

MODULE 1

Class Title: Ghost in the Machine

Aim of the lesson: To understand the significance of the human soul.

Category: Islam & Science

Lesson Format: Power point presentation with videos and discussion.

Greeting to students) *Assalam alaikum wa Rahmatullahi wa Barakatuh*

(*Taooz*) *Aoodhubillahi min AsShaytanir Rajeem*

(*Tasmiyah*) *Bismillahir Rahmanir Raheem*

(*Du'a*) *Rabbish rahli sadri wa yassirli amri wahlul uqdatum millisani yafqahu qawli*

(Surah At Ta-Ha 20: Verse 25-28)

Slide 1:

Teacher: The topic for today's class is 'the ghost in the machine.' What do you think, 'the ghost in the machine' means?

(Discussion with students)

Slide 2:

First of all, since we will be talking about the ghost in the machine, let's discuss machines. What are machines? What do machines do?

(Discussion with students)

Basically, machines are devices, which can be simple or complex and can have many parts. Complex machines have two or more devices working together to convert some sort of energy into mechanical work; they help us in a number of ways¹.

Slides 3 & 4:

What can machines do for us?

At times they convert raw material into finished products, like these textile machines. They make our work faster and easier. With the help of machines we can do more and do it faster as compared to doing things manually.

¹ A machine is any device that uses energy to perform some activity. In common usage, the meaning is that of a device having parts that perform or assist in performing any type of work.

Any mechanical or electrical device that transmits or modifies energy to perform or assist in the performance of human tasks

A simple machine is a device that transforms the direction or magnitude of a force without consuming any energy.

Complex Machine is a system in which simple machines all work together, parts of a complex machine that have just one function are called subsystems and often contain a simple machine. A compound machine consists of two or more simple machines put together. In fact, most machines are compound machines. Compound machines can do more difficult jobs than simple machines alone.

Slide 5:

These days we see machines all around us; we are dependent on machines for everything we do; from mobile phones to computers, watches, hair dryers, washing machines, generators, espresso machines, etc.

Slide 6:

So how does an espresso machine work? Who can tell me?

(Discussion with students)

The way an espresso machine works is something like this: it has a pump, which will push water into the heating chamber from the water reservoir. The heating chamber is often made of stainless steel, and this will heat the water at a high pressure. You will brew your espresso in a portafilter, which is a removable filter within the espresso machine, into which you will pack fine espresso grounds. It is important that you choose the right consistency for your espresso grounds, because if it is too fine or too coarse, then the espresso will not brew correctly. Some espresso machines might have a steel wand attached to it; this turns your coffee into a cappuccino or latte. That's how the espresso machine works; it's all mechanical.

Slide 7:

But why do I need to know how it works?

If I want my machine to function optimally and make the best coffee for me, I need to know exactly how it works. Also, if I am planning to invest in a machine, I need to know the way it works to make sure that it works at its best. I also need to know what kind of coffee beans to use in order to get the best results from my machine.

Slide 8:

The same thing goes for all other machines. If I have the very latest, high tech mobile phone; the latest model with all the features, but I don't know how to operate it, will it be of much use to me? I could have bought a simpler, cheaper phone and just answered my calls. Why do I need to invest in an expensive, high tech phone, if I don't want to use it? Is it beneficial for me if I don't know how to use it? It will only benefit me if I know how to use it, right?

Slide 9:

Is the human body a machine? How many agree? You don't agree? Why?

Student: A machine just does everything it is told and anything it is instructed to do. However, human beings do what they like, the human body doesn't necessarily listen to external commands

Teacher: A machine does what it's programmed for, right?

Student: Yes, but the human doesn't always do what it's told.

Student: The machines do whatever they're designed to do, however, humans are meant to be good but many of them don't do that. They do what they want to do.

Teacher: She's saying that many humans don't do what they are programmed to do because they are not made like machines; they even do things which they are not supposed to do. Humans do what they like instead of what they should be doing. Is that right? Let's go on and see what happens next.

How do we pick up a shopping bag?

Slide 10:

You have to bend, then you grasp the bag, and then you have to pull it up. What's actually happening inside our body when we lift a shopping bag is that, our body is converting chemical energy into mechanical work.

There are many processes going on in our body for which the chemical energy required is produced from the food we eat. There are many chemicals produced within our bodies, and there are many processes and reactions happening within the body. When you study biology and learn about the digestive system, you'll learn about gastric juices, what the juices are made up of and how they react with the food.

The same formula applies here: chemical energy is being converted into mechanical work. You are getting some work done by the body.

Slide 11:

The human body is a little different but mostly it's like a machine; it has many parts and many functions just like a complex machine. A simple machine would be something like a hammer, but a complex machine is made up of multiple, simple machines connected together. So the human body can be compared to a complex machine with lots of parts and various processes going on simultaneously.

Slides 12 and 13:

The brain is the most complex part of our body i.e. the human machine. Another complex part of the body is the eye; it is not as complicated as the brain though. In order to help you understand how the eye works, I will show you a video.

Slides 14:

Play Clip 1

Everything around us is known to us because of our five senses: what we see, we touch, we smell we taste and we hear; we recognize things around us through our five senses.

Let's discuss our eyes; how do we see?

Student: We see with our eyes.

Teacher: We see with our eyes. All of you agree that we see with our eyes?

Let's watch this clip and maybe you will change your mind.

Suppose that you are looking at a fruit bowl; the rays from the fruit bowl go through the lens in your eye and form an upside down image on the retina. Here, rays are turned into electrical signals and then transmitted by neurons to a certain part of the brain i.e. the centre of vision at the back of the brain which interprets the currents and gives rise to images. The act of seeing actually takes place in this centre of the brain, which is just a few cubic centimetres big; that's where you actually see the effect the rays, reaching our eyes, form in our brain; by being converted into electrical signals (and what you see is the electrical signals in our brain). So it's not your eye that is doing the seeing for you, it's actually the brain that is doing it. The eye is just a lens, through which the rays go in, and an upside down image is formed on your retina, and then the message is carried to the brain. So what is doing the seeing? The brain is doing the seeing. We will see what happens further...

The brain is very dark inside; is there light in the brain? Or is there any way that some light can reach the brain and illuminate it, just like a bulb can illuminate a room? Can a light illuminate the insides of our brain? If we see a candle, it's actually the image of the candle that we can see in our brain. However, the light is not going inside our brain. We can see the candle, but the brain does not become like a lit up room. The same goes for all the other things we see, all the beautiful sceneries, the beautiful world and everything around us. It's actually just images in your brain. Just like the candle is not inside your brain, everything you see is outside and you are just seeing an image of it. So, what is doing the seeing for you, the actual seeing? Is it the eye that is actually doing the seeing or is it the brain?

Student: The brain.

Teacher: The brain is doing the actual seeing for you; we will prove this further as the clip goes on. A man is sitting in a room and there is a bird chirping outside. The same principle applies: you can see the bird because the rays go inside your eye, and they form an upside down image on the retina, and then the message is carried to the brain. Then the brain does the seeing, but what is doing the hearing?

Student: The brain.

Teacher: Exactly! The sound waves travel through our ears and the message goes to our brain via the auditory nerve and then we actually hear the sound. If the nerve is cut off, what will happen? You will still have your ears but since the nerve is cut off, the sound will not be deciphered by the brain and you will not be able to hear it. Does that mean that the sound does not exist?

Student: No, it is still there but you just can't hear it.

Slide 15:

Teacher: Okay. So you just can't hear it but you can see the thing. Can we say that the

brain is the centre of everything? It's all in the mind. And man is an image, everything is temporary and deceptive and the universe is a shadow?

Student: No.

Slide 16:

Play Clip 2

Teacher: Okay, let's go on. Suppose there is a man sitting in a room. He can see the room around him. Let's just say that he's not in the room but the room is in his brain. Will I be correct in saying that?

Student: No, he can see it but it isn't in his brain.

Teacher: Actually, he is seeing the room, but where is the image being formed?

Student: At the back of his brain.

Teacher: At the back of the brain. He can touch the things in the room but what is actually feeling them? His fingers?

Student: The brain.

Teacher: Right. The room is the way it is because his brain is telling him it's that way. It's blue; the walls are blue because his brain is telling him it's blue.

Student: The brain is showing him?

Teacher: The brain is giving the message; he's getting the message that the room is blue. That is why the room is blue for him. If the brain says it's red, he will see it as red. Hypothetically speaking, if we take a brain out of its body, keep it alive in a glass container and attach it to a computer, which has a lot of data stored in it regarding images, sounds, smells, etc, and we tell the brain that it is a businessman, in an office the brain will actually think that it's a business man sitting in an office.

Even if it's a young child's brain and it is given that message, it will actually think that it is a businessman sitting in an office. This imaginary world would continue as long as the stimulations keep coming from the computer. It would never realise that it is only a brain. **Hence it is very easy for us to be deceived into believing something to be true just because of the way our brain deciphers certain electrical signals.** The same goes for everything else that we see; we see them because of the way our brain deciphers the message that it's getting. That's why we think of things and we see things the way they are.

For example, if a sleeping man is dreaming that he is a pilot, he will toss and turn, trying to manoeuvre the plane and handle all the controls. This is because he actually believes that he is a pilot; he is doing everything that a pilot does. But as soon as he gets up he realizes that it was just a dream. However, while he was dreaming, it felt so real that he was actually moving and trying to control that plane. But in fact, this person was in his bed the whole time. In his dreams, he may visit different settings

and meet with friends, have a chat with them, eat and drink together. But when the person awakes from his dream he realizes that it was all unreal.

Sometimes you feel that you're dream is very real but when you wake up it's not there. In the same way we think of things, we see things, we perceive them because of all the five senses that we have been given.

The way you perceive things depends on the messages sent by your brains. Something might look ugly to you because of the way the brain deciphers the message, because it has been programmed that way; it has been pre-programmed. When we wake up from a dream, how can we be sure that we have not entered a longer dream that we call real life? This means that we may well be awoken from our life on earth, which we think we are living right now, just as we are awoken from a dream.

For example, if we extend the nerves in our brain, and bring it outside our head where we can see it with our eyes, we would also be able to see our own brain.

The brain will be seeing itself. So who is it that does the seeing?

Students: The brain.

Teacher: But we just said that the brain is outside the head and the brain can see the brain. Will you say that you are seeing it, your brain is seeing it, or your eyes are seeing it?

Student: I'd say that my brain is seeing it.

Teacher: Yes, but you don't actually say that your brain is seeing something, right? Would you say that you are seeing me right now, or that your brain is seeing me?

This is just to get you to understand that things could be different; things are not necessarily the way you look at them; they could be different. It's not necessary that something is actually the way that you are seeing it. Because we never see the original form, we can never experience 'true matter.' What we experience are just the signals. In other words, we actually experience a copy and not the real thing.

So, what is the Will that sees, hears and perceives all other senses if it is not the brain? Who is it that sees, hears, touches and perceives our surroundings? Who is this being that thinks, reasons, has feelings and, moreover, says "I am me"?

Slides 17-20:

Is there a person inside the brain? Is there a person inside our heads who does the seeing? Is there a little part of our beings inside our heads doing the seeing? Who is the one that says 'I', the one that uses the brain? Who does the actual knowing?

Student: Us.

Teacher: Who are us? Who is me? Where's me? Where am I?

Student: Here.

Student: The conscience.

Teacher: Who is the one that sees and uses his brain? Who is it? Who can answer that?

Student: Me

Teacher: Me. Who is 'ME'?

Student: Our hearts?

Teacher: The point I'm actually trying to get to, is that there is something that does the seeing; that which you call I, me and myself. What is it? Your body is a machine right? The eyes are a machine, they help us see; the brain helps us see. Without the eyes, the brain will not see. If I am blindfolded and the brain is still working it won't do the seeing.

Everything has to be connected and be in order to see properly. The body is like a machine and it keeps getting these signals which tell the machine to decipher things in a certain way; that's how we do things. The body is getting the signal and as long as it is getting those signals, it is working. What happens to the person once those signals stop?

Student: Maybe he's dead.

Teacher: He is, most probably, dead.

Slide 21:

Let's watch this video clip and maybe then you'll understand my questions.

Play Clip 3

So you see, it's the soul that does the seeing and it's the soul that is getting all those signals. The soul is programmed to see things in a certain way. In your dreams you look at things differently.

Slide 22:

So, just like the universe works and the soul works, we all work and function as long we keep getting those signals.

What happens when a person dies? The eyes are still there, the ears are still there, the brain is still there; all the parts of the human machine are still there. What is gone?

Student: The soul.

Teacher: Right. So the soul gets the signals.

Slide 23:

Who is sending those signals to the soul? Allah (swt) is sending those signals to the soul, and that's why we see things the way they are, because we are made to see them that way.

We are made to see things a certain way by Allah (swt); He has programmed us in a certain way.

Slide 24:

So the human being consists of two parts: the body and the soul. The human being is a machine plus a soul. The body is a machine; when put together with the soul, it makes a human being. But if you remove the soul from the human being, what is left behind?

Student: Just the body.

Thus, this body is the machine form that has been given to us in order to pass through this world and is left behind when we die. The soul is the real being **which simply leaves the machine behind upon death**. The machine dies **but not the soul!**

When someone dies do we say that we buried the body or that we buried the human being?

Student: We bury the body.

Teacher: Right, we bury the body. The body is the machine and only when you add the soul to it, does it becomes a human being.

Slide 25:

Allah (swt) says, "Know that the life of this world is merely a game and a diversion and ostentation and a cause of boasting among yourselves and trying to out do one another in wealth and children..." (Surah Al Hadid 57: Verse 20)

Isn't that what we are doing all the time; we always want material things and more wealth. We want to be better than others, don't we?

Slide 26:

Allah (swt) goes on to say "...Like the plant growth after rain which delights the cultivators but then it withers and you see it turning it yellow and then it becomes broken stubble ... the life of this world is nothing but the enjoyment of delusion." (Surah Al Hadid 57: Verse 20)

What does this mean? Have you seen a plant blossom? Have you ever seen a plant blossom from a stem into a beautiful flower? But what happens after a couple of months? What happens to the beautiful flowers?

Student: It dies

Teacher: Its life is finished; it dies.

How long does it live? It can't live forever; maybe a week, two weeks, three weeks. No matter how much you take care of it, every flower eventually dies one day. In the same way the life we are living on this earth will end one day. The things we are seeing, the things we are hearing, the things we are touching and the things we claim to be owners of; all this is going to end one day.

Just like the man who woke up from his dream and realized that he was not a pilot, but was only dreaming that he was a pilot while he was sleeping, maybe we too are in a daze. Maybe we will just wake up one day and realize that this is all gone, it's finished, it's not there and we will reach another dimension. We will be seeing things differently because our chip will be re-programmed by Allah (swt). We've all learnt about the Hereafter and the life after death; we will be entering another dimension. Maybe we will just get up from a sleepy state and realize that all this was a dream.

Slides 27:

We should imagine ourselves living in this world as travellers because we will leave this place; this journey will end and we will reach our destination which is *Jannah* {heaven}, *in shaa' Allah*.

Slide 28:

And, just like we prefer to travel as light as possible in this world, we don't want to be cluttered with a lot of junk and unnecessary things. We should be taking just what is required. What do travellers do? They focus on their destination and they pack accordingly, right? Similarly, we should only take what is required.

Slide 29:

Allah (swt) says in the *Qur'an*, "Everyone on earth will pass away. But the face of your Lord will remain, Master of Majesty and Generosity." (Surah Ar-Rahman 55: Verses 26-27)

Allah (swt) is telling us that everyone and everything has to pass away one day.

Slide 30:

Again Allah (swt) says in the *Qur'an*, "They know an outward aspect of the life of this world but are heedless of the hereafter." (Surah Ar-Rum 30: Verse 7)

Allah (swt) is saying this about people who do not believe in the Hereafter. These people are just living for this world and they don't care about what's going to happen later. On the other hand, people who believe in the Hereafter will be like travellers and will pack their bags according to their destination; they will be prepared.

So, *in shaa' Allah*, we will also try to look at things differently because it's not necessary that things are actually the way we think they are.

So, why are we here? Who is me?

Student: A soul.

Teacher: When you call yourself me and I, what do you mean by that?

Student: My soul.

Teacher: So we are going to leave this body behind one day, right? Everyone does so at some point or another; some at a younger age, and some at an older age, but eventually every one leaves their bodies. But does that mean we finish? Do we die with the machine that is our body? Where do we go? ...To Allah (swt).

Is what we think necessarily correct? Maybe we see things in a particular way because our chip is programmed that way; maybe things are different. We don't know. Think about it.

Thus, let's try to make the most of the time we have on this earth and use our machine i.e. the body to gain maximum benefits by obeying Allah (swt).

(Du'a for end of a gathering) *Subhana Rabbika Rabbul Izzati 'amma yasifun wa salamun 'alal mursaleen, walhamdulillahi Rabbil 'alameen*
(Parting salutation to students) *Assalam alaikum wa rahmatullahi wa barakatuhu*

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