renderings of Jesus and the Virgin Mary, among other idols).

Such was the background against which the first installments of the Koran are said to have been revealed, in 610, to an affluent but disaffected merchant named Muhammad bin Abdullah. Muhammad had developed the habit of periodically withdrawing from Mecca's pagan squalor to a nearby mountain cave, where he would reflect in solitude. During one of these retreats he was visited by the Angel Gabriel—the very same angel who had announced the coming of Jesus to

the Virgin Mary in Nazareth some 600 years earlier. Opening with the command "Recite!," Gabriel made it known to Muhammad that he was to serve as the Messenger of God. Subsequently, until his death, the supposedly illiterate Muhammad received through Gabriel divine revelations in Arabic that were known as *qur'an* ("recitation") and that announced, initially in a highly poetic and rhetorical style, a new and uncompromising brand of monotheism known as *Islam*, or "submission" (to God's will). Muhammad reported these revelations verbatim to sympathetic family members and friends, who either memorized them or wrote them down.

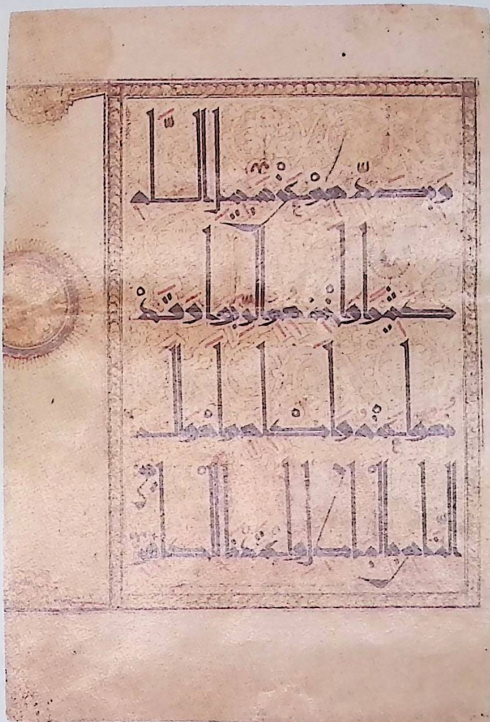
Powerful Meccans soon began to persecute Muhammad and his small band of devoted followers, whose new faith rejected the pagan core of Meccan cultural and economic life, and as a result in 622 the group migrated some 200 miles north, to the town of Yathrib, which subsequently became known as Medina (short for *Medinat al-Nabi*, or City of the Prophet). (This migration, known in Islam as the *hijra*, is considered to mark the birth of an independent Islamic community, and 622 is thus the first year of the Islamic calendar.) In Medina, Muhammad continued to receive divine revelations, of an increasingly pragmatic and prosaic nature, and by 630 he had developed enough support in the Medinan community to attack and conquer Mecca. He spent the last two years of his life proselytizing, consolidating political power, and continuing to receive revelations.

The Islamic tradition has it that when Muhammad died, in 632, the Koranic revelations had not been gathered into a single book; they were recorded only "on palm leaves and flat stones and in the hearts of men." (This is not surprising: the oral tradition was strong and well established, and the Arabic script, which was written without the vowel markings and consonantal dots used today, served mainly as an aid to memorization.) Nor was the establishment of such a text of primary concern: the Medinan Arabs—an unlikely coalition of ex-merchants, desert nomads, and agriculturalists united in a potent new faith and inspired by the life and sayings of Prophet Muhammad—were at the time pursuing a fantastically successful series of international conquests in the name of Islam. By the 640s the Arabs possessed most of Syria, Iraq, Persia, and Egypt, and thirty years later they were busy taking over parts of Europe, North Africa, and Central Asia.

In the early decades of the Arab conquests many members of Muhammad's coterie were killed, and with them died valuable knowledge of the Koranic revelations. Muslims at the edges of the empire began arguing over what was Koranic scripture and what was not. An army general returning from Azerbaijan expressed his fears about sectarian controversy to the Caliph 'Uthman (644–656)—the third Islamic ruler to succeed Muhammad—and is said to have entreated him to "overtake this people before they differ over the Koran the way the Jews and Christians differ over their Scripture."

'Uthman convened an editorial committee of sorts that carefully gathered the various pieces of scripture that had been memorized or written down by Muhammad's companions. The result was a standard written version of the Koran. 'Uthman ordered all incomplete and "imperfect" collections of the Koranic scripture destroyed, and the new version was quickly distributed to the major centers of the rapidly burgeoning empire.

During the next few centuries, while Islam solidified as a religious and political entity, a vast body of exegetical and historical literature evolved to explain the Koran and the rise of Islam, the most important elements of which are *hadith*,



A PAGE FROM AN ELEVENTH- OR TWELFTH-CENTURY PERSIAN KORAN

or the collected sayings and deeds of the Prophet Muhammad; *sunna*, or the body of Islamic social and legal custom; *sira*, or biographies of the Prophet; and *tafsir*, or Koranic commentary and explication. It is from these traditional sources—compiled in written form mostly from the mid eighth to the mid tenth century—that all accounts of the revelation of the Koran and the early years of Islam are ultimately derived.

## "For People Who Understand"

**R**OUGHLY equivalent in length to the New Testament, the Koran is divided into 114 sections, known as *suras*, that vary dramatically in length and form. The book's organizing principle is neither chronological nor thematic—for the most part the *suras* are arranged from beginning to end in descending order of length. Despite the unusual structure, however, what generally surprises newcomers to the Koran is the degree to which it draws on the same beliefs and stories that appear in the Bible. God (*Allah* in Arabic) rules supreme: he is the all-powerful, all-knowing, and all-merciful Being who has created the world and its creatures; he sends messages and laws through prophets to help guide human existence; and, at a time in the future known only to him, he will bring about the end of the world and the Day of Judgment. Adam, the first man, is expelled from Paradise for eating from the forbidden tree. Noah builds an ark to save a select few from a flood brought on by the wrath of God. Abraham prepares himself to sacrifice his son at God's bidding. Moses leads the Israelites out of Egypt and receives a revelation on Mount Sinai. Jesus—born of the Virgin Mary and referred to as the Messiah—works miracles, has disciples, and rises to heaven.

The Koran takes great care to stress this common monotheistic heritage, but it works equally hard to distinguish Islam from Judaism and Christianity. For example, it mentions prophets—Hud, Salih, Shu'ayb, Luqman, and others—whose origins seem exclusively Arabian, and it reminds readers that it is "A Koran in Arabic. / For people who understand." Despite its repeated assertions to the contrary, however, the Koran is often extremely difficult for contemporary readers—even highly educated speakers of Arabic—to understand. It sometimes makes dramatic shifts in style, voice, and subject matter from verse to verse, and it assumes a familiarity with language, stories, and events that seem to have been lost even to the earliest of Muslim exegetes (typical of a text that initially evolved in an oral tradition). Its apparent inconsistencies are easy to find: God may be referred to in the first and third person in the same sentence; divergent versions of the same story are repeated at different points in the text; divine rulings occasionally contradict one another. In this last case the Koran anticipates criticism and defends itself by asserting the right to abrogate its own message ("God doth blot out / Or confirm what He pleaseth").

Criticism did come. As Muslims increasingly came into contact with Christians during the eighth century, the wars of conquest were accompanied by theological polemics, in which Christians and others latched on to the confusing literary state of the Koran as proof of its human origins. Muslim scholars themselves were fastidiously cataloguing the problematic aspects of the Koran—unfamiliar vocabulary, seem-

ing omissions of text, grammatical incongruities, deviant readings, and so on. A major theological debate in fact arose within Islam in the late eighth century, pitting those who believed in the Koran as the "uncreated" and eternal Word of God against those who believed in it as created in time, like anything that isn't God himself. Under the Caliph al-Ma'mun (813–833) this latter view briefly became orthodox doctrine. It was supported by several schools of thought, including an influential one known as Mu'tazilism, that developed a complex theology based partly on a metaphorical rather than simply literal understanding of the Koran.

By the end of the tenth century the influence of the Mu'tazili school had waned, for complicated political reasons, and the official doctrine had become that of *i'jaz*, or the "inimitability" of the Koran. (As a result, the Koran has traditionally not been translated by Muslims for non-Arabic-speaking Muslims. Instead it is read and recited in the original by Muslims worldwide, the majority of whom do not speak Arabic. The translations that do exist are considered to be nothing more than scriptural aids and paraphrases.) The adoption of the doctrine of inimitability was a major turning point in Islamic history, and from the tenth century to this day the mainstream Muslim understanding of the Koran as the literal and uncreated Word of God has remained constant.

## Psychopathic Vandalism?

**G**ERD-R. Puin speaks with disdain about the traditional willingness, on the part of Muslim and Western scholars, to accept the conventional understanding of the Koran. "The Koran claims for itself that it is '*mu'beeen*,' or 'clear,'" he says. "But if you look at it, you will notice that every fifth sentence or so simply doesn't make sense. Many Muslims—and Orientalists—will tell you otherwise, of course, but the fact is that a fifth of the Koranic text is *just incomprehensible*. This is what has caused the traditional anxiety regarding translation. If the Koran is not comprehensible—if it can't even be understood in Arabic—then it's not translatable. People fear that. And since the Koran claims repeatedly to be clear but obviously is not—as even speakers of Arabic will tell you—there is a contradiction. Something else must be going on."

Trying to figure out that "something else" really began only in this century. "Until quite recently," Patricia Crone, the historian of early Islam, says, "everyone took it for granted that everything the Muslims claim to remember about the origin and meaning of the Koran is correct. If you drop that assumption, you have to start afresh." This is no mean feat, of course; the Koran has come down to us tightly swathed in a historical tradition that is extremely resistant to criticism and analysis. As Crone put it in *Slaves on Horses*,

The Biblical redactors offer us sections of the Israelite tradition at different stages of crystallization, and their testi-

monies can accordingly be profitably compared and weighed against each other. But the Muslim tradition was the outcome, not of a slow crystallization, but of an explosion; the first compilers were not redactors, but collectors of debris whose works are strikingly devoid of overall unity; and no particular illuminations ensue from their comparison.

Not surprisingly, given the explosive expansion of early Islam and the passage of time between the religion's birth and the first systematic documenting of its history, Muhammad's world and the worlds of the historians who subsequently wrote about him were dramatically different. During Islam's first century alone a provincial band of pagan desert tribes-

in the critical study of the Koran today must contend with Wansbrough's two main works—*Quranic Studies: Sources and Methods of Scriptural Interpretation* (1977) and *The Sectarial Milieu: Content and Composition of Islamic Salvation History* (1978).

Wansbrough applied an entire arsenal of what he called the "instruments and techniques" of biblical criticism—form criticism, source criticism, redaction criticism, and much more—to the Koranic text. He concluded that the Koran evolved only gradually in the seventh and eighth centuries, during a long period of oral transmission when Jewish and Christian sects were arguing volubly with one another well to

THE Koran is a scripture with a history like any other," one scholar says, "except that we tend to provoke howls of protest when we study it. But we are not trying to destroy anyone's faith."

men became the guardians of a vast international empire of institutional monotheism that teemed with unprecedented literary and scientific activity. Many contemporary historians argue that one cannot expect Islam's stories about its own origins—particularly given the oral tradition of the early centuries—to have survived this tremendous social transformation intact. Nor can one expect a Muslim historian writing in ninth- or tenth-century Iraq to have discarded his social and intellectual background (and theological convictions) in order accurately to describe a deeply unfamiliar seventh-century Arabian context. R. Stephen Humphreys, writing in *Islamic History: A Framework for Inquiry* (1988), concisely summed up the issue that historians confront in studying early Islam.

If our goal is to comprehend the way in which Muslims of the late 2nd/8th and 3rd/9th centuries [Islamic calendar/Christian calendar] understood the origins of their society, then we are very well off indeed. But if our aim is to find out "what really happened," in terms of reliably documented answers to modern questions about the earliest decades of Islamic society, then we are in trouble.

The person who more than anyone else has shaken up Koranic studies in the past few decades is John Wansbrough, formerly of the University of London's School of Oriental and African Studies. Puin is "re-reading him now" as he prepares to analyze the Yemeni fragments. Patricia Crone says that she and Michael Cook "did not say much about the Koran in *Hagarism* that was not based on Wansbrough." Other scholars are less admiring, referring to Wansbrough's work as "drastically wrongheaded," "ferociously opaque," and a "colossal self-deception." But like it or not, anybody engaged

the north of Mecca and Medina, in what are now parts of Syria, Jordan, Israel, and Iraq. The reason that no Islamic source material from the first century or so of Islam has survived, Wansbrough concluded, is that it never existed.

To Wansbrough, the Islamic tradition is an example of what is known to biblical scholars as a "salvation history": a theologically and evangelically motivated story of a religion's origins invented late in the day and projected back in time. In other words, as Wansbrough put it in *Quranic Studies*, the canonization of the Koran—and the Islamic traditions that arose to explain it—involved the

attribution of several, partially overlapping, collections of *logia* (exhibiting a distinctly Mosaic imprint) to the image of a Biblical prophet (modified by the material of the Muhammadan *evangelium* into an Arabian man of God) with a traditional message of salvation (modified by the influence of Rabbinic Judaism into the unmediated and finally immutable word of God).

Wansbrough's arcane theories have been contagious in certain scholarly circles, but many Muslims understandably have found them deeply offensive. S. Parvez Manzoor, for example, has described the Koranic studies of Wansbrough and others as "a naked discourse of power" and "an outburst of psychopathic vandalism." But not even Manzoor argues for a retreat from the critical enterprise of Koranic studies; instead he urges Muslims to defeat the Western revisionists on the "epistemological battlefield," admitting that "sooner or later [we Muslims] will have to approach the Koran from methodological assumptions and parameters that are radically at odds with the ones consecrated by our tradition."

## Revisionism Inside the Islamic World

**I**NDEED, for more than a century there have been public figures in the Islamic world who have attempted the revisionist study of the Koran and Islamic history—the exiled Egyptian professor Nasr Abu Zaid is not unique. Perhaps Abu Zaid's most famous predecessor was the prominent Egyptian government minister, university professor, and writer Taha Hussein. A determined modernist, Hussein in the early 1920s devoted himself to the study of pre-Islamic Arabian poetry and ended up concluding that much of that body of work had been fabricated well after the establishment of Islam in order to lend outside support to Koranic mythology. A more recent example is the Iranian journalist and diplomat Ali Dashti, who in his *Twenty Three Years: A Study of the Prophetic Career of Mohammed* (1985) repeatedly took his fellow Muslims to task for not questioning the traditional accounts of Muhammad's life, much of which he called "myth-making and miracle-mongering."

Abu Zaid also cites the enormously influential Muhammad 'Abduh as a precursor. The nineteenth-century father of Egyptian modernism, 'Abduh saw the potential for a new Islamic theology in the theories of the ninth-century Mu'tazilis. The ideas of the Mu'tazilis gained popularity in some Muslim circles early in this century (leading the important Egyptian writer and intellectual Ahmad Amin to remark in 1936 that "the demise of Mu'tazilism was the greatest misfortune to have afflicted Muslims; they have committed a crime against themselves"). The late Pakistani scholar Fazlur Rahman carried the Mu'tazilite torch well into the present era; he spent the later years of his life, from the 1960s until his death in 1988, living and teaching in the United States, where he trained many students of Islam—both Muslims and non-Muslims—in the Mu'tazilite tradition.

Such work has not come without cost, however: Taha Hussein, like Nasr Abu Zaid, was declared an apostate in Egypt: Ali Dashti died mysteriously just after the 1979 Iranian revolution; and Fazlur Rahman was forced to leave Pakistan in the 1960s. Muslims interested in challenging orthodox doctrine must tread carefully. "I would like to get the Koran out of this prison," Abu Zaid has said of the prevailing Islamic hostility to reinterpreting the Koran for the modern age, "so that once more it becomes productive for the essence of our culture and the arts, which are being strangled in our society." Despite his many enemies in Egypt, Abu Zaid may well be making progress toward this goal: there are indications that his work is being widely, if quietly, read with interest in the Arab world. Abu Zaid says, for example, that his *The Concept of the Text* (1990)—the book largely responsible for his exile from Egypt—has gone through at least eight underground printings in Cairo and Beirut.

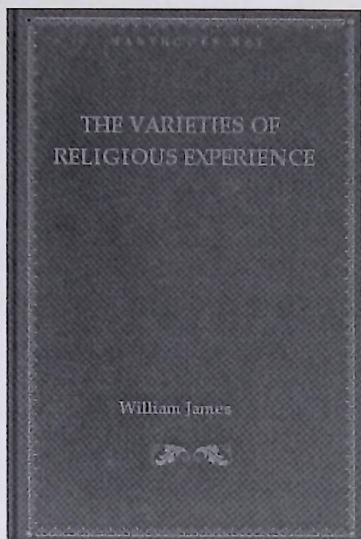
Another scholar with a wide readership who is committed

to re-examining the Koran is Mohammed Arkoun, the Algerian professor at the University of Paris. Arkoun argued in *Lectures du Koran* (1982), for example, that "it is time [for Islam] to assume, along with all of the great cultural traditions, the modern risks of scientific knowledge," and suggested that "the problem of the divine authenticity of the Koran can serve to reactivate Islamic thought and engage it in the major debates of our age." Arkoun regrets the fact that most Muslims are unaware that a different conception of the Koran exists within their own historical tradition. What a re-examination of Islamic history offers Muslims, Arkoun and others argue, is an opportunity to challenge the Muslim orthodoxy from within, rather than having to rely on "hostile" outside sources. Arkoun, Abu Zaid, and others hope that this challenge might ultimately lead to nothing less than an Islamic renaissance.

**T**HE gulf between such academic theories and the daily practice of Islam around the world is huge, of course—the majority of Muslims today are unlikely to question the orthodox understanding of the Koran and Islamic history. Yet Islam became one of the world's great religions in part because of its openness to social change and new ideas. (Centuries ago, when Europe was mired in its feudal Dark Ages, the sages of a flourishing Islamic civilization opened an era of great scientific and philosophical discovery. The ideas of the ancient Greeks and Romans might never have been introduced to Europe were it not for the Islamic historians and philosophers who rediscovered and revived them.) Islam's own history shows that the prevailing conception of the Koran is not the only one ever to have existed, and the recent history of biblical scholarship shows that not all critical-historical studies of a holy scripture are antagonistic. They can instead be carried out with the aim of spiritual and cultural regeneration. They can, as Mohammed Arkoun puts it, demystify the text while reaffirming "the relevance of its larger intuitions."

Increasingly diverse interpretations of the Koran and Islamic history will inevitably be proposed in the coming decades, as traditional cultural distinctions between East, West, North, and South continue to dissolve, as the population of the Muslim world continues to grow, as early historical sources continue to be scrutinized, and as feminism meets the Koran. With the diversity of interpretations will surely come increased fractiousness, perhaps intensified by the fact that Islam now exists in such a great variety of social and intellectual settings—Bosnia, Iran, Malaysia, Nigeria, Saudi Arabia, South Africa, the United States, and so on. More than ever before, anybody wishing to understand global affairs will need to understand Islamic civilization, in all its permutations. Surely the best way to start is with the study of the Koran—which promises in the years ahead to be at least as contentious, fascinating, and important as the study of the Bible has been in this century. ☞

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## The Varieties of Religious Experience

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### Lecture III

#### THE REALITY OF THE UNSEEN

Were one asked to characterize the life of religion in the broadest and most general terms possible, one might say that it consists of the belief that there is an unseen order, and that our supreme good lies in harmoniously adjusting ourselves thereto. This belief and this adjustment are the religious attitude in the soul. I wish during this hour to call your attention to some of the psychological peculiarities of such an attitude as this, or belief in an object which we cannot see. All our attitudes, moral, practical, or emotional, as well as religious, are due to the "objects" of our consciousness, the things which we believe to exist, whether really or ideally, along with ourselves. Such objects may be present to our senses, or they may be present only to our thought. In either case they elicit from us a REACTION; and the reaction due to things of thought is notoriously in many cases as strong as that due to sensible presences. It may be even stronger. The memory of an insult may make us angrier than the insult did when we received it. We are frequently more ashamed of our blunders afterwards than we were at the moment of making them; and in general our whole higher prudential and moral life is based on the fact that material sensations actually present may have a weaker influence on our action than ideas of remoter facts.

The more concrete objects of most men's religion, the deities whom they worship, are known to them only in idea. It has been vouchsafed, for example, to very few Christian believers to have had a sensible vision of their Saviour; though enough appearances of this sort are on record, by way of miraculous exception, to merit our attention later. The whole force of the Christian religion, therefore, so far as belief in the divine personages determines the prevalent attitude of the believer, is in general exerted by the instrumentality of pure ideas, of which nothing in the individual's past experience directly serves as a model.

But in addition to these ideas of the more concrete religious objects, religion is full of abstract objects which prove to have an equal power.

*none of this is whole in an actual God.*

God's attributes as such, his holiness, his justice, his mercy, his absoluteness, his infinity, his omniscience, his tri-unity, the various mysteries of the redemptive process, the operation of the sacraments, etc., have proved fertile wells of inspiring meditation for Christian believers. [21] We shall see later that the absence of definite sensible images is positively insisted on by the mystical authorities in all religions as the sine qua non of a successful orison, or contemplation of the higher divine truths. Such contemplations are expected (and abundantly verify the expectation, as we shall also see) to influence the believer's subsequent attitude very powerfully for good.

[21] Example: "I have had much comfort lately in meditating on the passages which show the personality of the Holy Ghost, and his distinctness from the Father and the Son. It is a subject that requires searching into to find out, but, when realized, gives one so much more true and lively a sense of the fullness of the Godhead, and its work in us and to us, than when only thinking of the Spirit in its effect on us." Augustus Hare: Memorials, i. 244, Maria Hare to Lucy H. Hare.

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Immanuel Kant held a curious doctrine about such objects of belief as God, the design of creation, the soul, its freedom, and the life hereafter. These things, he said, are properly not objects of knowledge at all. Our conceptions always require a sense-content to work with, and as the words soul, "God," "immortality," cover no distinctive sense-content whatever, it follows that theoretically speaking they are words devoid of any significance. Yet strangely enough they have a definite meaning FOR OUR PRACTICE. We can act AS IF there were a God; feel AS IF we were free; consider Nature AS IF she were full of special designs; lay plans AS IF we were to be immortal; and we find then that these words do make a genuine difference in our moral life. Our faith THAT these unintelligible objects actually exist proves thus to be a full equivalent in praktischer Hinsicht, as Kant calls it, or from the point of view of our action, for a knowledge of WHAT they might be, in case we were permitted positively to conceive them. So we have the strange phenomenon, as Kant assures us, of a mind

away.

We shall see abundant examples of this happy state of mind in later lectures of this course. We shall see how infinitely passionate a thing religion at its highest flights can be. Like love, like wrath, like hope, ambition, jealousy, like every other instinctive eagerness and impulse, it adds to life an enchantment which is not rationally or logically deducible from anything else. This enchantment, coming as a gift when it does come--a gift of our organism, the physiologists will tell us, a gift of God's grace, the theologians say --is either there or not there for us, and there are persons who can no more become possessed by it than they can fall in love with a given woman by mere word of command. Religious feeling is thus an absolute addition to the Subject's range of life. It gives him a new sphere of power. When the outward battle is lost, and the outer world disowns him, it redeems and vivifies an interior world which otherwise would be an empty waste.

If religion is to mean anything definite for us, it seems to me that we ought to take it as meaning this added dimension of emotion, this enthusiastic temper of espousal, in regions where morality strictly so called can at best but bow its head and acquiesce. It ought to mean nothing short of this new reach of freedom for us, with the struggle over, the keynote of the universe sounding in our ears, and everlasting possession spread before our eyes.[18]

[18] Once more, there are plenty of men, constitutionally sombre men, in whose religious life this rapturousness is lacking. They are religious in the wider sense, yet in this acutest of all senses they are not so, and it is religion in the acutest sense that I wish, without disputing about words, to study first, so as to get at its typical differentia.

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This sort of happiness in the absolute and everlasting is what we find nowhere but in religion. It is parted off from all mere animal happiness, all mere enjoyment of the present, by that element of solemnity of which I have already made so much account. Solemnity is a hard thing to define abstractly, but certain of its marks are patent enough. A solemn state of

mind is never crude or simple--it seems to contain a certain measure of its own opposite in solution. A solemn joy preserves a sort of bitter in its sweetness; a solemn sorrow is one to which we intimately consent. But there are writers who, realizing that happiness of a supreme sort is the prerogative of religion, forget this complication, and call all happiness, as such, religious. Mr. Havelock Ellis, for example, identifies religion with the entire field of the soul's liberation from oppressive moods.

"The simplest functions of physiological life," he writes may be its ministers. Every one who is at all acquainted with the Persian mystics knows how wine may be regarded as an instrument of religion. Indeed, in all countries and in all ages some form of physical enlargement--singing, dancing, drinking, sexual excitement--has been intimately associated with worship. Even the momentary expansion of the soul in laughter is, to however slight an extent, a religious exercise. . . . Whenever an impulse from the world strikes against the organism, and the resultant is not discomfort or pain, not even the muscular contraction of strenuous manhood, but a joyous expansion or aspiration of the whole soul--there is religion. It is the infinite for which we hunger, and we ride gladly on every little wave that promises to bear us towards it." [19]

[19] The New Spirit, p. 232.

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But such a straight identification of religion with any and every form of happiness leaves the essential peculiarity of religious happiness out. The more commonplace happinesses which we get are "reliefs," occasioned by our momentary escapes from evils either experienced or threatened. But in its most characteristic embodiments, religious happiness is no mere feeling of escape. It cares no longer to escape. It consents to the evil outwardly as a form of sacrifice--inwardly it knows it to be permanently overcome. If you ask HOW religion thus falls on the thorns and faces death, and in the very act annuls annihilation, I cannot explain the matter, for it is religion's secret, and to understand it you must yourself have been a religious man of the extremer type. In our future examples, even of the simplest and healthiest-minded type of religious consciousness, we shall find this complex sacrificial constitution, in which a higher happiness holds a lower

unhappiness in check. In the Louvre there is a picture, by Guido Reni, of St. Michael with his foot on Satan's neck. The richness of the picture is in large part due to the fiend's figure being there. The richness of its allegorical meaning also is due to his being there--that is, the world is all the richer for having a devil in it, SO LONG AS WE KEEP OUR FOOT UPON HIS NECK. In the religious consciousness, that is just the position in which the fiend, the negative or tragic principle, is found; and for that very reason the religious consciousness is so rich from the emotional point of view.[20] We shall see how in certain men and women it takes on a monstrously ascetic form. There are saints who have literally fed on the negative principle, on humiliation and privation, and the thought of suffering and death--their souls growing in happiness just in proportion as their outward state grew more intolerable. No other emotion than religious emotion can bring a man to this peculiar pass. And it is for that reason that when we ask our question about the value of religion for human life, I think we ought to look for the answer among these violenter examples rather than among those of a more moderate hue.

[20] I owe this allegorical illustration to my lamented colleague and Friend, Charles Carroll Everett.

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Having the phenomenon of our study in its acutest possible form to start with, we can shade down as much as we please later. And if in these cases, repulsive as they are to our ordinary worldly way of judging, we find ourselves compelled to acknowledge religion's value and treat it with respect, it will have proved in some way its value for life at large. By subtracting and toning down extravagances we may thereupon proceed to trace the boundaries of its legitimate sway.

To be sure, it makes our task difficult to have to deal so much with eccentricities and extremes. "How CAN religion on the whole be the most important of all human functions," you may ask, "if every several manifestation of it in turn have to be corrected and sobered down and pruned away?"

Such a thesis seems a paradox impossible to sustain reasonably--yet I believe that something like it will have to be our final contention. That personal attitude which the individual finds himself impelled to take up towards what he apprehends to be the divine--and you will remember that this was our definition--will prove to be both a helpless and a sacrificial attitude. That is, we shall have to confess to at least some amount of dependence on sheer mercy, and to practice some amount of renunciation, great or small, to save our souls alive. The constitution of the world we live in requires it:--

"Entbehren sollst du! sollst entbehren! Das ist der ewige Gesang Der jedem an die Ohren klingt, Den, unser ganzes Leben lang Uns heiser jede Stunde singt."

For when all is said and done, we are in the end absolutely dependent on the universe; and into sacrifices and surrenders of some sort, deliberately looked at and accepted, we are drawn and pressed as into our only permanent positions of repose. Now in those states of mind which fall short of religion, the surrender is submitted to as an imposition of necessity, and the sacrifice is undergone at the very best without complaint. In the religious life, on the contrary, surrender and sacrifice are positively espoused: even unnecessary givings-up are added in order that the happiness may increase. Religion thus makes easy and felicitous what in any case is necessary; and if it be the only agency that can accomplish this result, its vital importance as a human faculty stands vindicated beyond dispute. It becomes an essential organ of our life, performing a function which no other portion of our nature can so successfully fulfill. From the merely biological point of view, so to call it, this is a conclusion to which, so far as I can now see, we shall inevitably be led, and led moreover by following the purely empirical method of demonstration which I sketched to you in the first lecture. Of the farther office of religion as a metaphysical revelation I will say nothing now.

But to foreshadow the terminus of one's investigations is one thing, and to arrive there safely is another. In the next lecture, abandoning the extreme generalities which have engrossed us hitherto, I propose that we begin our

conscious realization of our oneness with the Infinite Life, and open ourselves to this divine inflow, do we actualize in ourselves the qualities and powers of the Infinite Life, do we make ourselves channels through which the Infinite Intelligence and Power can work. In just the degree in which you realize your oneness with the Infinite Spirit, you will exchange dis-ease for ease, inharmony for harmony, suffering and pain for abounding health and strength. To recognize our own divinity, and our intimate relation to the Universal, is to attach the belts of our machinery to the powerhouse of the Universe. One need remain in hell no longer than one chooses to; we can rise to any heaven we ourselves choose; and when we choose so to rise, all the higher powers of the Universe combine to help us heavenward." [51]

[51] R. W. Trine: In Tune with the Infinite, 26th thousand, N.Y. 1899. I have strung scattered passages together.

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Let me now pass from these abstracter statements to some more concrete accounts of experience with the mind-cure religion. I have many answers from correspondents--the only difficulty is to choose. The first two whom I shall quote are my personal friends. One of them, a woman, writing as follows, expresses well the feeling of continuity with the Infinite Power, by which all mind-cure disciples are inspired.

"The first underlying cause of all sickness, weakness, or depression is the human sense of separateness from that Divine Energy which we call God. The soul which can feel and affirm in serene but jubilant confidence, as did the Nazarene: 'I and my Father are one,' has no further need of healer, or of healing. This is the whole truth in a nutshell, and other foundation for wholeness can no man lay than this fact of impregnable divine union. Disease can no longer attack one whose feet are planted on this rock, who feels hourly, momentarily, the influx of the Deific Breath. If one with Omnipotence, how can weariness enter the consciousness, how illness assail that indomitable spark?

"This possibility of annulling forever the law of fatigue has been abundantly proven in my own case; for my earlier life bears a record of

*The  
Venerable  
Jew  
after  
his  
death.*

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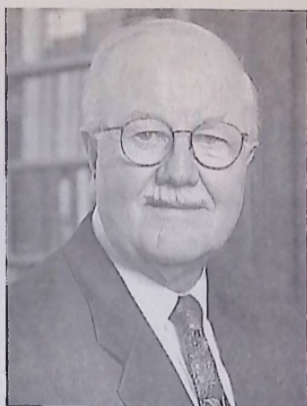
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# Q&A

## Acknowledging That God Is Not Limited to Christians

Dr. Joseph C. Hough Jr., the president of Union Theological Seminary in New York, has been calling in recent speeches for Christians to adopt a new theological approach to other faiths, one that goes considerably beyond simple tolerance, as a response to Americans' growing awareness of religious diversity in the United States and the world. In e-mail and telephone interviews with *Gustav Niebuhr*, he said he was speaking for himself and not the seminary.



Charlotte Raymond

**Q** Since the Sept. 11 tragedy, Americans of different faiths have joined together in public prayer services to show national unity. Have you found something essential missing in those gatherings?

What is missing is not goodwill. I have been deeply moved by the passionate witness of many Americans against religious intolerance in the aftermath of the Sept. 11 tragedy. Certainly, this was important in a time when the justification of terrorism by the perpetrators was based on their own twisted religious fundamentalism.

Yet many Christians... seem unaware that toleration alone, while desirable, is not sufficient in a world of religious pluralism. Even the most influential theologians during the 20th century have failed to see the limitations of toleration. They have conceded only that other faiths may be "lesser lights" (Karl Barth), or that representatives of other faiths can be saved because they are "Christians incognito" (Paul Tillich), or "anonymous Christians" (Karl Rahner). Tolerance like this concedes only minimal value to other religious traditions.

*You have said that Christians, to promote peace in a religiously pluralistic world, need to develop a new "theology of religions." What would that involve?*

It would begin with the recognition that religion is something that we human beings put together in an effort to give some cultural form to our faith. Our faith is a response to the experience of the presence of God.

Religion, our rituals, our music, even our theology, is a human attempt to express what we have experienced. Since we have only our human language and symbols to use in expressing our faith, religions differ as much as cultures differ. Therefore, we want to be careful about claiming that one religious form is the only one that is authentic or real.

The second element in a new theology of religions would be the development of a greater understanding of religious traditions other than our own. We can hardly evaluate the potential power of another religious tradition if we know nothing about it, and extensive literature is available for us to read and to teach in our churches.

Finally, a new Christian theology of religions will involve the recognition that the fomenting of religious conflict has been and still is a theological problem for Christians, because we have made our claim to God's revelation exclusively ours. Our history of internal conflict and persecution of persons of other religions is a grim reminder that we have killed each other and members of other religions in defending that exclusive claim. Ironically, by the defense of our exclusionary claim, we have often lived a contradiction of the spirit of Jesus Christ.

*But wouldn't many Christians respond that the theological approach you propose would threaten to compromise the uniqueness of the Gospels?*

The fear that openness to other religious traditions will destabilize our Christian faith has led many to resist full recognition of the adequacy of other religions to transform human beings with

hope and promise.

What is essential for Christian faith is that we know we have seen the face of God in the face of Jesus Christ. It is not essential to believe that no one else has seen God and experienced redemption in another place or time.

It's the difference between an attempt to convert and an attempt to bear witness. The attempt to bear witness is the attempt to state honestly what you have discovered in faith in Jesus Christ. This is to share the things in your life that are of highest value to you, and I think this is an act of friendship. But this is very different from saying, 'Now that I've told you this, you've got to believe as I do to experience this.' The one is an opening to conversation; the other is closing conversation.

*On which theologians do you draw in making your argument?*

I was born into the Reformation tradition, largely Calvinist. My father was a Southern Baptist minister all of his active adult life. I begin, therefore, with Calvin, especially Calvin's doctrine of God's absolute sovereignty. Some interpreted this only in terms of God's absolute power over the entire universe. I do not. Through the eyes of Karl Barth, a leading interpreter of Calvin, I see God's sovereignty manifested to us as God's absolute freedom to do and to be what she wills. Simply put, if God is sovereign over all, then God is totally free, free even to come to human beings as a fellow human being. It is God's freedom that suggests the possibility of God making himself known in Jesus Christ.

But there, according to Barth, God's freedom ends. For Barth, God is not finally free. God's self-revelation of hope for human salvation is limited to one tradition born at one time in one place in the world. Yet I believe that if one follows the logic of God's freedom, there would at least be hesitancy to impose our own limits on God's redemptive action.

*Are you saying that all religions are equal?*

No, all religions are not equal for me. For my faith, Jesus Christ is decisive. But I am a Christian who strongly believes that God has always been and now is working everywhere in every human culture to redeem the world. I believe that there is ample evidence in the best of the world's religions, including our own, that God's work is effective. Muslims, Jews, Hindus, Buddhists and others have been and are being transformed by a powerful vision of God that redeems them with hope and infuses their religious practice with compassion, justice and peace. Wherever there is peace and movement toward peace, where there is justice and movement toward justice, God is present and working.



AP/Associated Press



AP-France Presse

militarily (above).

London Times piece

Karmarok's Britain  
luck.

MATTHEW MILLER

# Philosopher Rawls taught us to be thankful for luck

THE DEATH THIS WEEK of John Rawls, the most influential political philosopher of our era, suggests a natural sermon at this season of giving thanks. For Rawls's contribution was a relentless focus on the role luck plays in human affairs and how we would order society if we were properly grateful for good luck and compassionate toward the luckless.

Rawls developed this idea in his seminal 1971 book, "A Theory of Justice." It's a dense and at times forbidding work, but the kernel at the heart of Rawls's thinking is simple and compelling.

The way to create the rules for a just society, Rawls argues, is to first imagine everyone in an "original position" behind a prebirth "veil of ignorance," where no one knows what their own traits will be — whether they will be rich or poor, beautiful or plain, smart or less so, talented or not, healthy or disabled. Only in this situation — where people don't know what place they are destined to occupy in society — can we see what kind of social order they would agree in advance was fair.

Rawls uses this thought experiment to focus our thinking on the central role he sees luck playing in life. There's the pre-birth lottery that hands out brains, beauty, talent, and inherited wealth. There's a post-birth lottery that (via family) bequeaths values and schooling. "The institutions of society favor certain starting places over others," Rawls writes. "Yet they cannot possibly be justified by an appeal to the notions of merit or desert."

Rawls's point: The vast inequalities of wealth and position we observe stem primarily from advantages for which people can't take credit.

Behind a prebirth veil of ignorance, therefore, Rawls suggests that we would agree these inequalities are just only if they most benefit those who end up not winning the prebirth lottery and if the top spots in life are open to everyone in a system where we've made a serious effort to equalize opportunity. As Rawls puts it: "The natural distribution (of advantages)

is neither just nor unjust; nor is it unjust that persons are born into society at some particular position. These are simply natural facts. What is just and unjust is the way that institutions deal with these facts.

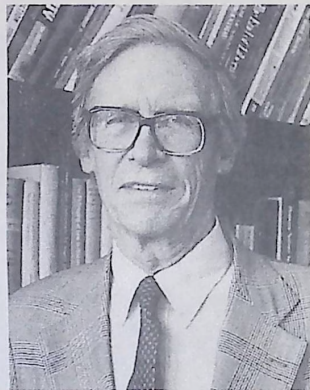
"Undeserved inequalities call for redress," Rawls concludes, "and since inequalities of (inherited) wealth and natural endowment are undeserved, these inequalities are to be somehow compensated for . . . to provide genuine equality of opportunity."

What does that "compensation" amount to in practice? To Rawls, equality of opportunity primarily means that "the government tries to insure equal chances of education and culture for persons similarly endowed and motivated, either by subsidizing private schools or by establishing a public school system." He also says government should guarantee a "social minimum," his phrase for a decent floor of existence for society's less lucky.

Beyond these specific measures, Rawls's just society is imbued with a genuine commitment to equal opportunity, but not to such old-time left-wing fetishes as equal incomes or equal "outcomes." Conservatives tend to fear that government efforts in this regard lead us down a dangerous path. For Rawls and his intellectual heirs, the better balance, and bottom line, is clear: In "justice as fairness" (Rawls's shorthand for his approach), "men agree to avail themselves of the accidents of nature and social circumstances only when doing so is for the common benefit."

"We Rawlsian liberals," Yale law professor Bruce Ackerman told me, "think that we have a special responsibility to arrange the starting points of American citizens in a way worthy of their claim to equality, but we don't have a responsibility to save them from their mistakes as grown-ups."

"The idea," says the philosopher Martha Nussbaum, another pupil of Rawls, who teaches at the University of Chicago, "is to set some limits on the power of luck



GLOBE FILE PHOTO

John Rawls

to deform human lives."

We're lucky to have had Rawls here to call us toward these principles. Yet we can't give thanks for his contribution without noting how far we have to go to take luck as seriously as he urged.

Matt Miller is a senior fellow at Occidental College in Los Angeles.

# US plan to end Mideast conflict faces monthlong delay

By Nicole Winfield

ASSOCIATED PRESS

JERUSALEM — A US-backed plan for ending the Israeli-Palestinian conflict won't be ready by its Dec. 20 target date and may be delayed until after the Israeli elections a month later, a Palestinian official said yesterday.

Separately, another influential Palestinian joined in criticizing

the Palestinian uprising that has left 1,954 Palestinians and 683 Israelis dead in 26 months of fighting.

Also, UN Secretary General Kofi Annan asked the Israeli government to identify and punish its soldiers responsible for last week's shooting death of British UN relief worker Iain Hook.

The Israeli army, in an initial

report, said its soldiers shot Hook by mistake as they returned fire aimed at them from Palestinian gunmen inside the compound of the UN Relief and Works Agency in the West Bank city of Jenin. UN officials say there were no gunmen inside the UNRWA compound. They say Hook bled to death after he was shot by Israeli forces, who then blocked an ambulance from gaining access to the site.

The delayed release of the so-called "road map" to ending the Israeli-Palestinian conflict, most likely until after the Jan. 28 elections, would mean a further delay in reaching a truce in the uprising, which has come under increasing criticism by Palestinian officials and citizens.

The United States, European Union, Russia, and the United Nations have jointly been trying to finalize a plan for a negotiated set-

tlement. The plan, which was to be presented on Dec. 20, calls for a three-phase, three-year program that would result in a Palestinian state living in peace beside Israel.

But Palestinian Planning Minister Nabil Shaath, after a meeting with US officials in Washington, said the Americans told him release of the plan would probably be delayed.

"They prefer to wait until after the Israeli elections, where there'll be an Israeli government ready to work with this plan," Shaath said.

The Palestinians have been pressing to have the plan presented on time, but Israeli officials have said talks should be put on hold until after the vote, which polls show is likely to result in a victory by the right-of-center Likud Party led by Prime Minister Ariel Sharon.

The delayed release of the plan

comes amid signs that many Palestinians are growing increasingly weary of the uprising, or intifadah.

"The intifadah sent a very important message to all the world that there is occupation on the ground," Palestinian Parliament speaker Ahmed Qureia told Associated Press Television News. "Now we have to evaluate the situation. . . . Why the intifadah has been transformed into a military act — is it useful or not?"

A poll published Thursday found that a majority of Palestinians want their security forces to crack down on militants attacking Israel, a shift that indicates Palestinians are souring on the uprising.

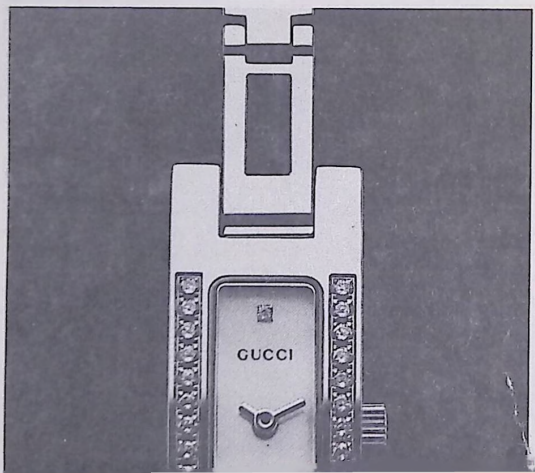
Yesterday, a gunman belonging to the Al Aqsa Martyrs' Brigade, which is linked to Palestinian leader Yasser Arafat's Fatah move-

ment, fired on the Jewish settlement of Dolah in the Gaza Strip, wounding two Thai workers and an Israeli. The gunmen were killed during the attack.

Later, Israeli soldiers arrested Majid Masri, 28, the Al Aqsa leader in the Rafidia neighborhood of the West Bank town of Nablus, Al Aqsa activists said. Masri, who also used the name Abu Mojahed, was also a spokesman for the group in the West Bank. The army said it was checking the report.

In southern Israel, police mounted a manhunt after two members of the militant Islamic group Hamas, both serving life terms, escaped from a prison in Ashkelon, Israel's prison services said.

*Material from Reuters was included in this report.*



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## Russian kills eight fellow servicemen

# The faith of the Framers

*The role of religion is a major flashpoint in the ongoing culture wars. Did the Founding Fathers see the U.S. as a Christian nation?*

## How religious were the Founders?

Most of them were men of sincere Protestant conviction. Their individual piety and practices, however, varied widely. George Washington, for example, was an Episcopalian who attended services regularly. But he didn't take communion or kneel when he prayed. Thomas Jefferson, while considering himself a Christian, disagreed with much of the Bible and rejected the divinity of Jesus. So he created his own version of the New Testament, cutting out all references to miracles—even Jesus' resurrection. Although Benjamin Franklin supported the Presbyterian church all his life, he rarely went to services because he found them dull.



Jefferson: He had his doubts.

## Did they think God had blessed America?

Indeed they did. Their writings are filled with the fervent belief that the Colonies' very existence proved that a divine will was at work. As early as 1765, John Adams wrote that he considered America to be "the opening of a grand scene and design in Providence for the illumination of the ignorant and the emancipation of the slavish part of mankind all over the earth." Nearly 50 years later, in 1815, he wrote that the "general principles on which the Fathers achieved independence were ... the general principles of Christianity." However, when Adams and his compatriots spoke of Christianity, it wasn't quite the kind practiced by evangelicals today.

## So what was it?

The faith that many of the Founders embraced was deism. Less a religion than a way of perceiving divinity in the world, deism is rooted in the 17th- and 18th-century scientific and philosophical revolutions of the Enlightenment. For deists, God is not a father figure who dwells in heaven and performs miracles. Rather, he is an undefined and unknowable "prime mover" who reveals himself in immutable laws that can rationally explain both cosmic and human affairs. Everything from the physical forces that govern the universe to the essential freedom of man, deists believe, are outward signs of God's presence among us. In keeping with their deist beliefs, the Founders often refrained from calling the source of their inspiration "God." He—or, rather, it—was "Divine Providence" and "The Universal Sovereign," among other euphemisms.

## But did the Founders oppose religion?

Quite the contrary. They considered it essential to the health of the republic. Religion, they felt, endowed people with such values as self-reliance, sacrifice, and compassion that were necessary for good citizenship. It also counteracted the destructive tendencies of democracy and capitalism alike. "Of all the dispositions and habits which lead to political prosperity," said George Washington in his farewell address in 1796, "religion and morality are indispensable supports." James Madison felt similarly. "Before any man can be considered a member of Civil Society," he wrote, "he must be considered as a subject of the Governour of the Universe." Still, the Founders declined to give religion the official endorsement of their new government.

## What were they afraid of?

The same intolerance and bigotry that drove many of the original settlers to the New World. The monarchs of the Old World, they knew, had often invoked God as an excuse to make war. Not only had Europe's kings and princes waged the Crusades in the name of Christianity, they had fought bloody battles of succession and conquest among themselves, with Protestants and Catholics slandering one another for political power. "I almost shudder at the thought of alluding to the most fatal example of the abuses of grief which the history of mankind has preserved—the Cross," wrote John Adams. "Consider what calamities that engine of grief has produced! When the Founders gathered to write the Constitution in 1787,

they were determined to set a different course, so as not to repeat the mistakes of history.

## How did they achieve this?

By largely excluding God and religion from our national blueprint. The only reference to religion in the original Constitution is in Article VI, Section 3: "No religious Test shall ever be required as a Qualification to any Office or public Trust under the United States." When it came time to add the Bill of Rights, the Framers felt that a firmer statement was needed. As their model, they took Virginia's Statute for Religious Freedom. Written by Thomas Jefferson, and passed by the Virginia Legislature in 1786, it declared that "all men shall be free to profess, and by argument to maintain, their opinion in matters of religion." For the Constitution, James Madison expanded this into: "The civil rights of none shall be abridged on account of religious belief or worship, nor shall any national religion be established, nor shall the full and equal rights of conscience be in any manner, or any pretense, infringed." With some trimming, Madison's resolution became part of the First Amendment we know today.

## What was the result?

For all practical purposes, it put the U.S. on the road to secularism. The earliest official expression of this sentiment probably came on June 7, 1797, when the Senate ratified the Treaty of Tripoli, which made peace with the Barbary pirates of North Africa. In declaring that we had no quarrel with the faith of any "Mehomitani" (Muslim) nation, the treaty—ratified unanimously—stipulated that "the government of the United States is not in any sense founded on the Christian religion." Evangelicals of the time were outraged, but the nation's course was set. In 1802, President Thomas Jefferson gave the secularists a phrase they would repeat in every subsequent argument on the topic. Baptist ministers from Connecticut had written him, complaining of persecution by the state's Congregationalist establishment, and seeking his views on religion and the Constitution. "Religion is a matter which lies solely between man and his God," Jefferson assured them, declaring that the First Amendment had "erected a wall of separation between Church and State."

## A call for prayer

The first weeks of the Constitutional Convention of 1787 were so fraught with difficulty that Benjamin Franklin, perhaps the least religious delegate, proposed that "henceforth prayers imploring the assistance of Heaven, and its blessings on our deliberations, be held in this Assembly every morning before we proceed to business." He even requested that a clergyman be appointed to officiate. But Alexander Hamilton and several other delegates feared that the resolution, by being introduced at this late date, might lead the public to think that the convention was getting desperate. In any event, Hugh Williamson of North Carolina pointed out, no funds were available to pay for a chaplain. Franklin's resolution promptly died. He later noted, "The convention, except for three or four persons, thought prayers unnecessary."

## Does Warsaw really need golden arches?

Leonard Pitts Jr.  
*The Miami Herald*

I'm all for exporting American values such as freedom and democracy, said Leonard Pitts Jr. in *The Miami Herald*. But a visit to Poland makes me wonder whether "Americanization" can go too far. Staring down at me from a giant mural on a Warsaw skyscraper is Philadelphia 76ers star Allen Iverson—hawking Nike sneakers, of course. On the street, "a beefy guy in a Chicago Bulls cap" scurries by. Everywhere I go, I see "Pizza Huts, McDonald's, Mars bars, Levi's," and posters of American pop stars from J.Lo to the rapper 50 Cent. On the one hand, "there is a certain pride that comes from seeing your country's products, fashions, and mores eagerly adopted by a new democracy." But I also worry that Poland's rich and textured culture is being overwhelmed by what one political scientist has dubbed "McWorld," whereby free-market forces "teach people what to want, and then give it to them." This can be a great way to move product, of course—but it leaves in its wake a "bland, uniformity." These days, when I travel around the U.S., I sometimes forget where I am, because every town offers "the same jumble of golden arches and Wal-Mart signs." There's probably not much Americans can do to reverse this "homogenization." But do the people of Poland "understand that they are selling their uniqueness for the price of an MTV video?"

## Dishonoring the casualties of friendly fire

Caspar Weinberger  
*The Wall Street Journal*

Friendly fire is a tragic reality of war, said former Defense Secretary Caspar Weinberger in *The Wall Street Journal*, but Americans can't come to grips with it. When one of this country's true heroes—former NFL star Pat Tillman—was killed by his fellow Rangers in a moment of chaos and confusion last year in Afghanistan, the Army initially tried to "hide the truth" by saying he had been shot by the enemy while leading a charge up a hill. Since the real story emerged, a hush has fallen over Tillman's admirers, and his parents have now publicly accused the Army of tarnishing his memory by lying to make his death appear more heroic. But the circumstances of Tillman's death don't "diminish" his sacrifice one bit. "Combat creates confusion," and all too often bullets and bombs go astray. And soldiers who are doing exactly what they are supposed to be doing can get caught in the crossfire. Sadly, that's what happened to Tillman, a brave young man who gave up a promising football career and a contract worth millions of dollars to fight for his country after 9/11. "There is nothing degrading about being killed by mistaken fire in the fog of battle." But there is something horribly unjust when the rest of us fail to give a hero his due.

## Why we will always have Paris

Richard Cohen  
*The Washington Post*

Was I ever wrong about Paris Hilton, said Richard Cohen in *The Washington Post*. For a while, I thought that this ubiquitous fixture of gossip pages and tabloid TV was just a flash in the pan. Don't get me wrong, she's got plenty going for her: synthetic good looks, gobs of money, the famous pedigree. Still, I figured that for all her night-clubbing and paparazzi posing, she possessed no discernible talents—"no infrastructure from which to hang the gauze of celebrity." One can only "be famous for being famous for so long," right? Not anymore. In our media-saturated, celebrity-crazed world, Hilton has proved that it's quite enough "if who you are is nothing more than what's in the media." That infamous sex tape of her canoodling with her then-boyfriend may have been a violation of her privacy, but it turned out to be a brilliant marketing move. Having seen her literally stripped bare, now we can't help but follow her every move. Her latest gig, as a lascivious pitchman for the Carl's Jr. hamburger chain, confirms her status as America's "first crossover porn star." America has always been fascinated by a great sales pitch. But Hilton has mastered the thoroughly modern art of being both the saleswoman and "the product."

## It must be true ... I read it in the tabloids

■ A robbery suspect was arrested in a New York police station, while standing beneath his own "Wanted" poster, reports the *New York Post*. Awiley "Chucky" Hernandez, 20, was checking on a recently arrested friend when an officer noticed his resemblance to a suspect in a taxi holdup whose photo was on the station bulletin board. "There's a wanted poster with their pictures, right there," said Sgt. Norman Horowitz of the 90th Precinct. "Obviously he did not notice it, but we did."



Hatcher: Responsive

■ Teri Hatcher's nipples have become a costly problem for the producers of *Desperate Housewives*. The star of the ABC hit says she has been wearing thick T-shirts and special heating pads to avoid offending TV watchdogs, still on a state of heightened alert following Janet Jackson's "wardrobe malfunction" at the 2004 Super Bowl. Nevertheless, said Hatcher, producers are spending "like, thousands of dollars digitally removing my nipples from the show. When it's cold and it's 30, 40 degrees and you're shooting outside in a T-shirt, things arise."

■ A New Jersey man has invented a chili sauce that's hot enough to kill, reports the *London Sun*. The sauce is made of pure capsaicin, the compound that gives chili peppers their heat, and could be fatal if consumed by an asthmatic. Blair Lazar, 35, has named his concoction "16 Million Reserve," after its score in Scoville units, the standard measurement of food "hotness." The official record for hotness is held by the Red Savina chili from Mexico, at 570,000 units. Tasting his sauce, Lazar said, "is like having your tongue hit with a hammer."

# Darwinists and Doubters Clash Over Explaining The Complexity of Life

Continued From Page A1

That does not mean that scientists do not believe in God. Many do. But they see science as an effort to find out how the material world works, with nothing to say about why we are here or how we should live.

And in that quest, they say, there is no need to resort to otherworldly explanations. So much evidence has been provided by evolutionary studies that biologists are able to explain even the most complex natural phenomena and to fill in whatever blanks remain with solid theories.

This is possible, in large part, because evolution leaves tracks like the fossil remains of early animals or the chemical footprints in DNA that have been revealed by genetic research.

For example, while Dr. Behe and other leading design proponents see the blood clotting system as a product of design, mainstream scientists see it as a result of a coherent sequence of evolutionary events.

Early vertebrates like jawless fish had a simple clotting system, scientists believe, involving a few proteins that made blood stick together, said Russell F. Doolittle, a professor of molecular biology at the University of California, San Diego.

Scientists hypothesize that what happened is that at some point, a mistake during the copying of DNA resulted in the duplication of a gene, increasing the amount of protein produced by cells.

Most often, such a change would be useless. But in this case the extra protein helped blood clot, and animals with the extra protein were more likely to survive and reproduce. Over time, as higher order species evolved, other proteins joined the clotting system. For instance, several proteins involved in the clotting of blood appear to have started as digestive enzymes.

By studying the evolutionary tree and the genetics and biochemistry of living organisms, Dr. Doolittle said, scientists have largely been able to determine the order in which different proteins became involved in helping blood clot, eventually producing the sophisticated clotting mechanisms of humans and other higher animals. The sequencing of animal genomes has provided evidence to support this view.

For example, scientists had predicted that more primitive animals such as fish would be missing certain blood clotting proteins. In fact, the recent sequencing of the fish genome has shown just this.

"The evidence is rock solid," Dr. Doolittle said.

Intelligent design proponents have advanced their views in books for popular audiences and in a few scientific articles. Some have developed mathematical formulas intended to tell whether something was designed or formed by natural processes.

Mainstream scientists say that intelligent design represents a more sophisticated —

was actually designed?

"If we've defined science such that it cannot get to the true answer, we've got a pretty lame definition of science," said Douglas D. Axe, a molecular biologist and the director of research at the Biologic Institute, a new research center in Seattle that looks at the organization of biological systems, including intelligent design issues. Dr. Axe said he had received "significant" financing from the Discovery Institute, but he declined to give any other details about the institute or its financing.

Stephen C. Meyer, director of the Center for Science and Culture at the Discovery Institute, compares the design approach to the work of archaeologists investigating an ancient civilization.

"Imagine you're an archaeologist and you're looking at an inscription, and you say, 'Well, sorry, that looks like it's intelligent but we can't invoke an intelligent cause because, as a matter of method, we have to limit ourselves to materialistic processes,'" Dr. Meyer said. "That would be nuts."

He added, "Call it miracle, call it some other pejorative term, but the fact remains that the materialistic view is a truncated view of reality."

William Paley, an Anglican priest, made a similar argument in the early 19th century. Someone who finds a rock can easily imagine how wind and rain shaped it, he reasoned. But someone who finds a pocket watch lying on the ground instantly knows that it was not formed by natural processes.

With living organisms so much more complicated than watches, he wrote, "The marks of design are too strong to be got over."

Mainstream scientists say that the scientific method is indeed restricted to the material world, because it is trying to find out how it works. Simply saying, "it must have been designed," they say, is simply a way of not tackling the hardest problems.

They say they have no disagreement with studying phenomena for which there are, as yet, no explanations.

It is the presumption of a designer that mainstream scientists dispute, because there are no artifacts or biological signs — no scientific evidence, in other words — to suggest a designer's presence.

Darwin's theory, in contrast, has over the last century yielded so many solid findings that no mainstream biologist today doubts its basic tenets, though they may argue about particulars.

The theory has unlocked many of the mysteries of the natural world. For example, by studying the skeletons of whales, evolutionary scientists have been able to trace the history of their descent from small-hoofed land mammals. They made predictions about what the earliest water-dwelling whales might look like. And, in 1994, paleontologists reported discovering two such species, with many of the anatomical features that scientists had predicted.

## What's Wrong With Evolution?

The proponents of intelligent design do not claim to have a coherent scientific theory about how life actually changed over time on earth. They offer arguments about what evolution could not do, and then conclude that a designer is the best hypothesis.

### Irreducible Complexity

**THE CRITICISM** The parts of a mousetrap do not catch mice unless they are put together. Much of the biological machinery in cells, like the motor-driven tails, or flagella, at the back of the bacterium *Helicobacter pylori* (below) and other bacteria, is similarly complex. Taking away one piece breaks the machine. Because evolution makes slow, incremental improvements, it would not have produced all these separate pieces that would have had no use until they were assembled into the final, working mechanism.



Barry Dowsett/Photo Researchers Inc.

**THE RESPONSE** Evolutionary biologists agree that evolution would never have produced the biological structures all at once. Rather, what likely happened is that evolution borrowed existing structures for new purposes, like taking the spring of a clothes pin for use in a mousetrap. For example, there exists a microsyringe inside some bacteria that consists of about 10 of the proteins found in the flagellum.

### The Pace of Change

**THE CRITICISM** Since natural selection deals with small changes in DNA, which in turn alter proteins the cell produces, it cannot create fundamentally new body shapes and new forms of life, as occurred during the Cambrian explosion a half a billion years ago, or during the rise of mammals after dinosaurs went extinct about 65 million years ago. The trilobite fossil, below, lived half a billion years ago in what is now Wales. The crablike trilobite, which lived on the ocean floor, is one of the major groups of advanced animals that appeared suddenly in the Cambrian.



genetic mutations do not have the power to create new shapes of animals.

But molecular biologists have found genes that control the function of other genes, switching them on and off. Small mutations in these controller genes could produce new species. In addition, new fossils are being found and scientists now know that many changes occurred in the era before the Cambrian — a period that may have lasted 100 million years — providing more time for change.

The Cambrian explosion, said David J. Bottjer, a professor of earth sciences at the University of Southern California and president of the Paleontological Society, is "a wonderful mystery in that we don't know everything yet."

"I think it will be just a matter of time before smart people will be able to figure a lot more of this out," Dr. Bottjer said. "Like any good scientific problem."

### Purposeful Patterns

Intelligent design proponents have been stung by claims that, in contrast to mainstream scientists, they do not form their own theories or conduct original research. They say they are doing the mathematical work and biology experiments needed to put their ideas on firm scientific ground.

For example, William A. Dembski, a mathematician who drew attention when he headed a short-lived intelligent design institute at Baylor University has worked on mathematical algorithms that purport to tell the difference between objects that were designed and those that occurred naturally.

Dr. Dembski says designed objects, like Mount Rushmore, show complex, purposeful patterns that evince the existence of intelligence. Mathematical calculations like those he has developed, he argues, could detect those patterns, for example, distinguishing Mount Rushmore from Mount St. Helens.

But other mathematicians have said that Dr. Dembski's calculations do not work, and that they cannot be applied in the real world.

Other studies that intelligent design theorists cite in support of their views have been done by Dr. Axe of the Biologic Institute.

In one such study, Dr. Axe looked at a protein, called penicillinase, that gives bacteria the ability to survive treatment with the antibiotic penicillin. Dr. Meyer, of the Discovery Institute, has referred to Dr. Axe's work in arguing that working proteins are so rare that evolution cannot by chance discover them.

What was the probability, Dr. Axe asked in his study, of a protein with this ability existing in the universe of all possible proteins?

Penicillinase is made up of a strand of chemicals called amino acids folded into a shape that binds to penicillin and thus disables it. Whether the protein folds up in the right way determines whether it works or not.

He calculated that of the plausible amino acid sequences, only one in 100,000 trillion trillion trillion trillion — a number written as 1 followed by 77 zeroes — would provide resistance to penicillin.

In other words, the probability was essentially zero.

Dr. Axe's research appeared last year in The Journal of Molecular Biology, a peer-reviewed scientific publication.

Dr. Kenneth R. Miller, a professor of biology at Brown University and a frequent sparring partner of design proponents, said

helping blood clot, eventually producing the sophisticated clotting mechanisms of humans and other higher animals. The sequencing of animal genomes has provided evidence to support this view.

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Mainstream scientists say that intelligent design represents a more sophisticated — and thus more seductive — attack on evolution. Unlike creationists, design proponents accept many of the conclusions of modern science. They agree with cosmologists that the age of the universe is 13.6 billion years, not fewer than 10,000 years, as a literal reading of the Bible would suggest. They accept that mutation and natural selection, the central mechanisms of evolution, have acted on the natural world in small ways, for example, leading to the decay of eyes in certain salamanders that live underground.

Some intelligent design advocates even accept common descent, the notion that all species came from a common ancestor, a central tenet of evolution.

Although a vast majority of scientists accept evolution, the Discovery Institute, a research group in Seattle that has emerged as a clearinghouse for the intelligent design movement, says that 404 scientists, including 70 biologists, have signed a petition saying they are skeptical of Darwinism.

Nonetheless, many scientists regard intelligent design as little more than creationism dressed up in pseudoscientific clothing. Despite its use of scientific language and the fact that some design advocates are scientists, they say, the design approach has so far offered only philosophical objections to evolution, not any positive evidence for the intervention of a designer.

### Truncated View of Reality'

If Dr. Behe's mousetrap is one of the most familiar arguments for design, another is the idea that intelligence is obvious in what it creates. Read a novel by Hemingway, gaze at the pyramids, and a designer's hand is manifest, design proponents say.

But mainstream scientists, design proponents say, are unwilling to look beyond the material world when it comes to explaining things like the construction of an eye or the spinning motors that propel bacteria. What is wrong, they ask, with entertaining the idea that what looks like it was designed

### A Debate Over Darwin

This is the second in a series of articles examining the debate over the teaching of evolution. The first article looked at how scholars at the Discovery Institute are mounting a politically savvy challenge to evolution. The next article will look at scientists' religious beliefs. Coverage of the Discovery Institute and the arguments over intelligent design: nytimes.com/evolution.

is the presumption of a designer that mainstream scientists dispute, because there are no artifacts or biological signs — no scientific evidence, in other words — to suggest a designer's presence.

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### Darwin's Finches

Nowhere has evolution been more powerful than in its prediction that there must be a means to pass on information from one generation to another. Darwin did not know the biological mechanism of inheritance, but the theory of evolution required one.

The discovery of DNA, the sequencing of the human genome, the pinpointing of genetic diseases and the discovery that a continuum of life from a single cell to a human brain can be detected in DNA are all a result of evolutionary theory.

Darwin may have been the classic scientific observer. He observed that individuals in a given species varied considerably, variations now known to be caused by mutations in their genetic code. He also realized that constraints of food and habitat sharply limited population growth; not every individual could survive and reproduce.

This competition, he hypothesized, meant that those individuals with helpful traits multiplied, passing on those traits to their numerous offspring. Negative or useless traits did not help individuals reproduce, and those traits faded away, a process that Darwin called natural selection.

The finches that Darwin observed in the Galápagos Islands provide the most famous example of this process. The species of finch that originally found its way to the Galápagos from South America had a beak shaped in a way that was ideal for eating seeds. But once arrived on the islands, that finch eventually diversified into 13 species. The various Galápagos finches have differently shaped beaks, each fine-tuned to take advantage of a particular food, like fruit, grubs, buds or seeds.

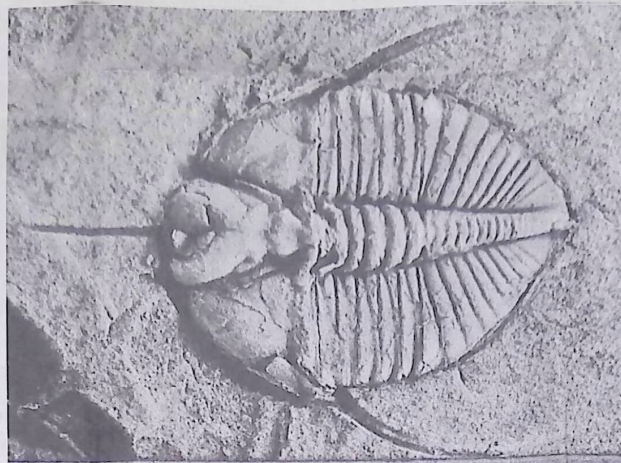
Such small adaptations can arise within a few generations. Darwin surmised that over millions of years, these small changes would accumulate, giving rise to the myriad of species seen today.

The number of organisms that, in those long periods, ended up being preserved as fossils is infinitesimal. As a result, the evolutionary record — the fossils of long-extinct organisms found preserved in rock — is necessarily incomplete, and some species appear to burst out of nowhere.

Some supporters of intelligent design have argued that such gaps undermine the evidence for evolution.

For instance, during the Cambrian explosion a half a billion years ago, life diversified to shapes with limbs and shells from jellyfish-like blobs, over a geologically brief span of 30 million years.

Dr. Meyer sees design at work in these large leaps, which signified the appearance of most modern forms of life. He argues that

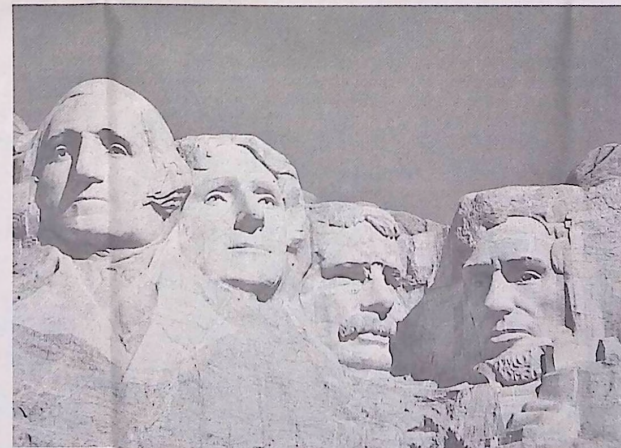


David L. Meyer

**THE RESPONSE** Some very powerful genes control what other genes do. These control genes switch on and off early in the life of embryos and mutations in these genes can make major changes, giving rise to new animal species. More and more fossils from the era leading up to the Cambrian are being discovered and studied, and other evidence shows that Earth's environment might have been undergoing major changes, like a rise in oxygen levels, that for the first time made more complex life possible. Further, the changes leading up to the Cambrian may have taken up to 100 million years.

### Information Theory

**THE CRITICISM** Look at Mount Rushmore and you think that it must have been carved. Look at a cell and you should think it must have been designed. Scientists who won't consider this are doing the same thing as looking for erosion and tectonic explanations for Mount Rushmore.



Associated Press

**THE RESPONSE** Mount Rushmore is an exception. It is the only place among all of earth's mountains where the faces of four presidents appear. A cell that had the faces of four presidents on it, while other cells did not, would no doubt prompt scientists to look for a designer. But the point of science is to discover how natural processes work. Moreover, intelligent design theorists have failed to show calculations that can convincingly differentiate a designed object from a naturally occurring one.

The New York Times

with this ability existing in the universe of all possible proteins?

Penicillinase is made up of a strand of chemicals called amino acids folded into a shape that binds to penicillin and thus disables it. Whether the protein folds up in the right way determines whether it works or not.

He calculated that of the plausible amino acid sequences, only one in 100,000 trillion trillion trillion trillion trillion — a number written as 1 followed by 77 zeroes — would provide resistance to penicillin.

In other words, the probability was essentially zero.

Dr. Axe's research appeared last year in *The Journal of Molecular Biology*, a peer-reviewed scientific publication.

Dr. Kenneth R. Miller, a professor of biology at Brown University and a frequent sparring partner of design proponents, said that in his study, Dr. Axe did not look at penicillinase "the way evolution looks at the protein."

Natural selection, he said, is not random. A small number of mutations, sometimes just one, can change the function of a protein, allowing it to diverge along new evolutionary paths and eventually form a new shape or fold.

### One Shot or a Continual Act

Intelligent design proponents are careful to say that they cannot identify the designer at work in the world, although most readily concede that God is the most likely possibility. And they offer varied opinions on when and how often a designer intervened.

Dr. Behe, for example, said he could imagine that, like an elaborate billiards shot, the design was set up when the Big Bang occurred 13.6 billion years ago. "It could have all been programmed into the universe as far as I'm concerned," he said.

But it was also possible, Dr. Behe added, that a designer acted continually throughout the history of life.

Mainstream scientists say this fuzziness about when and how design supposedly occurred makes the claims impossible to disprove. It is unreasonable, they say, for design advocates to demand that every detail of evolution be filled in.

Dr. Behe, however, said he might find it compelling if scientists were to observe evolutionary leaps in the laboratory. He pointed to an experiment by Richard E. Lenski, a professor of microbial ecology at Michigan State University, who has been observing the evolution of *E. coli* bacteria for more than 15 years. "If anything cool came out of that," Dr. Behe said, "that would be one way to convince me."

Dr. Behe said that if he was correct, then the *E. coli* in Dr. Lenski's lab would evolve in small ways but never change in such a way that the bacteria would develop entirely new abilities.

In fact, that is what appears to have happened. Dr. Lenski said his experiment was not intended to explore this aspect of evolution, but nonetheless, "We have recently discovered a pretty dramatic exception, one where a new and surprising function has evolved," he said.

Dr. Lenski declined to give any details until the research is published. But, he said, "If anyone is resting his or her faith in God on the outcome that our experiment will not produce some major biological innovation, then I humbly suggest they should rethink the distinction between science and religion."

Dr. Behe said, "I'll wait and see."