

Some comments, with comments, on "The Language of God" (Francis Collins, 2006)

Sam Harris: The Language of Ignorance

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> In this essay, the bestselling secularist author of "The End of Faith" delivers a scathing review of
> "The Language of God," a new book by Human Genome Project head Francis Collins that attempts to
> demonstrate a harmony between science and evangelical Christianity.

Francis Collins – physical chemist, medical geneticist and head of the Human Genome Project – has written a book entitled "The Language of God." In it, he attempts to demonstrate that there is "a consistent and profoundly satisfying harmony" between 21st-century science and evangelical Christianity. To say that he fails at his task does not quite get at the inadequacy of his efforts. He fails the way a surgeon would fail if he attempted to operate using only his toes●1●. His failure is predictable, spectacular and vile.●2● "The Language of God" reads like a hoax text, and the knowledge that it is not a hoax should be disturbing to anyone who cares about the future of intellectual and political discourse in the United States.

●1● ??????? How does he know that ?
●2● No prejudice, of course.

Most reviewers of "The Language of God" seem quite overawed by its author's scientific credentials. This is understandable. As director of the Human Genome Project, Collins participated in one of the greatest scientific achievements in human history. His book, however, reveals that a stellar career in science offers no guarantee of a scientific frame of mind. Lest we think that one man can do no lasting harm to our discourse, consider the fact that the year is 2006, half of the American population believes that the universe is 6,000 years old, our president has just used his first veto to block federal funding of embryonic stem-cell research on religious grounds●3●, and one of the foremost scientists in the land has this to say, straight from the heart (if not the brain):

●3● Those are Collins's fault ?

- > As believers, you are right to hold fast to the concept of God as Creator; you are right to
- > hold fast to the truths of the Bible; you are right to hold fast to the conclusion that science
- > offers no answers to the most pressing questions of human existence; and you are right to
- > hold fast to the certainty that the claims of atheistic materialism must be steadfastly
- > resisted....

- > God, who is not limited to space and time, created the universe and established natural laws
- > that govern it. Seeking to populate this otherwise sterile universe with living creatures, God
- > chose the elegant mechanism of evolution to create microbes, plants, and animals of all sorts.
- > Most remarkably, God intentionally chose the same mechanism to give rise to special
- > creatures who would have intelligence, a knowledge of right and wrong, free will, and a
- > desire to seek fellowship with Him. He also knew these creatures would ultimately choose to
- > disobey the Moral Law.

According to Collins, belief in the God of Abraham is the most rational response to the data of physics and biology, while "of all the possible worldviews, atheism is the least rational." Taken at face value, these claims suggest that "The Language of God" will mark an unprecedented breakthrough in the history of ideas. Once Collins gets going, however, we realize that the book represents a breakthrough of another kind.

After finding himself powerless to detect any errors in the philosophizing of C.S. Lewis (a truly ominous sign●4●), Collins describes the moment that he, as a scientist, finally became convinced of the divinity of Jesus Christ:

●4● I have some sympathy with that comment.

- > On a beautiful fall day, as I was hiking in the Cascade
- > Mountains ... the majesty and beauty of God's creation
- > overwhelmed my resistance. As I rounded a corner and saw a
- > beautiful and unexpected frozen waterfall, hundreds of feet
- > high, I knew the search was over. The next morning, I knelt in
- > the dewy grass as the sun rose and surrendered to Jesus Christ.

If this account of field research seems a little thin, don't worry – a recent profile of Collins in Time magazine offers supplementary data. Here, we learn that the waterfall was frozen in three streams, which put the good doctor in mind of the Trinity...

It is at this point that thoughts of suicide might occur to any reader who has placed undue trust in the intellectual integrity of his fellow human beings. One would hope that it would be immediately obvious to Collins that there is nothing about seeing a frozen waterfall (no matter how frozen) that offers the slightest corroboration of the doctrine of Christianity. But it was not obvious to him●5● as he "knelt in the dewy grass," and it is not obvious to him now●6●. Indeed, I fear that it will not be obvious to many of his readers.●7●

●5● Evidence, please – I imagine it was perfectly obvious.
●6● More evidence, please.
●7● Possibly true.

If the beauty of nature can mean that Jesus really is the son of God ●8●, then anything can mean anything. Let us say that I saw the same waterfall, and its three streams reminded me of Romulus, Remus and the She-wolf, the mythical founders of Rome. How reasonable would it be for me to know, from that moment forward, that Italy would one day win the World Cup? ●9●. This epiphany, while perfectly psychotic, would actually put me on firmer ground than Collins – because Italy did win the World Cup. Collins’ alpine conversion would be a ludicrous non sequitur even if Jesus does return to Earth trailing clouds of glory.

●8● deliberate obfuscation ? – Collins doesn’t say anything like that in the text quoted.
●9● That depends on how long you had been pondering the issue, and whether you thought that Romulus etc. had created the universe, and you, and the World Cup. And a few other things.

While the mere sighting of a waterfall appears to have been sufficient to answer all important questions of theology ●10● for Collins, he imagines himself to be in possession of further evidence attesting to the divinity of Jesus, the omnipotence of God and the divine origin of the Bible. The most compelling of these data, in his view, is the fact that human beings have a sense of right and wrong. Collins follows Lewis here, as faithfully as if he were on a leash, and declares that the “moral law” is so inscrutable a thing as to admit of only a supernatural explanation. According to Collins, the moral law applies exclusively to human beings:

- > Though other animals may at times appear to show
- > glimmerings of a moral sense, they are certainly not
- > widespread, and in many instances other species’ behavior
- > seems to be in dramatic contrast to any sense of universal
- > rightness.

●10● perhaps an overstatement ?
●11● – which naturally presents a random sample of human behaviour.
●12● More impressive if they were entirely altruistic - “love your enemies” ?

One wonders if the author has ever read a newspaper ●11●. The behavior of humans offers no such “dramatic contrast.” How badly must human beings behave to put this “sense of universal rightness” in doubt? And just how widespread must “glimmerings” of morality be among other animals before Collins – who, after all, knows a thing or two about genes – begins to wonder whether our moral sense has evolutionary precursors in the natural world? What if mice showed greater distress at the suffering of familiar mice than unfamiliar ones? (They do. ●12●) What if monkeys will starve themselves to prevent their cage-mates from receiving painful shocks? (They will.) What if chimps have a demonstrable sense of fairness when receiving food rewards? (They have.) Wouldn’t these be precisely the sorts of findings one would expect if our morality were the product of evolution?

Collins’ case for the supernatural origin of morality rests on the further assertion that there can be no evolutionary explanation for genuine altruism. Because self-sacrifice cannot increase the likelihood that an individual creature will survive and reproduce, truly self-sacrificing behavior stands as a primordial rejoinder to any biological account of morality. In Collins’ view, therefore, the mere existence of altruism offers compelling evidence of a personal God. (Here, Collins performs a risible sprint past ideas in biology like “kin selection” that plausibly explain altruism and self-sacrifice in evolutionary terms.) A moment’s thought reveals, however, that if we were to accept this neutered biology, almost everything about us would be bathed in the warm glow of religious mystery. Forget morality – how did nature select for the ability to write sonnets, solder circuit boards or swing a golf club? Clearly, such abilities could never be the product of evolution. Might they have been placed in us by God? Smoking cigarettes isn’t a healthy habit and is unlikely to offer an adaptive advantage – and there were no cigarettes in the Paleolithic – but this habit is very widespread and compelling. Is God, by any chance, a tobacco farmer? Collins can’t seem to see that human morality and selfless love may be derivative of more basic biological and psychological traits, which were themselves products of evolution. It is hard to interpret this oversight in light of his scientific training. If one didn’t know better, one might be tempted to conclude that religious dogmatism presents an obstacle to scientific reasoning. ●13●

●13● Frothing at the mouth. I don’t think much of Collins’s argumernts either, but it doesn’t have a lot to do with the main point.

Having established that our moral sensitivities are God-given, Collins finds himself in a position to infer the nature of our Creator:

- > And if that were so, what kind of God would this be? Would this be a deist God, who
- > invented physics and mathematics and started the universe in motion about 14 billion years
- > ago, then wandered off to deal with other, more important matters, as Einstein thought? No,
- > this God, if I was perceiving him at all, must be a theist God, who desires some kind of
- > relationship with those special creatures called human beings, and has therefore instilled this
- > special glimpse of Himself into each one of us. This might be the God of Abraham, but it
- > was certainly not the God of Einstein.... Judging by the incredibly high standards of the
- > Moral Law ... this was a God who was holy and righteous. He would have to be the
- > embodiment of goodness.... Faith in God now seemed more rational than disbelief.

I hope the reader will share my amazement that passages like this have come from one of the most celebrated scientists in the United States. ●14●. I find that my own sense of the moral law requires that I provide a few more examples of Collins’ skill as a philosopher and theologian...

●14● Perhaps Harris has not met many celebrated scientists.
●15● What’s that got to do with anything ?

On the question of why God simply doesn’t provide better evidence for his existence:

- > If the case in favor of belief in God were utterly airtight, then the world would be full of confident
- > practitioners of a single faith. But imagine such a world, where the opportunity to make a free
- > choice about belief was taken away by the certainty of the evidence. How interesting would that be? ●15●

One is tempted to say that it might be more “interesting” than a world unnecessarily shattered by competing religious orthodoxies and religious war, only to be followed by an eternity in hell for all those who believe the wrong things about God. But, to each his own.

How does Collins settle the problem of theodicy – the mystery of why there is evil and misfortune in a world created by an omniscient, omnipotent and perfectly benevolent God? He takes it very much in stride:

- > Science reveals that the universe, our own planet, and life itself are engaged in an evolutionary process.
- > The consequences of that can include the unpredictability of the weather, the slippage of a tectonic plate, or the misspelling of a cancer gene in the normal process of cell division. If at the beginning of time God chose to use these forces to create human beings, then the inevitability of these other painful consequences was also assured. Frequent miraculous interventions would be at least as chaotic in the physical realm as they would be in interfering with human acts of free will.

But why was God obliged to make cell division susceptible to the perversity of cancer? ●16● And why couldn't an all-powerful, all-knowing, perfectly benevolent God perform as many miracles as He wanted? ●17● There isn't time to entertain such questions, however, as Collins must solve all outstanding problems in the science of cosmology:

●16● Ask whoever made God.
●17● Perhaps He did. That you want more isn't evidence.

- > The Big Bang cries out for a divine explanation. It forces the conclusion
- > that nature had a defined beginning. I cannot see how nature could have
- > created itself. Only a supernatural force that is outside of space and time
- > could have done that.

It is worth pointing out ●18● the term “supernatural,” which Collins uses freely throughout his book, is semantically indistinguishable from the term “magical.” Reading his text with this substitution in mind is rather instructive ●19●. In any case, even if we accepted that our universe simply had to be created by an intelligent being, this would not suggest that this being is the God of the Bible ●20●, or even particularly magical. If intelligently designed, our universe could be running as a simulation on an alien supercomputer. ●21● As many critics of religion have pointed out, the notion of a Creator poses an immediate problem of an infinite regress. If God created the universe, what created God? To insert an inscrutable God at the origin of the universe explains absolutely nothing. And to say that God, by definition, is uncreated, simply begs the question. (Why can't I say that the universe, by definition, is uncreated? ●22●.) Any being capable of creating our world promises to be very complex himself. As the biologist Richard Dawkins has observed with untiring eloquence, the only natural process we know of that could produce a being capable of designing things is evolution. ●23●

●18● – but it would be even better to present an argument; I don't find it obvious. Magic is done by people; supernatural isn't.
●19● – and potentially misleading; if he'd meant “magical” perhaps he'd have said “magical”.
●20● – which he hasn't so far been quoted as saying.
●21● True – but just as much an article of faith as God. Let's make quite sure that God is not before pursuing that one.

Any intellectually honest person must admit that he does not know why the universe exists. ●24● Secular scientists, of course, readily admit their ignorance on this point. Believers like Collins do not.

●22● You can; go ahead.
●23● True, but irrelevant.
●24● This is an assertion that only intellectually dishonest people believe that they know why the universe exists. Proof ?

- > The major and inescapable flaw of ... [the] claim that science demands of atheism is that it goes beyond
- > the evidence. If God is outside of nature, then science can neither prove nor disprove His existence.
- > Atheism itself must therefore be considered a form of blind faith ●25●, in that it adopts a belief system that
- > cannot be defended on the basis of pure reason.

●25● perhaps “choosing an axiom without compelling evidence” might be a better way of putting it.
●26● Evading the issue : atheism is not disbelieving in Jehovah, but asserting that there is no god.

Is disbelief in Zeus or Thor also a form of “blind faith”? ●26● Must we really “disprove” the existence of every imaginary friend? The burden of producing evidence falls on those making extravagant claims about miracles and invisible realities. What is more, there is an enormous difference between acquiring a picture of the world through dispassionate, scientific study and acquiring it through patent emotionality and wishful thinking – and only then looking to see if it can survive contact with science.

Consider the following fact: Ninety-nine percent of the species that have ever lived on Earth are now extinct. There are two ●27● very different questions one could ask about a fact of this sort, if one wanted to assess the reasonableness of believing in God. One could ask, “Is this fact compatible with the existence of an omnipotent, omniscient and compassionate God?” Or, one could ask, “Does this fact, alone or in combination with other facts, suggest that an omnipotent, omniscient and compassionate God exists?” ●28● The answer to the first question is always, “Well, yes – provided you add that God's will is utterly mysterious.” (In the present case, He may have wanted to destroy 99% of his creatures for some very good reason that surpasses our understanding.) ●29● The answer to the second question is “absolutely not.” ●30● The problem for Collins is that only the second question is relevant to our arriving at a rational understanding of the universe. The fact that a bowdlerized evangelical Christianity can still be rendered compatible with science (because of the gaps in science and the elasticity of religious thinking) does not mean that there are scientific reasons for being an evangelical Christian. ●31●

●27● Only two ?
●28● Or, one could ask, “So what?”. Why should it matter ? How does it bear on God's omnipotence, omniscience or compassion ?
●29● The extinction of species has very little to do with the death of individuals, 100% of which die. If he's using “creatures” to mean “species” it's a curious usage, but – again – what does it matter ?
●30● Fair enough – but it doesn't suggest that such a God doesn't exist either.
●31● Agreed.

Collins' sins against reasonableness do not end here. Somewhere during the course of his scientific career, he acquired the revolting habit of quoting eminent scientists out of context to give an entirely false impression of their religious beliefs. Misappropriation of Einstein and Hawking, while common enough in popular religious discourse, rises to level of intellectual misconduct when

perpetrated by a scientist like Collins. Where either of these physicists uses the term “God” – as in Einstein’s famous “God does not play dice...” – he uses it metaphorically. Any honest engagement with their work reveals that both Einstein and Hawking reject the notion of Collins’ God as fully as any atheist. Collins suggests otherwise at every opportunity. ●32●

●32● Probably fair comment, though it was my impression that Einstein was rather less dogmatic.

In his role as Christian apologist, Collins also makes the repellent claim that “the traditional lore about Galileo’s persecutions by the Church is overblown.” Lest we forget: Galileo, the greatest scientist of his time, was forced to his knees under threat of torture and death, obliged to recant his understanding of the Earth’s motion, and placed under house arrest for the rest of his life by steely-eyed religious maniacs. ●33● He worked at a time when every European intellectual lived in the grip of a Church that thought nothing ●34● of burning scholars alive for merely speculating about the nature of the stars. As Collins notes, this is the same Church that did not absolve Galileo of heresy for 350 years (in 1992). When it did, it ascribed his genius to God, “who, stirring in the depths of his spirit, stimulated him, anticipating and assisting his intuitions.” Collins clearly approves of this sordid appropriation, and goes on to say that all the fuss about Galileo was, in the end, unnecessary, because “the claims that heliocentricity contradicted the Bible are now seen to have been overstated...” (And what if they weren’t overstated? What then?) It is simply astonishing that a scientist has produced such a pious glossing of the centuries of religious barbarism that were visited upon generations of other scientists. ●35●

●33● “Steely-eyed” might be beyond the evidence.
●34● Evidence, please.
●35● It almost reminds one of the same sort of hatchet job visited nowadays by critics upon scientists who are Christians

If one wonders how beguiled, self-deceived and carefree in the service of fallacy a scientist can be in the United States in the 21st century, “The Language of God” provides the answer. ●36● The only thing that mitigates the harm this book will do to the stature of science in the United States is that it will be mostly read by people for whom science has little stature already. Viewed from abroad, “The Language of God” will be seen as another reason to wonder about the fate of American society. Indeed, it is rare that one sees the thumbprint of historical contingency so visible on the lens of intellectual discourse. This is an American book, attesting to American ignorance, written for Americans who believe that ignorance is stronger than death. Reading it should provoke feelings of collective guilt in any sensitive secularist. We should be ashamed that this book was written in our own time. ●37●

●36● More frothing.
●37● So much for free speech ?

Book Review: “The Language of God: A Scientist Presents Evidence for Belief” by Rich Deem

http://www.godandscience.org/apologetics/language_god.html

Francis Collins, the former head of the Human Genome Project, has written a book presenting his case for belief in theism. Having read the pre-reviews, I was looking forward to reading a fellow biologist’s viewpoint on the evidence supporting the existence of God. Although Collins presents much of the evidence supporting a Christian worldview, he discounts nearly all of it in his discussions. For example, although Collins fully accepts the anthropic principle (and devotes an entire chapter to it in “The Language of God”), he rejects the origin of life as requiring any input from God ●1●. Collins present the standard high school textbook version for the naturalistic origin of life and seems unaware of the wealth of evidence ●2● that contradicts all naturalistic scenarios, saying “this is not the place for a thoughtful person to wager his faith.” Collins goes on to reject creationism (but seems to restrict the term primarily to the young earth variety), relegating virtually all of Genesis (other than Genesis 1:1) to being “poetic” and “allegorical.” Another chapter is devoted to criticizing intelligent design, indicating that it is a “God of the gaps” approach “ironically on a path toward doing considerable damage to faith.” Ultimately, the entirety of Collins’s appeal for faith falls upon the design of the universe (which is covered rather superficially) and the existence of “moral law” among human beings ●3●. Collins rejects the idea that moral law is not universal, although he does not mention that things such as human sacrifice were once widely practiced among different societies ●4●.

■ 1■ Why is that remarkable ?
■ 2■ What “wealth of evidence” ? Is this the material he’s “discounted” ? Why did he discount it ?
■ 3■ Is “the existence of moral law” self-evident ?
■ 4■ Is human sacrifice necessarily against “moral law” ? (– or whose moral law ?)

Collins proposes that God designed the universe with such precision that humans ●5● would be the end result. Thus, although Collins believes in “theistic evolution,” the only part he accepts as being theistic was the original design of the universe. All subsequent events were the result of naturalistic processes (although the end result was guaranteed to result in the evolution of humans because of God’s specific initial design). At some point in the process (Collins identifies it as occurring ~100,000 years ago) God put a soul ●6● into a group of hominids, creating modern humans. This kind of creation would be indistinguishable from naturalism and, therefore, would provide no evidence for God’s existence. Also, it could never be falsified. Collins calls it “BioLogos” (“bios” through “Logos”). Accordingly, “BioLogos is not intended as a scientific theory. Its truth can be tested only by the spiritual logic of the heart, the mind and the soul.” Although Collins calls it “spiritually satisfying” and “intellectually rigorous”, I think most believers ●7● would find it biblically troublesome ●8● and scientifically irrelevant ●9●.

■ 5■ What does he mean by “human” ? Homo sapiens, or any intelligent and emotional creature ? – and what makes him think that we’re the end result ? The show is still running.
■ 6■ Define “put a soul into”; and demonstrate that it’s uniquely human.
■ 7■ Do we get to vote on it ?
■ 8■ There’s not much in the Bible about – say – atomic theory either.
■ 9■ Isn’t that more or less the point ?

Collins experience in coming to faith was interesting and is detailed in the beginning and end of the book. He grew up in an agnostic family, and knew at an early age that he wanted to be a scientist. At first, he was interested in the physical sciences, since “biology was rather like existential philosophy: it just didn’t make sense.” However, nearing the end of a Ph.D. program, Collins took a biochemistry course and was hooked. He applied for and was admitted to medical school, from which he graduated and began genetic research and a clinical practice. During one clinic, Collins was confronted by a Christian patient who asked him about his spiritual

beliefs. He didn't really have an answer, but determined that he should confirm his atheism by studying the best arguments for faith. A pastor directed him to "Mere Christianity" by C. S. Lewis. Collins found the arguments compelling, and cites C. S. Lewis as the principle basis for his conversion. Why did Collins choose Christianity over all the other monotheistic religions of the world? Although he came to faith on the basis of evidence that is generally agreed upon by deists, Collins rejected deism because of the presence of the moral law, which seemed to represent God's personal involvement with His creatures. He recognized that the presence of moral law meant that God was holy and righteous, but was extremely concerned about his inability to live up to the demands of moral law on the basis of his best efforts. The answer that seemed best to him was Christianity, which is the only religion that claims to have a solution to the problem of sin that makes one absolutely righteous and justified before God.

10 Why the restriction to monotheistic ?

Although "The Language of God" is an interesting book to read, I don't think it will be satisfying to believers or convincing to non-believers.

Monday, Jul. 10, 2006 By DAVID VAN BIEMA

http://www.time.com/time/magazine/article/0,9171,1211593,00.html

The pious young scientist had a question about human origins and the attention of one of the foremost geneticists in the world. Standing up in a crowded Hilton-hotel conference room in Alexandria, Va., the inquisitive Ph.D.-M.D. candidate asked Francis Collins, who mapped the human genome, about an attempt to reconcile science and faith: Did Collins think it possible that all species are products of evolution – except for humanity, which God created separately? "Based on everything we know," the young man asked, "would that tie together evolution and [a literal reading of the Bible] and make room for God to intervene?"

1 God of the gaps – and make your own gap ??
2 Not predictable by me.
3 Rubbish. At most you can say "A possible conclusion is ..." – unless he has some way of ruling out all other possibilities ?

Collins showed no surprise that a star scholar poised to contribute to the future of medicine should entertain the idea that evolution might not apply to humans. Indeed, the question was almost predictable, since the room was filled with Harvey Fellows, high-performing young academics devoted to bringing a Christian presence to fields where Evangelicals are underrepresented. And Collins, that rarest of rarities, a superstar evangelical biologist and author of the new book "The Language of God: A Scientist Presents Evidence for Belief" (Free Press; 304 pages), was perfectly qualified to answer. He did. That notion "gets you into a series of real problems," he replied. He sketched one out: the human genome contains nonfunctional elements in the precise spot where they can be found on the chromosomes of lower animals. If God was creating humans afresh, Collins asked, "why would he insert a pseudo-gene that has lost its ability to do anything in the same place that it appears in a chimp?" Barring evolution, "you're forced to the conclusion that God was trying to mislead us and test our faith – and I have trouble with that kind of conjecture."

In America's ongoing and sometimes rancorous discussion about science and God, some stock characters have evolved. There are the vocal proponents of creationism and intelligent design who storm school boards in hopes that either science or local government will conform to their beliefs. Then there are academic atheists who claim increasingly aggressively that science is in the process of proving religion a delusion. But few of the polemicists have the authority to preach beyond their own choirs. Most believers don't care to listen to an atheistic scientist calling the idea of God a mythology created to explain what humans don't understand, and academic atheists are just as uninterested in scientific lectures from Bible literalists.

4 Equally rubbish, unless you can find some proposition about God which is necessarily true and experimentally falsifiable.
5 Not only atheists !

Collins, however, has both the standing and the desire to promote a third way. At 56, he is an unassuming 6-ft. 4-in. stork with a reedy voice, a techie's el cheapo digital Timex and – his one touch of flash – a wide silver ring emblazoned with a cross. "I think the majority of people in the U.S. probably occupy a middle ground but feel under attack by the bombs thrown from either side," he says. "We haven't heard very much about the way these views can be rendered into a very satisfying harmony. And I do hope that both camps are a potential audience for what I have to say."

To some, the mere fact that he is effectively outing himself to the secular world as a man of faith warrants celebration. "Just that he's written the book is important," says Randy Isaac, head of American Scientific Affiliation, a professional group for conservative Christians. "It will help convince Christian young people that science is a viable career, and scientists to recognize that Christian faith is a relevant option."

6 I never had any problems.
7 What about miracles ?

But Collins has more in mind than being a role model. The last celebrity scientist to suggest a middle path in the creation wars was Stephen Jay Gould, who argued that science and faith could coexist because they are "nonoverlapping" domains with no common ground on which to clash. Yet Collins insists on overlaying and intertwining them. He starts from a very Gouldian premise – "Science is the only reliable way to understand the natural world [but] is powerless to answer questions such as 'what is the meaning of human existence'" – but he tracks it to a different conclusion. "We need to bring all the power of both scientific and spiritual perspectives to bear on understanding what is both seen and unseen," he writes, maintaining that those perspectives "not only can coexist within one person, but can do so in a fashion that enriches and enlightens the human experience." And without seeming particularly immodest, he offers his own experience as Exhibit A.

Collins' life, although told many times in the press during the genome race, remains appealingly weird and inspiring. He was born on an outhouse-equipped Virginia "dirt farm" – but his Yale-educated parents had earlier returned to the land as part of a rural-

community experiment under Eleanor Roosevelt's patronage. Home-schooled and solitary, their brilliant fourth son pursued his inclinations through a Yale dissertation on quantum mechanics – but then swerved, first to an M.D. and next to the field of genetics, whose astonishing precision and lifesaving potential were becoming manifest.

In 1993, Collins' trailblazing work identifying genetic defects that predispose to cystic fibrosis and other diseases led to his succeeding double-helix discoverer James Watson as head of a 2,400-scientist, multinational project to map all 3.1 billion biochemical letters that constitute the human blueprint. In 2000, Bill Clinton honored Collins and his private-sector competitor Craig Venter in the White House, crediting their complementary genome work with uncovering "the language in which God created life."

That statement reflected Collins' input. In 1976, during his medical residency, the serene faith of some of his mortally ill patients shocked the self-described "obnoxious atheist" into consulting a local minister, who handed him the book "Mere Christianity" by the great Christian popularizer and Narnia creator, C.S. Lewis. Struck by Lewis' nuts-and-bolts approach, Collins investigated faith on his own methodical terms. Finally, one morning in 1978, while hiking in the Pacific Cascades, he came upon a massive, frozen, three-stream waterfall. To him it recalled the Trinity. He writes, "I knelt in the dewy grass as the sun rose and surrendered to Jesus Christ."

Reconciling his belief with his service to genetics proved easier for him than for many of his colleagues. Upon discovering the fibrosis flaw, he remembers feeling that "God had rained down his blessing." But in a profession only 8% of whose elite admit to believing in a God who answers prayer, he found that God talk could be something of a taboo. "Bring up faith and there's always a little sense of, Didn't you get the memo?" At least once a month he receives an e-mail from some lonely post-doc asking advice on being an evangelical scientist. As his renown grew, he moved from sharing his Christian conversion with groups of fellow believers to sitting on public panels where, he says, "I've found myself the sole person saying faith was relevant" to science. Thus, he adds, "I've kind of been writing this book for 25 years."

The story of Collins' journey to faith, a description of his evangelical belief and a wrenching examination of God and suffering through the story of his daughter's rape constitute a significant part of his book, resembling in some ways evangelical testimony more than previous scientific arguments for belief. But he also explains why, although he does not believe God is rationally provable, he thinks that natural phenomena – such as the development of conditions favoring life on earth in the face of incredible odds – point toward the divine. ♣8♣

♣8♣ – which would be true even if the divine wasn't there; so what ?

And he provides a pocket description of his preferred synthesis of evolution with Christianity, which he calls BioLogos but which has a previous history under the name theistic evolution. Collins' version sees God as having preplanned the process of mutation and selection at time's beginning, knowing it would produce humanity. It differs from Deism, the "divine clockmaker" theology of Enlightenment thinkers like Thomas Jefferson, in that many Deists think God signed off once the clock was wound. Collins, on the other hand, thinks the whole point was for God to create a being with whom he could develop an ongoing relationship through prayer, Scripture and what the scientist cheerfully acknowledges as a scientifically inexplicable "divine invasion of the natural world" in the saving person of Jesus Christ.

"The Language of God" is enlightening but not always convincing. Collins writes at a pace better suited to statements of position than to sustained argument, and he sometimes falls back on familiar polemics by pros like Lewis. His insights on the nature of a God-science overlap, while fresh, are celebratory rather than investigative, budgeting relatively little space to wrestle with instances when the conjunction of the two can induce the philosophical bends (such as faith's understanding of God's place outside human time) ♣9♣ .

The book seems liveliest when Collins turns his guns from atheists on the left to creationists and intelligent designers on the right, urging the abandonment of what he feels are overliteral misreadings of Scripture. "I don't think God intended Genesis to teach science," he says, arguing that "the evidence in favor of evolution is utterly compelling." He has little patience with those who say evolution is just a theory, noting that in his scientific world the word theory "is not intended to convey uncertainty; for that purpose a scientist would use the word hypothesis." ♣10♣ The book is hard on intelligent design, heaping scientific doubt on its key notion of "irreducible complexity" in phenomena like blood clotting, and theological scorn on its ultimate implications ("I.D. portrays the Almighty as a clumsy Creator, having to intervene at regular intervals to fix the inadequacies of His own initial plan" ♣11♣ ... this is a very unsatisfactory image" ♣12♣).

♣9♣ Why "philosophical bends" about that ?
♣10♣ Silly; "theory" is certainly not intended to convey certainty either.
♣12♣ What has "unsatisfactory" to do with it ?
Atheists could use the same argument against the assumption of God (and probably do).

That is not the argument his publisher has chosen to emphasize, or his book's subtitle would be flipped to read "A Believer Presents the Evidence for Science". But it may be the one with the best prospects. Students of the debate note that atheists are more dogmatically opposed to God than Evangelicals are to evolution, if only because aggressive creationism is neither a long-standing evangelical position nor a unanimous one. According to Edward Larson, a Pulitzer-prizewinning historian of the evolution debate at the University of Georgia, American support for it, now near 50%, hovered around 30% as recently as 1960. Today, Larson says, "it's a dynamic situation, with no unanimity." Evolution is taught at some Christian colleges.

Even before he wrote "The Language of God", Collins was a player in this potentially consequential debate. He has an ongoing dialogue with Chuck Colson, the former Nixon aide who heads the successful Prison Fellowship and influences a significant conservative Christian audience through a daily radio show and a magazine column. Thus far Collins has failed to convince Colson, who says, "I think he's giving away more than he needs to, and he thinks I'm denying science." But Colson adds, "He's a guy I like, admire and appreciate. We're going to have dinner together and get some folks around a table and talk it through."

Evangelist Tony Campolo, whose position on the spectrum is somewhat closer to Collins', offers encouragement of his own. "It's one thing for a scientist to debunk creationism," he says. "It's another when a believer does it." A scientific believer with a serious book may stand the best chance of all.

A man of science face▲1▲ *Darwin and the Deity*. by David Klinghoffer
08/14/2006, Volume 011, Issue 45▲2▲

▲1▲ Google searches get "face" about twice as often as "faces". I have no idea why.
▲2▲ – of the "Weekly Standard".

<http://www.weeklystandard.com/Content/Protected/Articles/000/000/012/542pbkmy.asp>

Head of the Human Genome Project, Francis Collins is among the country's foremost authorities on genetics, a staunch Darwinist, and a prominent critic of Intelligent Design. He's also an evangelical Christian who dramatically describes the moment he accepted Jesus as his personal savior. If that sounds like it might be a paradox, read on.

Collins was hiking in the Cascade Mountains of western Washington when, as he writes, he found that "the majesty and beauty of God's creation overwhelmed my resistance. As I rounded a corner and saw a beautiful and unexpected frozen waterfall, hundreds of feet high, I knew the search was over. The next morning, I knelt in the dewy grass as the sun rose and surrendered to Jesus Christ."

Anyone who doubts that Darwinism may coherently be embraced alongside a faith in biblical religion will be intrigued and challenged by "The Language of God". Besides offering a lovely, impassioned, and transparently sincere defense of his own Christian faith, Collins argues that one need not choose between Darwin and God. Indeed, he says, embracing both is the most profound and compelling way of penetrating "that mystery of mysteries," as Darwin called it, the puzzle of the origin of species.

He makes a strong and moving case for religious belief with the part of the book that is a memoir. Collins grew up an agnostic. After medical school, he treated a woman with crippling heart disease who relied on her faith for support. She asked him what he believed about God, and he was disturbed to find that he had no thoughtful reply. Another turning point came when, on a medical mission to Africa, he saved the life of a young farmer suffering from tuberculosis with a risky emergency surgery.

The man thanked Collins afterward and commented, "I get the sense you are wondering why you came here. I have an answer for you. You came here for one reason. You came here for me." The experience set Collins to thinking about the workings of Providence, God's oversight of our lives: "The tears of relief that blurred my vision as I digested his words stemmed from indescribable reassurance – reassurance that there in that strange place for just that one moment, I was in harmony with God's will, bonded together with this young man in a most unlikely but marvelous way."

His later, and historically significant, work on the Human Genome Project has mapped the genetic language, DNA, in which Collins believes God speaks His will for living creatures. Collins does a splendid job of clarifying for the layman what genetic information actually is. He explains how evidence for Darwin's understanding of the evolutionary mechanism may be observed in queer, vestigial features of the genetic code. However, if that mechanism was never at any point guided by a transcendent intelligence – as Darwin in "The Origin of Species" assumes it was not – this naturally raises the question▲2▲ of what need there was for a Deity as most believers understand Him. God has the right to command us because he created us.

▲2▲ Really "naturally" ?

Obviously in the background here, and the foreground too, is the Intelligent Design debate. Darwin and his followers advocate an unguided and purely material mechanism of natural selection operating on random genetic variation. Intelligent Design claims to find positive evidence that the mechanism was, indeed, guided – in short, that the software in the cell (DNA) did not write itself.

Collins's book rejects Intelligent Design as an "argument from personal incredulity." That argument, in his telling, would go this way: We don't understand exactly how the Darwinian mechanism could have produced certain aspects of biological information; therefore, a Designer must have done it. I believe Collins misrepresents Intelligent Design▲3▲, and it appears that he hasn't followed the latest rounds in the scientific debate. But never mind. Let's assume he's right and ask: If Darwinism is the true resolution of the "mystery of mysteries," where does that leave God?▲4▲

▲3▲ Does he ?
▲4▲ Yes, I know what he means, but it leaves God totally unaffected.

Something you'll often hear people say is, "Well, Darwinism doesn't mean God isn't the creator. Maybe evolution was programmed into the universe from the start. So He had no need to guide the process." The problem with such thinking is that it's directly contradicted by a major current in Darwinian evolutionary theory.▲5▲ In his book "Wonderful Life" (1989), the late Harvard paleontologist Stephen Jay Gould demonstrated what he called the "contingency" of life's history. Gould explained what an incredibly lucky break it was that Earth ever cast up intelligent life forms.▲6▲

▲5▲ What "major current" ? Whatever it is, why couldn't the "programming" take it into account ?
▲6▲ Why isn't that "programming" ?

Wisely turning away from this doomed approach to showing God's hand here on Planet Darwin, Collins argues that we may discover evidence of His existence and love from looking to our own hearts, and to the heavens. In this he follows the lead of Immanuel Kant, who famously wrote, "Two things fill me with constantly increasing admiration and awe, the longer and more earnestly I reflect on them: the starry heavens without and the Moral Law within." The incredible fine-tuning of the universe's physical laws at the moment of the Big Bang, making existence possible against unimaginably high odds, must indicate that God had us in mind when He created the starry heavens▲7▲. Collins quotes Stephen Hawking: "It would be very difficult to

▲7▲ Drivel.

explain why the universe should have begun in just this way, except as the act of a God who intended to create us."▲8▲

But doesn't this sound like an "argument from personal incredulity" of just the kind Collins would attribute to Intelligent Design? Here is Collins on the Big Bang: "I cannot see how nature could have created itself."▲9▲

The same objection may be lodged against Collins's favorite demonstration of God's being and caring. This comes from the "Moral Law," the sense of right and wrong, of charity and altruism, which he believes to be inborn in the human heart. Where else could it come from, he asks, but from God? "In my view, DNA sequence alone . . . will never explain certain special human attributes, such as the knowledge of the Moral Law and the universal search for God." Darwin, among others, would disagree. In *The Descent of Man* he advanced an evolutionary explanation of altruism.▲10▲

▲8▲ It would be difficult only if you had some theory which led you to believe that the universe should have started in a different way. Without such a theory, why is any starting point more or less likely than any other? Perhaps there is such a theory, but no one ever seems to talk about it.

▲9▲ No; things that don't exist aren't in a good position to take action. "Nature" is the wrong word. What's the right word?

▲10▲ Darwin wins that one.

In his most satisfying defense of belief, Collins brings forward a clever way of reconciling an unguided evolutionary process with God as the Creator. He points out that God resides beyond the limits of time. Hence, what appears to us as evolution's unpredictable course was, from God's perspective, entirely predictable. It's a neat perspective – except, perhaps, if we ask whether an unguided process of "creation" is still "creation" even if its results were foreseen.▲11▲

▲11▲ Of course it's still creation. It might not be unguided.

I am surprised that Collins didn't try another approach to harmonizing God and Darwin, an approach I find more promising. This one is brought forward by an Orthodox Jewish scholar who deserves to be more widely known outside Jewish circles. In his own new book, "The Challenge of Creation: Judaism's Encounter with Science, Cosmology, and Evolution", Rabbi Natan Slifkin also summarily dismisses Intelligent Design. On the other hand, he offers a sumptuous variety of theological and philosophical approaches to reconciling Darwinian evolution with religious faith. Slifkin's perspective, while endorsing Darwinism, holds that what may appear random and unguided in life's history may not be at all.▲12▲

▲12▲ Is that surprising?

His writing is too fascinatingly rich to summarize here ▲13▲, but a hint of this line of thinking may be found in a citation from the book of Proverbs▲14▲: "[When] the lot is cast in the lap, its entire verdict has been decided by God." Or as a cryptic verse of a famous Sabbath hymn, "L'chah Dodi," suggests, in Slifkin's paraphrase: The end of the deed is first in thought, which explains that the final result sheds light on the entire process. In this case, it clarifies that when a seemingly meaningless process results in a highly meaningful conclusion, one looks back and sees that the apparent meaninglessness was a mere disguise for the goal, which was actually envisaged at the start of the entire process.▲15▲

▲13▲ How very convenient!
▲14▲ Proverbs 16.33; no relevant context.
▲15▲ Exactly what Collins said in the paragraph before last?

This turns Stephen Jay Gould's notion of contingency on its head. The unlikely course of evolutionary history with its ultimate▲16▲ product – us – actually becomes an argument for the emergence of humans having been intended all along.▲17▲. After all, the unlikely thing actually happened. But Slifkin's attempt at harmonizing would likely trouble Darwin, who assumed that the process not only seemed to be unguided but also was unguided.

▲16▲ Time has not yet come to an end.

▲17▲ How does he know that "we" are the intended product? Why not cockroaches? or trees? (– which at least don't go round systematically killing each other, or destroying the ecosystem)

Can we reconcile God and Darwin without changing the accustomed meaning of one or the other? I remain skeptical. Yet readers owe Francis Collins – and Rabbi Slifkin – a debt of gratitude for making us think more deeply about issues that often get swept away with trite, unexamined formulations designed to give us an excuse for not thinking. The theological and scientific paradoxes will not be resolved in a book review, nor perhaps in any book that has yet been written.