DARUL QASIM

DISCERNING THE TIMES:
## ON NEW ATHEISM

taught by

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During this session we will be examining New Atheism. Specifically, the claims New Atheists make regarding God, morality, religion, and science will be looked at in light of Kalām theology. Additionally, Muslim attitudes and arguments regarding the question of God's existence will be explored.
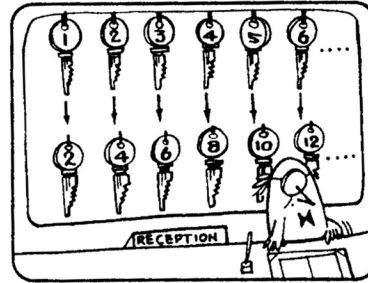
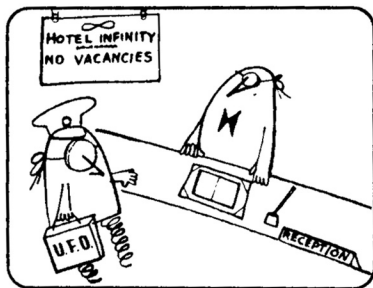| SESSION	TIME (CST)	TOPICS
1	9:00 a.m. – 10:00 a.m.	The Religious Landscape: What is new about atheism?
Break	10:00 a.m. – 10:10 a.m.	
2	10:10 a.m. – 11:10 a.m.	A look at some of the New Atheist's claims.
Break	11:10 a.m. – 11:20 a.m.	
3	11: 20 a.m. – 12:30 a.m.	Muslim Arguments for God's Existence.

Hotel Infinity
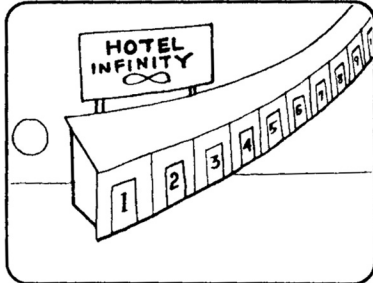
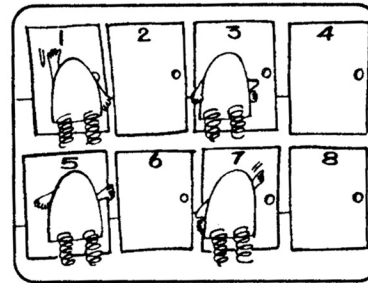Before Dr. Zeta left, he told a fantastic story.

Dr. Zeta: Hotel Infinity is an enormous hotel at the center of our galaxy. It has an infinite number of rooms that extend through a black hole into a higher dimension. The room numbers start at 1 and go on forever.
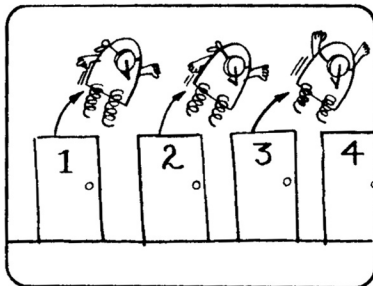

Dr. Zeta: One day, when every room was occupied, a UFO pilot, on his way to another galaxy, arrived.

Dr. Zeta: Even though there was no vacancy, the hotel manager found a room for the pilot. He just moved the occupants of each room to the room with a number that was one higher. This left Room 1 vacant for the pilot.
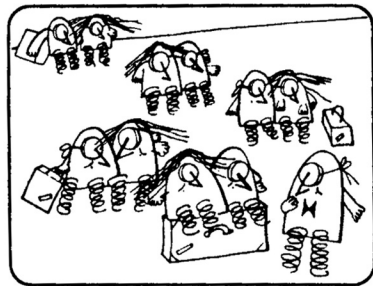
Dr. Zeta: The next day, five couples on their honeymoons showed up. Could Hotel Infinity take care of them? Yes, the manager simply moved everybody to a room with a number that was five higher. This left rooms 1 through 5 vacant for the five couples.

Dr. Zeta: On the weekend an *infinite* number of bubble gum salespeople came to the hotel for a convention.

Herman: I can understand how Hotel Infinity could take care of any *finite* number of new arrivals. But how could it find room for an *infinite* number?

Dr. Zeta: Easily, my dear Herman. The manager just moved everyone to a room with a number *twice* as large as before.
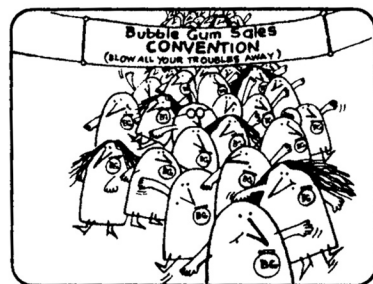

Herman: Of course! That put everybody in a room with an *even* number. This left all the odd-number rooms—an infinity of them—vacant for the bubble gummers!

No finite set can be put into one-to-one correspondence with one of its proper subsets. This is not true of infinite sets. They seem to violate the old rule that a whole is greater than any of its proper parts. Indeed, an infinite set can be defined as one that can be put in one-to-one correspondence with a proper subset of itself.

The manager of Hotel Infinity first showed how the set of all counting numbers can be put in one-to-one correspondence with one of its proper subsets so as to leave one element left over, or five elements left over. Clearly, this procedure can be varied so that an infinite subset can be taken from the entire set, leaving any desired finite number of elements.

Another way to dramatize this kind of subtraction is to imagine two infinitely long measuring rods lying side by side on a desk, their zero ends flush and at the center of the desk. Both rods are marked and numbered in centimeters. They extend infinitely far to the right, with all numbers in one-to-one correspondence: 0–0, 1–1, 2–2, and so on. Now imagine sliding one rod n centimeters to the right. After this operation all marks on the rod that was moved will still be in one-to-one correspondence with marks on the stationary rod. If the rod were moved 3 centimeters, the marks will correspond as 0–3, 1–4, 2–5, ... The n centimeters that project represent a difference in lengths between the two rods. Both rods remain, however, infinitely long. Since we can make n, the difference, any value we please, it is clear that subtracting from infinity is an ambiguous operation.

The hotel manager's final maneuver opened up an infinite number of rooms. This shows how infinity can be taken from infinity yet leave infinity. By putting every counting number in one-to-one correspondence with every even counting number, an infinite set of whole numbers— namely all the odd ones—is left over.