AL KITAB
The Renaissance Project

Chapter 10

Fire and Earth

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Fire & Earth

They say a parent's love is eternal; one that can never be equaled. I do not have any children of my own which makes it all the harder for me to imagine what was going through the minds of the six year old boy's parents when they heard of their son's demise. The boy was beaten to death by two men. Afterwards, his heart was cut out and offered to the "Gods of the Sea". What makes this story all the more difficult to read is that it occurred in a modern society.

The year was 1960, Chile was rocked by the most powerful earthquake recorded in human history. This natural phenomenon devastated the country and its economy. Amid the fear that gripped the country, a group of men decided to enact an ignorant and disgusting act of human sacrifice that resulted in the murder of an innocent child.

It seems that earthquakes are not only devastating in their ability to inflict material and human loss, they also instill serious psychological damage and fear among the human populace. I am currently on vacation in the beautiful city of Amman. For years locals have been warned of an impending earthquake. Thankfully this has not happened yet but it has managed to create distress among local communities. I pray that such horrible events never occur here or elsewhere, but earthquakes are unfortunately a natural occurrence of our planet's life cycle. So how do earthquakes transpire?

In 1915, a German meteorologist by the name of Alfred Wegener published an article supporting a controversial theory called "Continental Drift". According to the theory, the world was previously made up of a single continent. This massive continent split and drifted apart, forming the seven continents we are familiar with today. Thus, the theory suggests that the position of continents is not fixed and that continents are constantly moving like icebergs floating on water. Consequently, today's continents may have been in a very different place a long time ago!

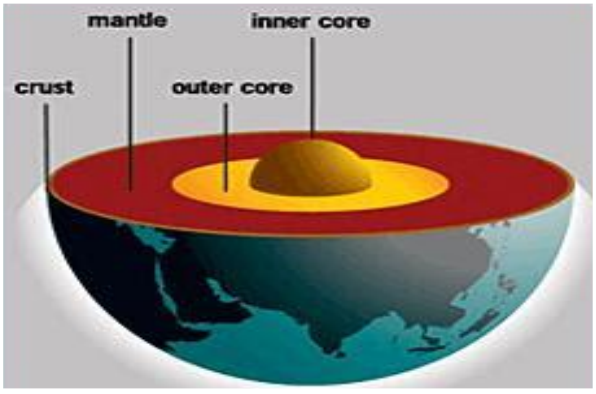
The theory was dismissed at first. The problem was that no one was able to properly explain why these continents would split or move. This would change a few decades later when Arthur Holmes finally provided the answer. It was proposed that heat transfer from the mantle and core of the Earth to its surface was the driving force behind continental drift.

In 1967, Dan Mckenzie finally put things together. His "Plate Tectonic Theory" suggests that the Earth's surface is divided into a number of distinct "plates". To better understand this, imagine a boiled egg with a cracked shell. The egg's shell is broken into a number of pieces as shown in Figure 10.2.

Did you know?

The Earth's "Plates" are composed of the Earth's crust and upper most mantle; together, these two layers are called the lithosphere.

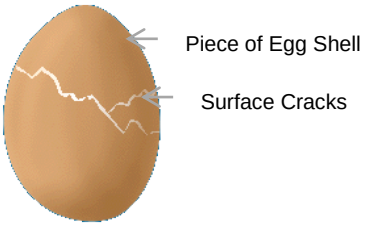
Figure 10.1 Inside the Earth



Earth's Layers – The Science

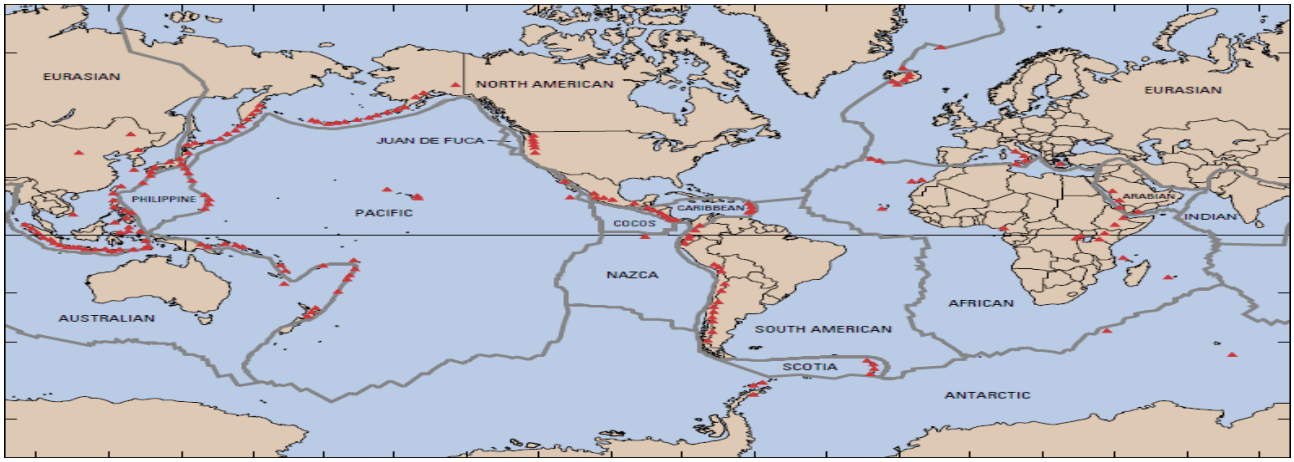
Our Earth is divided into three main layers; Core, Mantle and Crust as seen in figure 10.1. The Core forms the inner most layer and is extremely hot while the crust forms the outermost layer of Earth. Heat transfer from the Earth's mantle is thought to be responsible for creating these plates and putting them into motion

Figure 10.2: The Egg



Fire and Earth

Figure 10.3: The Earth's Plates



Similarly, the cracks / faults that stretch across the Earth's surface divide it into 8 major plates / pieces and a larger number of smaller plates as seen in figure 10.3.

Furthermore, heat transfer from the rocks laying underneath the plates causes them to move. For example, plates could drift apart or crash into one another.

These plate interactions are the cause of natural events such as earthquakes, volcanoes, and the creation of mountains.

One can imagine how the movement of plates can create devastating earthquakes. This is especially true when two plates converge / collide. Similarly, volcanos arise from the conversion or diversion of plates; hot magma escapes the Earth's interior through deep cracks in the Earth's crust and flows to the surface.

Did you know?

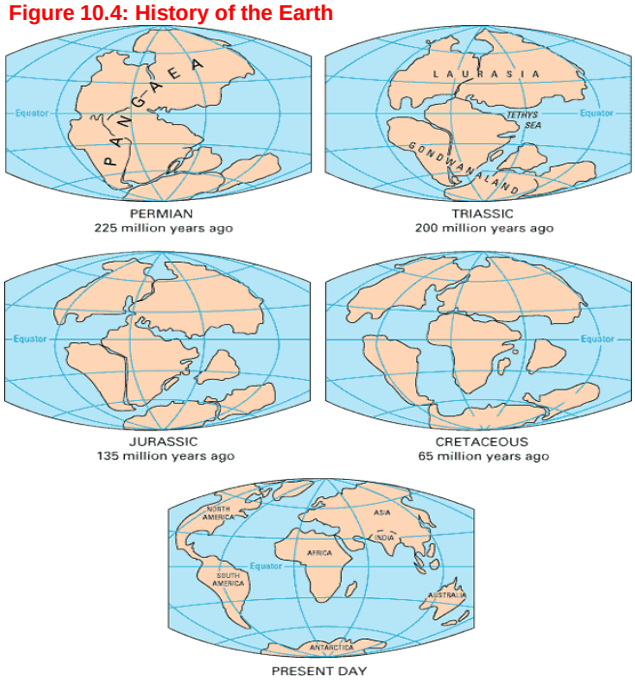
The Indian plate is being driven northwards into Southern Asia. The colliding boundary between these plates gives rise to the Himalayas.

Plate Tectonic Theory is an extraordinary discovery. It not only enables scientists to explain many of the Earth's features, it can also help predict future events, and by doing so, protect the lives of many. Let us now investigate how the Earth is described in the Quran and see whether the ideas between the two fields match.

Plate Interactions – The Science

Plates interact near their boundaries in three ways; converge (move towards each other), diverge (move away), or transform. An example of diversion can be seen in Figure 10.3. One can clearly see that Africa and South America were connected together at one point in time before drifting apart.

Figure 10.4: History of the Earth



Did you know?

Some 200 million years ago, all of today's continents were part of a single continent called Pangea (See Figure 10.4).

Earth & Cracks

Over the past few centuries, Islamic scholars have argued that the Quran, once more, describes features of the Earth that have only been discovered in modern times. They frequently mention evidence of the Quran's accurate description of the Earth's shape and complex internal structure such as its layers.

Unfortunately, evidence to such claims, though reasonable, is not conclusive. This is not to say that these claims are mistaken. Rather, it comes from a realization that the Quran and/or the Science involved is not perfectly clear on the matter and as such, a valid comparison cannot be made at this time. Consequently, I do not intend to include such material in this edition of the book. However, there is one verse that clearly describes some of the scientific evidence investigated in this Chapter. It is one again, in the form of an oath:

"والسَّمَاءِ ذَاتِ الرَّجْعِ (11) والْأَرْضِ ذَاتِ الصَّدْعِ (12) إِنَّهُ لَقَوْلٌ فَصْلٌ (13) وَمَا هُوَ بِالْهَزْلِ (14)" (86,11-14)

"By the sky that reflects(11) And by the Earth that cracks / which spliteth (12) Lo! this (Qur'an) is a conclusive word (13)"
"By the sky that reflects(11) And by the Earth that is cracked (12) Lo! this (Qur'an) is a conclusive word (13)"

We have already discussed the importance of oaths in previous chapters and how they point us towards signs of the Quran's miracles. The oath seen above is no less important. Here, after swearing by the sky's reflective nature (See Chapter 8), Allah swears by the Earth's fragmented nature which has only been highlighted recently as part of plate tectonic theory(1). After this display of knowledge, The Quran then declares that one cannot doubt the divinity of the book as the Quran is the conclusive word of truth. Given the context of the verse, it is indeed difficult to subscribe such displays to mere coincidence.

Notes: (1) For lack of better knowledge, ancient scholars would attempt to explain the verse by pointing to the cracks in the Earth's soil from which plants grow. This interpretation still holds but has now been augmented by recent discoveries; it seems the verse above was much more telling and accurate than previously thought

Primary Sources

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Photo and Figure Sources

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- Figure 10.1: Photo Credit: Amnh.org
- Figure 10.3: Photo Credit:
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Editors

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