When Science Replaced the Bible

Theology doesn't teach what we know about God;
it teaches what we do not know about Nature.

To believers, it is the Bible's antiquity and the prestige of the Church that gives it its power and mystique. The biblical world view went unchallenged until some major scientific discoveries set it in retreat. What follows is a brief sketch of the some of the major landmarks in scientific discovery which have discredited beliefs rooted in the Bible.

Archeology

According to the chronology in the Bible, earth was created on 4004 BCE.

In 1798 Napoleon Bonaparte took a team of 150 scientists with him on a military mission to Egypt. Napoleon had to abandon his military ambitions, but his scientists stayed behind. A couple of years later they brought back artifacts from an advanced civilization almost as old as the biblical time of Creation, 4004 BCE. If there was such thing as a Noah's flood, it would have destroyed the Egyptian civilization at the time when they were building their pyramids. This would apply equally as well to all the other ancient civilizations around the world which have since been discovered.

Astronomy

Up until 1492, the biblical view of a flat earth was a commonly accepted belief.

It was on that date when Christopher Columbus sailed west to the Americas and proved that earth is round. The authority and dominance of the Catholic Church was at last fractured. Early scientists began asking questions that challenged long held dogmas about creation and the nature of the universe.

In 1543, the Polish astronomer, Nicolaus Copernicus, overturned the geocentric theory of an earth centered universe with his heliocentric, sun-centered theory. When Galileo Galilei, improved the telescope he saw more detail in the heavens then ever before. Around 1610 he published his first findings for his support for the Copernican theory of a moving earth. In 1633, he was ordered to renounce his discoveries and was kept in house arrest for the rest of his life.

Biology

When God created life, according the Bible, he created them according to their kind. This was interpreted to mean that life forms were fixed according to the way they were created.

In 1665, with the aid of microscopes, Robert Hooke proposed the cell theory, which states that all living things are composed of cells, the fundamental unit of life, and that all cells arise from previous cells.

1859 brings us to the year when Darwin published his *Origin of Species*. His theory of natural selection argues that it is not so much a matter of survival of the fittest as it is, survivors produce more adaptable offspring. It's based on a simple observation that marginal variations in offspring yield different degrees of survival success. He also introduced the concept of related organisms which are descended from common ancestors. He introduced the idea that earth is not static, but evolving.

Credit for the founding of genetics goes to a Czechoslovakian monk, Gregor Mendel, who in 1865 announced his

findings based on 28,000 experiments with pea plants. There exists "atoms of inheritance" which we now call genes. Each parent contributes half of its offspring's genes. Genes come in different forms and are sorted and distributed randomly.

In 1968, James D. Watson published the *Double Helix*. His research lead to the discovery of the double helix structure of DNA molecules. DNA is consistent with both Newton and Darwin. Like Newton's laws of motion showing matter is a form of energy, DNA contains the chemical blueprints for self-replication. Consistent with Darwin, the self-replication process produces marginal variations. It is not fixed the way creationists want to believe.

In the year 2000, J. Craig Venter and his company Celera Genomics, mapped the entire human DNA molecule. They found 30,000 different genes in a molecule, but the search isn't over yet. Apparently, they've found, each gene contains a collection of protein amino acids whose functions are not yet understood. The 30,000 genes can be seen as plans for housing development and amino acids, as the blueprints and building materials for each house.

Chemistry

In the Bible creation stories, God creates earth and then creates life. All matter was composed of some combination of air, water, fire and earth. Up to the nineteenth century, it was believed that living material matter was fundamentally different than dead matter. The notion that four elements controlled the nature of men and matter can be seen in Genesis 1 and has carried into the seventeenth century.

In 1828 German chemist Friedrich Wohler showed that living matter comes from dead matter when he synthesized urea from ammonium nitrate-urea is produced mostly in the liver as the end product of protein metabolism. This means that at the level of atomic structure, living matter cannot be differentiated from nonliving matter.

The first to discredit the idea of four elements was an Englishman, Robert Boyle, who in 1661 published *The Sceptical Chymist>*. His contribution was to realize that matter is composed of a range of elements, each of which, in its pure form is a collection of identical corpuscles or atoms. He was responsible for placing the emphasis on careful experiment and for his rejection of occult explanations.

Education

About 1452 Johannes Gutenberg invented the printing press. Up to that time books were hand written. Writing was a slow process, so not many books were produced. It was comparatively easy for Catholic censors to destroy any book not to their liking. With the spread of the printing press, books got produced too fast for the censors to keep up and literacy increased. The Protestant Reformation was one of the outgrowths of the printing press.

1900 was the first year religious works did not outnumber all other publications. It wasn't long after when colleges were graduating more science majors than theology majors.

Geology

In 1795 James Hutton published his theories in *Theories of the Earth* in which suggests that processes such as sedimentation, volcanism and erosion caused changes in the surface of the earth and had been operating in the same manner and at the same rate over a very long period of time. This aroused strong opposition from those who believed in Archbishop James Ussher's biblical chronology published in 1650, which stated that the world was created in 4004 BCE.

Building on the pioneering work of James Hutton, Charles Lyell published his theory of *uniformitarianism* in 1830.

Uniformitarianism contradicted the theory of *catastrophism.* Catastrophism claimed that only major catastrophes could change the basic formation of the earth, and that earth was only about 6,000 years old. Catastrophism supported the belief in Noah's flood. Lyell's theories influenced the work of his friend, Charles Darwin. He eventually became a strong supporter of Darwin's theories.

Law And Economics

In 1789 the U.S. Constitution was ratified. The First Amendment prohibited the federal government from making any laws "respecting an establishment of religion." It was the first time a nation formally divorced itself from religious influence. Paradoxically, the United Stated remains one of the most religious countries in the world, and the most diverse. The paradox has to do with market economics. Without government protection, freedom gives religious denominations the incentive to compete for their audience. In other words, since no one can agree on God's message, marketing becomes the deciding factor.

Medicine

According to the Gospels, Jesus affected his cures by ridding his subjects of demons. Up until the sixteenth century, Catholic nations reinforced their views on sickness with piety. Prayers to saints and the virgin, pilgrimages to miraculous shrines, votive offerings, use of the sacraments and the anointing of the sick with holy oil remained extremely popular. For their part, soul-searching Christians could regard illness as divine punishment for sin or as a Job-like trial of faith. How a person died was crucial, for it determined whether they went to heaven or hell. For Catholics it was essential to make a last confession and to receive the sacraments and so die in a state of grace.

The year was 1878 when Louis Pasteur presented his germ theory of disease. He proved convincingly that micro-organisms were responsible for disease, putrefaction and fermentation. Particular organisms could produce specific conditions; and that once those organisms were known, prevention would be possible by developing vaccines.

Physics

To religionists, God is the principle mover of all things; without God, there would be chaos and disorder.

In 1687 Isaac Newton published his *Principia*, in which he developed the laws of motion and planetary gravitation. Newton showed that forces lie within the bodies themselves. By this time, Newton's works were widely acclaimed and the Christian Church could pose no personal threat.

Since the 1970's, a new science has emerged called the science of complexity and chaos. Whereas the traditional scientific view saw the natural world as regular and predictable, the chaos theory suggests that nature is in fact, unpredictable and irregular. Now that scientists are looking, they see chaos everywhere. They see it in weather patterns, smoke rising from a fire, turbulent flow of air and fluids, automobile traffic, the market economy, and organic metabolisms.

Conclusion

And now in the early part of the 21st century, there is one class of hold outs who think science can prove the existence of God: Creationists.

At the level of human sense perception, the universe appears orderly. But at the unseen level it is extremely complex and chaotic. Matter contains its own energy. Genes contain their own self-replicating blueprints. Everything in the entire universe is moving and shifting like clouds in the sky, in accordance with the law of causality. The idea that some supernatural deity can intercede is utterly preposterous.

Creationists can continue to nit-pick about missing evolutionary links to no avail. The process of evolutionary change and the law of causality are indigenous to every branch of science without exception: biology, chemistry, human history, geology, physics and astronomy. It's not only science; it is nature itself.

What that leaves is the Bible with all of its religious factions fixated on first century beliefs while human progress moves farther into the twenty first century. Like anything else that can't adapt, religious influence will continue to recede towards evolutionary extinction. For my part, the sooner the western world rids itself of these superstitious beliefs, the better.

Other Sources

For a view of what the world looked like in Bible times, see What did God Create

Chronology of Science by Lisa Rezende

Asimov's Chronology of Science and Discovery by Isaac Asimov