

PRE-SCIENCE

The Bible has many examples of scientific writings that preceded their scientific discovery by centuries. Many argue that this is just luck, that the Biblical writings are vague, imprecise, and that there are other examples of Biblical writings that are in opposition to science. We shall examine the case for pre-science in the Bible.

The Stars

Ptolemy counted 1,056 stars, Kepler counted 1,005. We can see at best 4,000 stars with the naked eye. The Bible says, “the hosts of the heavens cannot be numbered,” (Jer: 33:22); “the sand which is on the seashore” [can be compared to] “the stars of the heaven,” (Gen 22:17). Scientists estimate that there are more than 10^{26} stars.

In 1 Corinthians, Paul says, “The sun has one kind of splendor, the moon another and the stars another; and star differs from star in splendor,” yet all stars, except the sun appear very similar. In Psalm 19:6 it says, “It rises at one end of the heavens and makes its circuit to the other; nothing is hidden from its heat.” Some argue that this verse suggests that the sun revolves around the earth, which is clearly wrong. But in relativistic terms, if we place the point of reference (the origin of the coordinate system) on the earth, then it is correct to say that the sun revolves around the earth. Clearly the writer was on earth! Another interpretation of the verse could be that the sun revolves around something else. IT DOES, it revolves around the center of the galaxy at the rate of 600,000 miles per hour.

The Shape of the Earth

A few centuries ago almost every great thinker believed in a flat earth, yet the Bible says, “He sits enthroned above the circle of the earth, and its people are like grasshoppers,” (Isaiah 40:22) and here the word used for “circle” is more literally translated as “roundness,” or “sphere.” See also Proverbs 8:27, “He set a compass (spherical shape) upon the face (surface) of the deep (waters of the earth).” See Job 26:7 “He spreads out the northern skies over empty space; he suspends the earth over nothing. He wraps up the waters in his clouds, yet the clouds do not burst under their weight.” The Hindu faith suggests that the earth is held on the shoulders of an elephant that stands on a tortoise. Other religions suggest various means for supporting the weight of the earth.

The Water Cycle

Consider Job 36:27-29, “He draws up the drops of water, which distill as rain to the streams; the clouds pour down their moisture and abundant showers fall on mankind.” There are many similar verses in the Bible concerning the water cycle. It was discovered by scientists about 300 years ago, yet it is vital to life on the planet, and a good description of the process has been sitting in the Bible for centuries.

Misc

There are also statements about the importance of blood to all life. Harvey discovered the circulation of blood in 1616.

The fact that the universe is slowly running out of chemical energy is now widely understood. The Bible says it like this, "In the beginning you laid the foundations of the earth, and the heavens are the work of your hands. They will perish, but you remain; they will all wear out like a garment. Like clothing you will change them and they will be discarded. But you remain the same, and your years will never end" (Ps: 102:25-27). Recall that Revelation tells us that God will create a new universe on the eighth day.

In Hebrews 11:3 we see. "By faith we understand that the universe was formed at God's command, so that what is seen was not made out of what was visible." This is remarkable. It agrees with the latest scientific model of the creation: that in the "Big Bang," the universe was created out of nothingness. Quantum mechanics states that nothingness is an unstable state and something is quite likely to pop up out of it. There is supposed to be an approximate balance in the universe between the positive and negative energy. The total energy is zero, so all of us, and every star, was made out of nothing. Surely Paul's statement must have seemed Greek to everyone who read it until very recently.

Medical Science: Moses' Speeding Tickets

The Levitical food and cleanliness laws (Lev. 11-) have, through the ages, been regarded as simple rituals, used to honor God. No Christian today thinks that eating pork is offensive to God, and so the food laws have almost been forgotten. Yet, if we study the exact set of creatures that were forbidden foods, we discover that every one is a carrier of deadly pathogens. The Jews could eat animals with split hoofs that chewed their cud, fowl, and fish with scales and fins. The unclean list included swine, horses, camels, animals with paws, shellfish, birds of prey, reptiles, and rodents. The Jews were not even permitted to touch the carcasses of these animals. (Solomon kept horses, remains of his stables were discovered recently)

Swine may be the most well known source of disease. Their parasites include the tapeworm, the trichinosis worm, which causes a wasting disease, and a form of streptococcus causing Erysipelas. Many animals wallow in, or eat excreta. Pigs and dogs are examples. Typhoid and Paratyphoid are caused by contact with such animals. Virtually all of the unclean aquatic animals are bottom feeders, or scavengers. These animals tend to be carriers of many parasites because of human and animal waste in the rivers. For example, catfish carry typhoid.

Rodents carry some of the worst pathogens known to man. Disease can be transmitted by touch or by bite. Bubonic plague, rabies, tapeworms, and ratbite fever are common bi-products of encounters with rats.

Birds of prey eat rodents and therefore carry many of the pathogens that rodents carry.

Turtles and lizards often live in stagnant waters and carry salmonella bacteria, amongst others.

Wild dogs carry fungal skin parasites that are easily transmitted to man by touch. They eat rodents and excreta and are especially dangerous. (I was horrified when my dog tried to eat horse manure.)

Notice also the Mosaic laws governing the sabbatical year when the fields must lay fallow. Pathogens in plants have a hard time surviving the changing seasons. Some change to spores in the winter. If a certain plant fungus builds up from year to year within a crop, its progress will be completely halted by the fallow year. (Recall that the Jews were kicked out of the Promised Land for failing to keep the sabbatical year in their fields. God insisted that His laws be followed because they kept the race from many diseases that plagued other nations).

See Exodus 15:26, "If you listen carefully to the voice of the Lord your God and do what is right in His eyes, if you pay close attention to His commands, and keep all His decrees, I will not bring on you any of the diseases I brought on the Egyptians, for I am the Lord, who heals you."

The cleanliness laws also protected the Jews from many infectious diseases, as we shall see.

No other nation, or religion had such a set of food laws. The Muslims have the same food laws as the Jews, but they got them from the Old Testament (Mohammed accepted the Old Testament and even thought Jesus was a prophet. He lived in the 6th century AD. The Koran was written about 200 years after his death.) The Hindus have food and cleanliness laws, but their laws do not seem to be so profoundly useful in avoiding disease.

Semmelweis recognized in 1840 that disease could be transmitted from dead bodies to the living. Moses got his publication out some 3,400 years earlier! Moses stated that anyone touching a dead carcass was to wash frequently in running water. Any articles or implements that might have touched the carcass were to be washed in the same way. Any open food vessels found in the vicinity of a dead person were to be smashed. The unclean person was to stay away from anyone else for the rest of the day. Women were not permitted sexual relations during their periods and for a time after childbirth (Lev 12).

A person who became unclean washed himself and his clothes and dried them in direct sunlight. The ultra violet light from the sun and the drying process kills almost all bacteria and viruses.

Semmelweis' story is interesting from another point of view. He was working in a hospital in Vienna where newborn babies were dying in large numbers from puerperal fever. The mortality rate for childbirth was 1 in 6. Women prayed not to be taken there! Semmelweis made a careful study and observed that the women examined by a surgeon who had just come from conducting an autopsy on a puerperal fever victim were most likely to suffer the same disease. He also reasoned that the disease could be carried on the physician's hands between live patients. He insisted that all physicians wash in chlorinated water before examining each patient. The mortality rate reversed itself immediately. Within 3 months it was 1 in 84.

Instead of recognizing the effectiveness of the preventative measures, Semmelweis' colleagues ostracized him and he was eventually fired. Hand washing stopped and the mortality rate immediately returned to 1 in 6. Even then the hospital staff did not accept the truth. Semmelweis returned to his hometown of Budapest, where he was to repeat the exact same sequence of events.

This time his results were accepted with enthusiasm and even the hospital in Vienna finally accepted them.

If our very best medical experts of 150 years ago saw no merit in washing between surgeries, how can we expect a mere nomad, an ignorant sheep farmer who grew up in pagan Egypt to have the foresight to invent these life preserving laws so long ago?

It is only in the last 100 years that we have begun to understand the spread of disease and the life cycles of parasites in various animals. Some of these parasites mature for months in the human body before causing any signs of sickness. This appears to rule out the possibility that the ancient Jews carried out careful clinical trials with control groups, or constructed these laws based on observational data. One possible exception is leprosy, which was clearly seen to spread through households.

Consider also the practice of circumcision. Under the foreskin of the penis the smegma bacillus grows prolifically. It usually does no harm to the male, although it has been linked with cancer of the penis, but once the bacteria are inside the women, the bi-products of the bacteria cause cervical cancer. As recently as 1961, scientists found that there was almost zero incidence of this disease in women whose husbands had been circumcised. This disease has been almost eradicated in the West, because of our obsession with cleanliness (frequent showers.) The skin covering of the tip of the penis is also thicker in those who have been circumcised. This membrane allows disease an easy passage into the male bloodstream.

Notice, also that circumcision was (and still is) carried out on the eighth day of the baby's life. The clotting agent, vitamin K, in the child's blood is almost absent before the seventh day. Vitamin K comes from bacterial microflora in the intestine. Infants are not born with these microflora since the amniotic fluid surrounding the child is sterile. The infant picks up these essential microflora in the mother's birth canal and during nursing.

It takes seven days for the population of these microflora to build adequate supplies of vitamin K in the blood stream. On the eighth day the level of the clotting agent peaks to 110% of normal and then subsides to its lifelong level. The eighth day is the optimum day for clotting.

If you do not accept that these ideas were spoken to Moses by the living God, then they must remain a tremendous puzzle. It is clear that the laws protected the Jewish nation from many deadly diseases through the ages. Their method of diagnosing leprosy makes excellent clinical sense today (see Lev. 13).

You can also make a strong case for God's protection from many modern diseases in the Levitical laws. Animal fat was completely forbidden. Alcohol use was restricted. The good Jew strictly observed the Sabbath day of rest, and he carefully controlled his diet, maintaining a good balance of food groups. It is certainly true that adherence to these principles even today would go a long way towards preventing heart disease, stress, and other deadly ailments. We are told to accept God's principles: "offer your bodies as living sacrifice, holy and pleasing to God", (Rom 12:2), and, "Do you not know that you, yourselves are God's temple and that God's Spirit lives in you?" (1 Cor

3:16), and, “you are not your own, you were bought with a price. Therefore honor God with your body” (1 Cor 6:20.)

The Mystery.

No scientist can possibly accept that anyone without a recent degree in biochemistry and a great deal of knowledge of parasites in animals could possibly come up with such a set of preventative measures, yet the evidence has been plain in the Scriptures for centuries. The probability of a lucky guess is astronomically low, since there are so many of these laws, and all are unquestionably valuable preventatives.

God's laws still protect us from disease. We use them throughout medicine and in our food preparation practices at home and in restaurants. If we obey the sexual restrictions of the Bible the chances of catching sexually transmitted diseases, including AIDS, are almost zero.

A good source of comparison between the Bible and scientific knowledge is “Reasons to Believe”, an organization in California headed by Hugh Ross, a respected astronomer and cosmologist. See their website at www.reasons.org. Hugh has written many books attempting to show how the Bible’s truth can be reconciled with science. For example, he lists 10 stages in the Creation Story of Genesis and shows that current scientific thought agrees with the order of creation in 8 of the 10. There is still some controversy in scientific circles about the order, but even so, the chances of guessing the correct permutation of 10 things and getting 8 of them in the correct order is incredibly small. Hugh even dares to suggest that God’s view of time and the mysteries of Heaven can be explained by a 10-dimensional universe. Modern theoretical physics also needs more than 4 dimensions in order to explain its theories.

Clearly, we can believe whatever we like. Many beliefs have no rational basis, yet people die for them. Could it be that the Bible is not the book of such an empty religion, but God’s handbook for His people? Could it be His method of revealing Himself and His nature to us? Could it prescribe a way of living that will keep us safe, slim, happy, stress-free, and in harmony with His plans for His people? You can choose to ignore these possibilities, in which case you will never know, or you can choose to study the Bible for yourself, even with a highly critical eye, and determine the answer for yourself. I think you will be amazed.