

Notes from the Panorama of Science

Lessons from Twentieth-Century Geology

Introduction

Today's creationists—facing an aggressive, powerful monopoly of atheism—can easily forget that nothing is new under the sun. Our forefathers faced the same in the 1960s; it was less overtly atheist (they just called it “science” then) but no less assertive or driven by a religious commitment to naturalism. One of the leaders in the field of geology during the early days of creation science was Marion King Hubbert (1903–1989). A short analysis of his writing from the mid 1960s opens a window onto the world faced by Drs. Morris and Gish and their colleagues.

Hubbert (Figure 1) was born in 1903 in San Saba, Texas, and was educated through the PhD level, earning that degree at the University of Chicago in 1937. He worked as a geophysicist for

the Shell Research Lab from 1943 to 1964 and then became a fixture at the United States Geological Survey until his retirement in 1976. He also taught in the California University system at Stanford and Berkeley. During his day, he was one of the best-known geologists in the world, famous for his bell-curve predictions about the future of the world's oil supply (Figure 2). He was a president of the Geological Society of America and an honored member of the National Academy of Sciences.

But Hubbert was also an aggressive proponent of naturalism, though in the mid-twentieth century, the term “world-view” did not possess today's familiarity. Nor was there a significant perception in the church or in the public that philosophical and religious commitments characterized atheists. Positivism

still had a tight grip on the culture, opposition to God was simply “science,” and Hubbert was no exception. His 1967 article, “Critique of the Principle of Uniformity,” provides an interesting window on the hurdles faced by the early creationists. Even more interesting are the erroneous views about history and philosophy that were part and parcel of that day's thought. Enlightenment propaganda still had a tight grip on Western culture. For example, his view of the history of his science was nothing more than an atheistic rant:

During the last five hundred years, the tortuous evolution of geological science has been characterized by a progressive emancipation from the constraints and impediments imposed by assumptions of Special Creations and interferences from

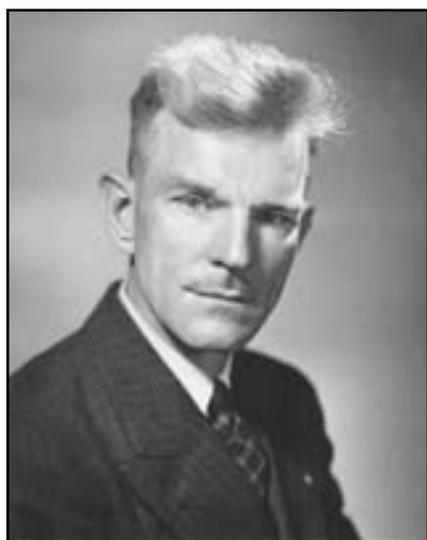


Figure 1. Marion King Hubbert. From peake.blogspot.com/2006_03_01_archive.html (as of August 14, 2009).

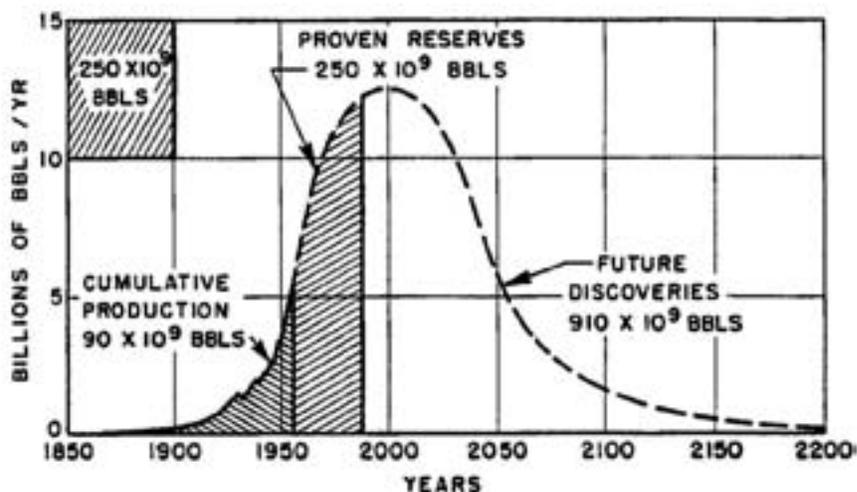


Figure 2. The Hubbert Curve predicted the world's future oil supply and has proved remarkably accurate in the decades since Hubbert's first prediction in 1956. From www.geo.cornell.edu/.../peak_oil.html (as of August 14, 2009).

Divine Providence in geological (and human) affairs. A major part of this emancipation has been accomplished by the employment of the Principle of Uniformity, but this rests upon insecure grounds due in large part to its having been formulated in ignorance of the later-developed laws of thermodynamics (Hubbert, 1967, p. 31).

American pragmatism is on full display too. Despite the fact that he places little confidence in the principle of uniformity, he rejoices that it was so useful in overthrowing a biblical view of science and history. His vitriol continues all the way to his conclusion. After retelling the story of the French astronomer Laplace dismissing the necessity of the “God Hypothesis” when talking to Napoleon, Hubbert (1967, pp. 31–32) echoes the same dream for geology: “It may be that the time has now arrived when geologists too may explicitly declare their lack of necessity for that particular hypothesis.”

Ironically, God had other plans. The Creation Research Society had just been founded, and the Institute for Creation Research was just over the horizon. Today many more people recognize that atheism is a religion and that science owes its origins to Christianity. A closer look at Hubbert’s paper reveals a number of other related errors, both in his understanding of the history of geology and the philosophical positions associated with it. Examining examples of both can help us see just how much things have changed since the early days of creation science.

Errors of History

Only recently have the myths surrounding the origins of geology been identified as such and set aside by serious historical study. It is interesting to examine the extent to which these errors were entrenched in the highest echelons of geological thinking, even in the 1960s when pioneers like Reijer Hooykaas (1963)

were demonstrating otherwise. Hubbert demonstrates that even the intellectual elite were not immune from bad history and even worse philosophy. All of these errors have one thing in common—they were myths used in the service of an anti-Christian naturalism.

Among them is one still bravely pushed by atheists, despite its repeated scholarly repudiation. As the story goes, the true significance of the Copernican revolution was the blow to Christianity caused by the displacement of man from the center of the universe and therefore from the center of God’s affections and attentions.

Inevitably, the demise of the geocentric system carried with it strong repercussions for the philosophical systems and theological dogmas which formed its principle supports. The theological dogma that the earth, being the abode of God’s favorite Creation, Man, could not occupy a lesser place than the seat of honor at the center of the universe, was severely shaken by the establishment of the earth, not as the stationary center of the universe, but as only one of the six known planets encircling the sun (Hubbert, 1967, p. 3).

We know better now (and some historians knew better then). For example, Hooykaas (1999) summarized his research (dating back to the mid twentieth century) in his final book. Regarding the Copernican myth, he noted,

a supposed connection between man’s rank in the hierarch of created beings and the ‘importance’ of the place of this terrestrial abode has occupied many writers on the Copernican controversy (Hooykaas, 1999, p. 153).

He then debunks the idea:

The proponents of this explanation deem it unnecessary to adduce solid proofs for their contention. Yet it is one of those ‘clever’ constructions by moderns who think they know better than our ancestors themselves what

were their real motives (Hooykaas, 1999, p. 153).

After explaining that religious opposition to Copernicus had only been advanced on exegetical grounds, not doctrinal, he stated that it “did not change anything in religious belief” (Hooykaas, 1999, p. 154) and showed that Copernicus’s ideas actually did the opposite—elevating man from his previous Ptolemaic “earthly” position to a “heavenly” one. Showing the theological incompetence of these detractors, Hooykaas finished his analysis with an accurate assessment.

Man owed his high rank in creation to his being made in the image of God: the position of his dwelling place had nothing to do with this honorable stature. Indeed if it were true that the *central position* conferred dignity, Hell would have been the place most esteemed by the adherents of the geocentric system. For it, so they believed, was located in the centre of the Earth (Hooykaas, 1999, p. 155, emphasis in original).

Of course, a little logic would have done the same thing: Hubbert might have wondered why, if heliocentrism crushed Christianity, the chief scientists who developed the new astronomy—Copernicus, Galileo, Kepler, and Newton—remained devout Christians.

Similarly, mythology obscured the beginnings of geology from Hubbert’s view.

The second major scientific revolution is that which may be referred to as the Huttonian-Lyellian-Darwinian. During this, an earth with a presumed Biblical history of only some 6000 years, whose plant and animal inhabitants were initiated by Divine Creation, was supplanted by an earth the length of whose decipherable history was estimated to be at least hundreds of millions of years, and whose plant and animal inhabitants had evolved during those years from

ever more primitive ancestral forms. Man, instead of being God's highest and most favored Creation, was reduced to being a direct biological descendent, in common with all other members of the animal kingdom, of the long animal evolutionary chain (Hubbert, 1967, p. 3).

The errors in this statement would take a long discussion to point out completely. Suffice it to say, that a quick read through Rudwick (2005) will demonstrate that the traditional Biblical view of history had been rejected by the Enlightenment savants well back into the 1700s. In fact, de Luc noted that he was one of the only intellectual defenders of the Flood in the late 1700s, and his system did not even hold to a young earth.

Furthermore, Hubbert's emphasis on British geologists at the expense of the continental savants only illustrates the ongoing influence of Lyell's nationalistic bias. Gould (1975; 1987) laid bare the "empiricist myth" of Hutton, Playfair, and Lyell as the fathers of geology contra British "fundamentalists," propagated by apologists for scientism like Geikie, whom Hubbert liberally cited.

Sinking even deeper into Enlightenment propaganda, Hubbert attempts to conflate Werner's Neptunism and Genesis, going as far as to say that Werner's Neptunism "had an implied time scale which was compatible with Biblical chronology" (Hubbert, 1967, p. 9).

Rudwick (2005, p. 125) showed otherwise: "Likewise, Werner commented in print—casually and just in passing—that the Geognostic pile of rock masses must have accumulated 'in the immense time span...of our earth's existence.'"

Sticking to his paradigm of atheism's emancipation from the chains of Christianity, Hubbert also botched the debate between Hutton and Richard Kirwan, an Irish savant, whom Hubbert immediately accuses of having no personal knowledge of geology.

The attacks began as early as 1793 when the Irish chemist, Richard Kirwan, with no personal knowledge of geology, coupled the Wernerian system to a literal interpretation of the Bible in support of the charge of atheism against Hutton (Hubbert, 1967, p. 9).

This story is unmasked by Gould (1984, p. 13), who noted that "the textbook tale of uniformitarian goodies versus catastrophist baddies is a bit of self-serving, historically inaccurate rhetoric."

Then Rudwick (2005) fills us in on a more accurate version. He first credits Kirwan with being a "chemist and mineralogist" (p. 334), whose 1793 paper dealt with the supposed igneous origin of rocks. As Rudwick notes, Kirwan was courteous to Hutton, and "only briefly" referred to "the broader implications of Hutton's geothory" (Rudwick, 2005, p. 334). When he did, he attacked the philosophical eternalism of Hutton, not the "deep time" that we associate today with the geological timescale. This philosophical aversion was common to most European savants of that time—Christian or not.

As Rudwick (2005) notes later (pp. 335–336), it was only after the revolutionary terror in France that Kirwan—making an explicit link between geology and morality—asserted a more Biblical position in opposition to Hutton, whose model, though deistic in its theology, was rightly seen as promoting atheism. Though Rudwick deplores the subsequent development of scriptural geology in answer to Hutton and Lyell, it is clear in retrospect that Kirwan was prescient in understanding the broader implications of earth history without a Creator. Ironically, Hubbert completes Kirwan's argument by his illogical position of praising uniformity for overthrowing Christianity, while rejecting it on its logical merits!

But Hubbert is not finished mischaracterizing Neptunism:

Throughout its history the Neptunist-Vulcanist controversy was a mixture of geology and theology, and the central issue was the Huttonian versus the Biblical interpretation of geologic history (Hubbert, 1967, p. 10).

Rudwick (2005) first counters by distancing Neptunist geognosy from Werner.

Historians and historically minded geologists have commonly ascribed the Neptunist system to Werner (and many of them, until recently, routinely castigated him for it). But Werner was merely giving his own expression to a widely held kind of geothory (p. 175).

And as to Werner's supposed "theological" motivation, Rudwick (2005) notes,

He defined geognosy unambiguously as a branch of mineral natural history, concerned above all with the structural situation and spatial relations of rock masses. He firmly excluded "hypotheses," *for example about the origin of the earth*, arguing that such speculations were quite different from the sober inferences that followed directly from what could be observed (pp. 421–422, emphasis added).

Again, Hubbert could have deduced as much by researching the facts that: (1) Werner never published a "geothory," and (2) his views were quite conventional compared to other European savants; in other words, he accepted an indeterminately, yet not eternally, old earth.

So why did someone of Hubbert's caliber embrace these errors? Perhaps because he (like all too many others) developed a template of history based on his faith commitments to atheism. Facts were fitted to drive the story, not the other way around—a strange position for an "empiricist." It didn't help that he gained his historical information from propagandists like Geikie. As he started, so he ended:

In our historical review, we have traced a somewhat tortuous, but essentially unidirectional, progression toward emancipation from the idea that so-called natural laws could be set aside arbitrarily and terrestrial affairs manipulated at will by the dictates of a Divine Providence (Hubbert, 1967, p. 28).

In the 1960s, this view of Christianity was still seen as “scientific,” despite its theological inaccuracy and philosophical naiveté. Today, in retrospect, we can see unmasked commitments to materialism, evolutionism, positivism, and atheism. When we look at our increasing awareness of the complexity of real history, we can gain a greater appreciation for the work of the early creationists, who paved the way for modern views by challenging the arrogant scientism of their day. Today’s atheists are just as committed and outspoken as Hubbert, but more and more people are seeing the blatant religious bias that accompanies their “analysis,” thanks largely to the unremitting work of Christians who are unafraid to point out the obvious.

Errors of Philosophy

If Hubbert’s historical errors were significant, they pale beside his philosophical “analysis.” After praising uniformity for overthrowing Christianity, he claims that Lyell’s views were inconsistent and takes on the task of addressing the past. Although the following quote is somewhat long, it is quite revealing of Hubbert’s commitments.

Perhaps in answer to this we should consider what are the logical essentials in the deciphering of history, not just geological history, but any kind of history. Because it is impossible for us to observe anything except the present, our interpretations of prior events must necessarily consist of inferences based upon present observations. *History, human or geological, represent our hypothesis, couched in terms of past*

events, devised to explain our present-day observations.

What are our assumptions in such a procedure? Fundamentally, they are two:

- (1) We assume that natural laws are invariant with time.
- (2) We exclude hypotheses of the violation of natural laws by Divine Providence, or other forms of supernaturalism.

These are not arbitrary assumptions, nor are they peculiar to geologic science. Rather, they represent the distilled essence of all human experience, and are common to all sciences....

The second assumption is actually a corollary of the first, but it requires to be explicitly stated in view of the fact that for centuries the failure to accept this assumption has been one of the principle hindrances to the advancement of scientific understanding (Hubbert, 1967, pp. 29–30, emphasis in original).

Here, Hubbert’s view of history shows that his historiography has remained stubbornly a part of the scientific mindset, and this statement might well be made by a current geologist. The irony is that his two fundamental assumptions are *contradictory!*

While it is true that science rests on invariant natural laws, it is also true that the origins of science in Christian Europe lay in the ability of thirteenth- to seventeenth-century theologians to justify this sweeping assumption. They did so by linking it to the nature of God. It is essential that Christians avoid the trap of thinking that “invariant natural law” is not something intrinsic to matter and energy, but that it is the manifestation of what theologians call “Providence”—God’s ongoing involvement in His creation. All too often, we unconsciously accept the deistic formulation of God that when He created, He endowed matter and energy with “laws”

and walked away. In that paradigm, miracles become the divine “interfering” with creation decried by Hubbert. Instead, the founders of science were keenly aware that “wonders” were the norm—just the continued existence of anything was a “miracle.” Were God to withdraw His maintaining providence for even a moment, the universe would cease to exist.

It is only in the context of that Biblical view (Hooykaas, 1972; Glover, 1984) that the idea of invariant natural law can be secured and science can be settled. Enlightenment philosophers kept the uniformity but discarded the only logical basis for it. As Hume noted long ago, universal laws cannot be justified empirically because our observation does not reach across space and time in a manner sufficient to insure uniformity at all times in all places. This is especially true for someone who thinks the Earth is 4.6 billion years old.

Thus, when Hubbert leaps to his second assumption of discarding God, he fails to see that he has just “thrown out the baby with the bathwater.” The arrogance of his positivism is manifested in his following sentence, where contrary to Hume’s (and many others’) logical analyses, he asserts that these assumptions can be confirmed by “the distilled essence of human experience.” He then makes another error common to atheists: he claims both assumptions are a part of science. What he doesn’t realize is that rather than strengthening his assumptions, what he is doing is binding science to the altar of positivism, where it lays supine, waiting for the knife of logic to fall.

His arrogance is revealed again in his final paragraph. He sees the tenacity of human belief in God as if it were some psychological pest, clinging like a parasite to an evolving human race, rather than taking any time to wonder why so many people in so many places at so many different times have affirmed theism. As a confirmed atheist, he can-

not possibly accept the logical answer that it is because there really is a God who created the cosmos. And of course since others have discussed it at length, we need not waste too much time on the other obvious contradiction in his statement—for science is a child of Christianity alone.

To sum it up: the rise of science was not an extension of classical learning. It was the natural outgrowth of Christian doctrine: Nature exists because it was created by God. To love and honor God, one must fully appreciate the wonders of his handiwork. Moreover, because God is perfect, his handiwork functions in accord with immutable principles. By the full use of our God-given powers of reason and observation, we ought to be able to discover these principles (Stark, 2003, p. 157).

Conclusion

M. King Hubbert exemplified geology in the mid-twentieth century. It had a view of its own history built on Enlightenment propaganda rather than rigorous scholarship. It was aggressively atheistic and positivistic. Logic never stood in the way of its commitment to a world without God, and anyone with the temerity to question its many errors would have been informed that they were “unscientific”—a professional death

blow in a culture that still worshipped technology.

This was the world that welcomed *The Genesis Flood* in 1961 and the first manifestation of the modern creationist movement, the Creation Research Society, in 1963. Today creationists face a variety of challenges, but as this historical retrospective shows us, the opposition has always been there. Like our forefathers, we do not rely on our intellect, our cleverness, or our skill in debate. We simply rely on the promise of God in 1 Corinthians 1:27 (KJV):

But God hath chosen the foolish things of the world to confound the wise; and God hath chosen the weak things of the world to confound the things which are mighty.

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