

# Islamic Cosmology

## Lesson 1



# Defining Terms

- **Physical cosmology** is a branch of astronomy that studies the origin and development of the physical universe and the laws that govern it.
- **Islamic cosmology** goes beyond the physical universe to study all of creation as a whole, looking at its origins, its composition, and the processes at play within it.

# A Brief History

- Cosmology was studied extensively in the Muslim world during what is known as the Islamic Golden Age from the 7th to 15th centuries.
- Many Muslim scholars attempted to construct Islamic cosmological theories from pre-Islamic models.
- In his book, *“An Introduction to Islamic Cosmological Doctrines”* Sayid Hossein Nasr presents some of the most important cosmological theories in the Islamic tradition.

# A Brief History

- **1. Ikhwan Al-Safa:** One of the most influential work about science and cosmology in this period in the Arab world is Rasa' il Ikhwan al-safa' (Encyclopedia of the Brethren of Purity). This is a collection of writings on a wide range of topics written by an esoteric brotherhood that existed in Basrah in the 10<sup>th</sup> century.
- Ikhwan considered numbers as the cause of all things and the key to understand the harmony of the universe.
- They adapted Pythagoras' view of numbers as the key to ascertaining the reality of existence.

# A Brief History

- **2. Ptolemy:** He proposed a geocentric model with 9 celestial spheres.
- Some medieval Muslim scholars tried to reconcile Ptolemy's model with the Quran by adding the Arsh and the Kursi to the seven heavens mentioned in the Quran.
- **3. The Four Elements:** Greek idea from Aristotle that water, wind, earth and fire are the 4 elements of the cosmos. Thus, to understand the the cosmos one must study the composition of these elements.

# A Brief History

- **4. The Ten Intellects:** Al-Farabi, in the 9<sup>th</sup> century, developed a theory of emanation describing the origin of the material universe. Ten intellects or intelligences are coming in succession from the First Being, and, from each of them, a sphere of the universe is produced. This theory was likely adopted from ancient Greek philosophers.
- **5. Astrology:** a science which claims to offer information about human affairs and terrestrial events by studying the movements and relative positions of celestial bodies.

# The Heavens/Skies

- The word **سماء** has 2 main usages in the Quran:
  - 1. The physical sky (both outer space and the atmosphere)
  - 2. A higher realm from which all of the treasures of God emanate.

# The Physical Heavens/Skies

## 1. The physical sky (both outer space and the atmosphere)

اللَّهُ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ وَأَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجَ بِهِ مِنَ الثَّمَرَاتِ رِزْقًا لَكُمْ

*“It is God who created the heavens and the earth and sent down rain from the sky and produced thereby some fruits as provision for you...”*

Quran 14:32

- When the Quran speaks of the physical skies it typically employs the plural form.



# The Physical Heavens/Skies

هُوَ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعاً ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ فَسَوَّاهُنَّ سَبْعَ سَمَاوَاتٍ

*“He is the one who created for you all that is on earth and then turned to the sky and made them seven skies...” Quran 2:29*

# A Higher Realm

- 2. A higher realm from which all of the treasures of God emanate.

يُدَبِّرُ الْأَمْرَ مِنَ السَّمَاءِ إِلَى الْأَرْضِ

*“He manages matters [issuing decrees] from above to the earth...”*

Quran 32:5

# A Higher Realm

وَإِنْ مِنْ شَيْءٍ إِلَّا عِنْدَنَا خَزَائِنُهُ وَمَا نُنزِّلُهُ إِلَّا بِقَدَرٍ مَّعْلُومٍ

*“Whatever there is, its treasuries are with us, and we only send it down in known measure.” Quran 15:21*

# A Higher Realm

قَالَ عِيسَى ابْنُ مَرْيَمَ اللَّهُمَّ رَبَّنَا أَنْزِلْ عَلَيْنَا مَائِدَةً مِنَ السَّمَاءِ تَكُونُ لَنَا عِيداً لِأَوَّلِنَا وَآخِرِنَا  
وَأَيَّةً مِّنكَ وَارزُقْنَا وَأَنْتَ خَيْرُ الرَّازِقِينَ

*“Jesus son of Mary said, “O God! O Lord! Send down on us a tray laden with food from above which will be the starting point of a festival for us and for the coming generations of our people and a sign from you.”*

Quran 5:114

# The Number of Heavens/Skies

- According to the Quran, there are 7 heavens/skies.

هُوَ الَّذِي خَلَقَ لَكُمْ مَّا فِي الْأَرْضِ جَمِيعاً ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ فَسَوَّاهُنَّ سَبْعَ سَمَاوَاتٍ

*“He is the one who created for you all that is on earth and then turned to the sky and made them seven skies...” Quran 2:29*

# The Structure of the Heavens/Skies

الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ طِبَاقًا

*“who created seven heavens in layers.”* Quran 67:3

- Some scholars assert that the word **طِبَاقًا** refers to the synchronization of the seven heavens and not that they are layered.

# The Structure of the Heavens/Skies

وَلَقَدْ زَيَّنَّا السَّمَاءَ الدُّنْيَا بِمَصَابِيحَ

*“We have adorned the closest of these skies with lights...”* Quran 67:5

إِنَّا زَيَّنَّا السَّمَاءَ الدُّنْيَا بِزِينَةِ الْكَوَاكِبِ

*“We have adorned the closest of these skies with the beauty of the planets.”* Quran 37:6

# The Structure of the Heavens/Skies

أَوَلَمْ يَرَ الَّذِينَ كَفَرُوا أَنَّ السَّمَاوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا

*“Do those who reject faith not see that the skies and the earth were combined, and that we then separated them?” Quran 21:30*



# The Structure of the Heavens/Skies

ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ وَهِيَ دُخَانٌ فَقَالَ لَهَا وَلِلْأَرْضِ ائْتِيَا طَوْعًا أَوْ كَرْهًا قَالَتَا أَتَيْنَا طَائِعِينَ

*“Then he turned toward the sky, when it was like smoke, and he said to it and to the earth, “Come willingly or unwillingly.” They replied, “We come willingly.” Quran 41:11*

- "The Big Bang started the universe as a hot, murky soup of extremely energetic particles that was rapidly expanding. As this material spread out, it cooled, and the particles coalesced into neutral hydrogen gas."- Carnegie Institution for Science

# The Structure of the Heavens/Skies

وَلَقَدْ خَلَقْنَا فَوْقَكُمْ سَبْعَ طَرَائِقَ وَمَا كُنَّا عَنِ الْخَلْقِ غَافِلِينَ

*“We created above you seven pathways, and thus we are never heedless of our creatures.” Quran 23:17*

# The Earth الأرض

- Usage of the word أرض
- **1. Planet earth:**

الَّذِي جَعَلَ لَكُمُ الْأَرْضَ فِرَاشًا

*“...who made the earth flat like a bed...”* Quran 2:22

بَدِيعُ السَّمَاوَاتِ وَالْأَرْضِ

*“He is the originator of the sky and the earth...”* Quran 2:117

# The Earth الأرض

- **2. The ground:**

قَالَ إِنَّهُ يَقُولُ إِنَّهَا بَقْرَةٌ لَّا ذَلُولٌ تُثِيرُ الْأَرْضَ

*“Moses said, “God says the cow you must slaughter is a cow that is not broken to till the ground...” Quran 2:71*

# The Earth الأرض

- **3. Specific geographic location:**

قَالَ اجْعَلْنِي عَلَى خَزَائِنِ الْأَرْضِ إِنِّي حَفِيظٌ عَلِيمٌ

*“Joseph said, “Appoint me to oversee the granaries of this land, for I am prudent and knowledgeable.” Quran 12:55*

# The Earth الأرض

- 4. Lowly material world:

يَا أَيُّهَا الَّذِينَ آمَنُوا مَا لَكُمْ إِذَا قِيلَ لَكُمْ انْفِرُوا فِي سَبِيلِ اللَّهِ اثَّاقَلْتُمْ إِلَى الْأَرْضِ أَرَضِيتُمْ بِالْحَيَاةِ  
الدُّنْيَا مِنَ الْآخِرَةِ فَمَا مَتَاعُ الْحَيَاةِ الدُّنْيَا فِي الْآخِرَةِ إِلَّا قَلِيلٌ

*“O believers! What is wrong with you that when you are told to go forth in the way of God, you drag your feet on the ground? Are you content with a worldly life in exchange for the hereafter? Beware of such a choice, for the life of this world is nothing when compared to the hereafter.” Quran 9:38*

# The Number of Earths

اللَّهُ الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ وَمِنَ الْأَرْضِ مِثْلَهُنَّ

*“God is the one who created seven skies and the likes of them from the earth...”* Quran 65:12

- Possible meanings of the earth being *like* the 7 skies:
  - 1. That there are also 7 earths
  - 2. That there is a single earth and that the single earth is like the 7 skies in that it is also a massive and intricate creation of God.