Title: 나의 정체성,
Identity theory of mind (1)

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[00:00]

Okay. Let me summarize what we discussed last time before we move on to today's material. 비 and 정지훈 are one and same person.

Clark kent and superman are same person.

Clark kent and super man may appeal to be different people but in fact they are one and same person.

If we closely investigate Clark kent, he will turn out to be superman.

In that sense, Clark kent is reducible to superman. Clark kent is identical with superman.

Okay. Pain. what is pain?

Pain is identical with C-fiber stimulation.

C-fiber stimulation is kind of brain state.

So identity theory says, if we closely investigate pain, it will turn out to be C-fiber stimulation.

What we call pain is C-fiber stimulation.

There is one to one correspondence between mental state and brain states.

And one correspondence to b1 and so on.

According to dualism, mind and brain are distinct things. Suffer things, different things.

According to identity mind and brain are same things.

At the fundamental level, all that exist is physical.

Only physical things exist according to identity theorist.

Does the mind take up space? The answer is yes.

According to the identity theory because the brain take up space.

Psychology is a science of mind.

What should psychologists study in order to understand the mind? Answer brain.

Does the mind interact with an arm?

The answer is yes. After all brain interact with arm.

Does the mind interact with brain?

No the mind and brain are the same things.

So they can't interact with each other.

Crick and Churchland are performance of the identity theory.

Oaky. Basically that is what we discussed last time.

Today we'll move on to two famous objections against identity theory.

One was raised by Thomas nagal.

And the other one was raised by David louis. And Hillary petnam.

The first objection is the idea that we can't know everything about the mind although we can know everything about the brain.

So mind and brain are different things. They are not identical with each other.

The second objection is the idea that the same kind of mental state can be realized in different kinds of physical states.

the second objection is the idea that the same kind of mental state can be realized in the different kind of physical state

so martial can feel pain and a computer can feel pain although they don't have brain

okay, as usual, two students will give presentations today

전형주 will tell us about ``, and 황의성 will tell us about the multiple reliability argument

but both students are absent.

전형주? Ah, 황의성. Where is 전형주? Okay, 황의성 will give a presentation first

my name is 황의성 and I will talk about question 2

and now I'll explain about multiply reliability

multiply reliability is, you can say that in other words, mental state and body state are not identical

and you can figure out that this is the opposite argument with identical theory

and what is multiple reliability?

minds, I mean, briefly, minds are, you can say that minds are multiply relizable, other than brains

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in more detail, you can also say that a certain mental/psychological state can be drived by various psysical/body states

it seems other than brains

and as a result, you can say that pain is actually realizable and not just C-fiber stimulation

and there are two person who insist this multiply realization, Lewis and Putnam

and their arguments are these. First, if the identity theory were true, it is impossible to have a mind without a brain

because identical theory means brains minds

but they said that things without brains can have minds and I'll explain this `````

so identity theory is not true because all without having a brain there are something ```

there is one example

they started with a assumption that there might be a martian that can feel a pain same as we do

but their body structure is very different from us. It's just formed ,,,silicon and nothing imaginary

and while we feel pain we physically realizing by C-fiber stimulation

they can also `` but we don't know there might be another way by stimulation but martian can have kind of feeling of pain

and there's another example it's conscious computer

and before saying about it, I'll give you a pop quiz, it's very easy and you can use any,, just your brain or writing a paper or using a calculator?

and first come, first served. I'll give you a present at the end of the presentation

can you calculate this one?

does that mean times?

how did you make an answer?

calculator

so other way, someone

althought there are some difficult thinking and their output is inputed

whatever the program just writing on the paper or using calculator on the problem

output is same and input is also same but there's possibility that programs can be different each other

and Putnam said that like calculating, our mind is from our physical thing like neural states but if I

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calculator are not same as out mind do, but totally different physical constitution, we can not say that you can figure out the

something's mind just ``` or identifying their physical or chemical constitution

I'll explain multiple relization, and at the end of the question there was a question like if I were an identity theorist,

how could I reply to it? And in fact, if I were an identity theorist, I'll give up to defend the theory, find another one

but we have to find a logical way I'll try to defend a multiple relization in my own way

first, I would like to say that there is no such a "Universal Pain"

I mean in the Universal Pain is that the concept of pain that can be applied to any creatures or any things

that kind of pain does not exist I mean that Univeral Pain is and if there is no that kind of Universal Pain,

we cannot say that Human's pain and Martian's pain is the same thing because if there is a Univeral Pain,

one possible pain can be applied to human and martian both but I mean this argument but human's pain and martian's pain

can be different. And so there's no multiple realizability but just various kinds of pain and

various physical constitution

which one person response

I don't know if it does make sense

it makes sense to me

that's all I got and thank you for listening

황의성 says martian can feel pain as we do, but martian's pain is different from our pain, right?

yes

but input and ouput are the same. That means martian acts as if he feels pain as we do.

if we pinch him, he just say outch, right? As we do

so input and output… human's input and human's output are the same as martian's input and martian's ouput

so human beings and martians behave in the similar way but what is going on inside the mind are different, okay. Different program

human's program is different from martian's program

that is 황의성's position

<student questioning>

[15:00]

suppose I hit ``, he says outch and I hit ```,``` said oh, yeah

outputs are different. What is going on in ```'s mind is different from what is going on in your mind, ``` feels pain and you feel pleasure

outputs are different so mental state must be different, too.

<student questioning>

according to ```, the answer is yes

martians have their own revolutionary history and human beings have their own revolutionary history

they have in thorough different revolutionary historys

but according to Lewis Putnam, we can feel pain and they can feel pain, too.

we don’t share their revolutionary history yet we can have the same kind of mental state

so evolutionary history does not matter, according to Lewis Putnam

<student questioning>

multiple relizability and independent theory are incompatible with each other

they cannot stand together. If one is true the other goes down, the other is false

[20:00]

if the other is true, the other one is false. They cannot go together

they fight with each other

<student questioning>

<student answering>

I guess Lewis Putnam will say to you that it is true that suppose you feel pain and I feel pain

my brain state is not exactly alike your brain state

but they are sufficiently similar to each other

there is enough similarity between your brain state and my brain state

so although two brain states are completely identical with each other, they are the same kind of mental state, you feel pain and I feel pain, too.

because there is enough similarity

so what matters is enough similarity, not identity not completely identical with each other but think about back, consider martian's brain

martian's brain state, martians feel pain he is in a certain brain state I feel pain and I am in a certain brain state, too.

but my brain state and martian's brain state are not sufficiently similar to each other

because my brain is made out of carbon and martian's brain is made out of silicon.

two brains are made out of different stuffs, so there is not enough similarity between them. They are different from each other

even so, Lewis Putnam will say martian can feel pain, as I do.

so, pain is not identical with C-fiber simulation

martian does not have C-fiber simulation

I have a C-fiber simulation

I feel pain he can feel pain, too. So, pain is not identical with C-fiber simulation

and you have a C-fiber simulation and I have a C-fiber simulation that's wh y we feel pain

[25:00]

okay, other comments? No more questions? Okay, thank you for your excellent presentation

```, ready? Yeah Let's go

<student answering>

Functionalism… I did not want to discuss functionalism in this course, but anyway.

In a human being's brain, C-fiber stimulation performs a certain function.

It gives an input and gives out a certain output.

In a martian's brain, there is no C-fiber stimulation, but there ss, say, S-fiber stimulation.

Its brain is made of silicon, so let's call it S-fiber stimulation.

S-fiber stimulation performs a certain function, too.

It takes an output and gives out an output.

The C-fiber stimulation and S-fiber stimulation perform the same function.

When a certain input is given, they give out the same output.

Same input, same output. They perform the same function.

So, a human being can feel pain, and a martian can feel pain too.

There is a similarity between them.

The similarity is that they perform the same function.

That's why they feel same.

They feel pain.

This stuff is difficult.

Think about two vending machines.

Suppose there is a vending machine in the hallway.
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You stick in 100 won, no, 200 won, and it gives out a cup of coffee.

There is another vending machine in the administrative building.

You stick in two coins and it gives out a cup of coffee.

They perform the same function. Right?

Same input, then same output.

So what is going on inside the machine is the same.

Similarly, C-fiber stimulation performs the certain function in my brain.

In the martian's brain, S-fiber stimulation performs the same function.

That's why I can feel pain, and the martian can feel pain too.

That is what functionalism says.

That is not what identity theory says.

According to identity theory, a martian cannot feel pain.

Why? Because it does not have C-fiber stimulation.

But according to functionalism, a martian can feel pain too.

Because it performs a certain function.

and its function is completely the same as the C-fiber stimulation's function

OK. If you understood what I've just said, perfect. Nice. That's good.

If you did not understand what I've just said, that's OK. That's OK. OK.

Hello, I'm the presenter of this stage, and my name is 조형준.

I will talk about Nagel's bat.

We have a little background knowledge of it.

It is the bat-echolocation.

First, the bat releases the main echo.

It is maybe an ultramicrowave.

It will go to some substance, and the main echo is reflected off the swim bladder.

Like that substance, and the bat receives the returning echo.

Then the brain recognizes the position of the substance.

[30:00]

And we know the whale recognized of the brain.

And we can use it in machines.

Like the navy's sonar.

It is of the same method as echolocation, and it's the main part of my presentation.

We assume that all bats have the experiences.

It means all bats have different brains.

In other words, all bats have different brain states.

But when brains get echolocation, they have the same mental states.

They perfectly seem that all… It is there, like this.

So it means the different brain states can make the same mental states. Right?

It is the first problem of the identity theory.

And the second problem of the identity theory is using reduction to absurdity.

It is the 귀류법.

We assume the mental states are identical to the brain states.

Then the knowledge about the brain states is the same as the knowledge about the mental states.

But in the bats' case, we have almost about the brain state, but we do not have any information about the mental state.

So the assumption is wrong.

We can say that the mental state is not the brain state.

Is it right?

Yes.

But I think it has a little problem of this .

First, Nagel's bats…

I think the information about this substance is not only the position.

It has so many information about that, but we don't recognize other information.

So, it is a little wrong just to look that this substance has only the position.

It is the brilliant whole of my presentation.

That's it. OK.

Any questions?

Fantastic presentation.

So who is right?

The identity theorists or Nagel?

Who is right?

Which side do you support?

Who will you side with?

I think the identity theorists are…

You side with the identity theory.

So this problem is just instinct.

Problem is instinct? OK.

Any questions?

No?

In my opinion, I'm a little bit with the identity theory.

In identity theory, feeling or experience is similar to most people.

That's the main point of the identity theory.

But apart of the identity theory, Nagel thinks that feeling or experience is different in each person.

[35:00]

Maybe that's not? That's wrong?

Nagel did not say that. OK.

He did not say that.

OK. I'll think again.

OK.

Do you support identity theory?

Yes.

So, if we have a perfect field of sicence, do you think we can make a perfect formula of one person's brain?

Yes.

So, if we use different…

If we make this formula, can I know my mind's state?

I think it's the…

In this part, in this instance, it is not controlled by your memory.

So it is the…

If we're human with hands, you have the legs, like that.

We are human. You must recognize that.

Just not controlled by the memory.

Just because you have it, you are human.

So is it a problem in qualia?

Huh?

So is it a problem in qualia?

The identity theory?

No, this bat case.

Some kind of problem in qualia?

Problem of Koreans?

Qualia.

Ah, the qualia. The qualia problem. Yes.

According to Nagel, a human being cannot have the bat's qualia.

Although a human being can perfectly understand that bat's brain.

So, how about this objection?

Even though humans could completely learn about being in a bat's mental state,

it doesn't mean that human could feel how it exactly is because there are gaps between knowledge of what it would be like.

So kind of like the ability to…

Knowledge argument.

That is a better terminology.

We can have a perfect knowledge about bat's brain, but we cannot have perfect knowledge bat's mind.

So bat's brain and bat's mind are different things.

That's what Nagel says.

We can perfectly understand bat's brain if we have perfect neuroscience,

but we cannot perfectly understand the mind.

So mind and brain are different things.

So mind and brain, are they different things, are they distinct things, or are they one and the same thing?

According to identity theory, they are one and the same thing.

According to Thomas Nagel, they are different things.

Thomas Nagel is a dualist.

Mind and brain, different things.

So what I was talking about is that…

So there is various knowledge about how the bat's mind is ordered and…

According to Thomas Nagel, no. No.

We can have perfect knowledge about bat's brain, but not about the bat's mind.

So what I want to argue about is that there is no perfect knowledge about its…

Brain?

Bat's brain, but because there is a gap between the…

So what…

There are gaps between the religion and experience.

And so… actually it is hard to say that human can know perfectly about bat's mind.

Then you agree with Nagel. Right?

That's exactly what Nagel says.

We cannot perfectly know about bat's mind.

[40:00]

Here, we cannot perfectly know about bat's mind, but we can know - C-A-N, positive -

We can know perfectly about bat's brain.

So bat's mind and bat's brain are different things.

박은혜?

I just think that Nagel is more reasonable, but I think Nagel's reasoning process is a little bit…

Objectionable?

Yes. I must have realized about the martian fallacy.

In martian fallacy that "we don't know" is not a good reasoning.

So, Nagel says you don't know the state of our mind.

So we cannot say that our mind and our brains are not same is a good reasoning.

That's an interesting point.

So, Nagel is appealing to ignorance.

We don't know whether god exists or not.

Therefore, god exists.

That is a paradigm example of appeal to ignorance.

I guess Nagel's argument is a little different.

In appeal to ignorance, the premise states that we don't know about something.

But the conclusion makes a definite claim.

Nagel's argument does not fit the definition of appeal to ignorance.

The first premise of Nagel's argument is, we can know everything.

We can know everything that there is no know about the bat's brain.

But we cannot know everything about the bat's mind

Therefore, bat's mind is different from the bat's brain.

The second premise.

Looks like the second premise is appealing to ignorance.

So we cannot know everything about the bat's mind.

So you can say that the second premise is appealing to ignorance.

But the second premise can be rephrased as follows.

We know that we cannot know everything about bat's mind.

Then that premise is not appealing to ignorance.

We know that we cannot know everything about bat's mind.

That premise is not appealing to ignorance.

That premise is the claim about our cognitive capacity.

His argument is that if identity theory is correct, we know the process of brain state.

We should know more state of mind.

We know the mind's state, so we know that the two are different.

That's exactly what Nagel says.

Is it true that we can know bat's brain state completely?

Say again. Say again, please.

Is it true that we can know brain state of bats completely?

Complete?

That is false now, but it may be true in the future.

If we have advanced neuroscience, perfect neuroscience, then we can have complete knowledge about bat's brain.

That is an assumption that Nagel makes.

In identity theory, if we can know about brain state completely, we can know about the mind state?

That's exactly what the identity theory says.

I don't agree with that. So…

What is that? Identity theory or Nagel?

Both. Yes.

Both?

OK. Good.

Identity theory ignores the experience and learning.

[45:00]

Identity theory ignores experience or qualia.

Nagel also ignores… can't explain that.

Difficult to explain?

So Nagel overlooked something according to 권용찬.

It is not clear what that something is at this moment.

Anyway, we are running out of time.

I only have 20 minutes for my presentation.

제형주.

Thank you for the fantastic presentation.

20 minutes, OK.

According to the identity theory, the mind is the same thing as the brain.

The mind equals the brain.

If we closely investigate the mind, it'll turn out to be brain.

Just as if we closely investigate Clark Kent, he will turn out to be Superman.

And this the the corollary of the identity theory.

This claim is what follows from the identity theory.

If we know everything about the brain, then we know everything about the mind, and vice versa.

Right? If we know everything about Superman, then we know everything about Clark Kent.

And vice versa,

Why? Because they are the same person.

Similarly, if we know everything about the brain, then we also know everything about the mind.

Because they are one and the same thing.

This is what follows from the identity theory.

No? OK.

This is what follows from the identity theory.

Please keep this point in mind.

Thomas Nagel. He is a professor at New York University now.

Nagel. OK.

Here goes his objection against the identity theory.

if the mind and the brain are the one and the same thing,

we should know everything about the bat's mind by knowing everything about the bat's brain.

But we cannot know everything about the bat's mind by knowing everything about the bat's brain..

Therefore, the mind is distinct from the brain.

The brain, I mean the bat sends a supersonic sonar to an object.

And supersonic sonar bounces of the object.

And by receiving the supersonic sonar, the bat can know how object looks like and how far the object is and so on.

The point is this. When the bat receives the supersonic sonar, it must feel something.

It must have a certain sensation.

It is qualia.

OK. That experience, that perception is qualia.

It must feel something, and we human beings cannot have that sensation.

In other words, we human beings cannot know what it is like to be a bat.

We cannot have the sensation that bat has when it receives a supersonic sonar.

Suppose we have perfect neuroscience.

So we have complete knowledge about bats' brain.

Even so, we cannot have complete knowledge about the bat's mind.

We cannot have that sensation so bat's mind and bat's brain are different things.

Thas is Nagel's objection against the idea.

Yeah, 김승원

Ah, you can say that mind is a collection of mental states, but this state is a collection of atoms.

Also you can say mind is that which has mental states. Ah, mind, whatever it is it has mental states.

[50:00]

So we cannot have complete knowledge about bat's brain even if we have perfect neuroscience. Okay I can see that 장중원 you agree with 김승원.

Right? we cannot know everything about that sprain. We cannot know. You said something similar to that I guess. Other relation[?] to Nagel's objection? Uh?

Ah. They are the same things you can say they are the same things.

So if we gain this sonar system of the bats, we just only gain the ability to do something, Can it make a sense?

I guess you should have the experience in order to know what it is like to have that experience.

This is what 이만수 said, we can never know whether the bat has a mind or not.

I guess he agrees with Thomas Nagel.

김건희, 김승원. We can’t know everything about a bat's brain although we might have stuff at neuroscience.

So what, so the second premise is false. Ah, Second question is questionable not false. So we don’t have to accept the conclusion.

So 김승원 defended Nagel theory. Okay this is what 문성보 said.

A scientific instrument might be devised in the future with which se can absorb, take out the bat's sensation, bat's polia and put it into our head. Take out bat's sensation and put it into my head.

Then I can know what it is like to be a bat.

In present society, we can control the basic feeling of, basic feeling by some drugs so it's also the one reason of the idea.

We can control the mind, basic feeling of the mind by medication.

Okay, by taking certain drug, we can generate certain mental state.

Okay. A possible reply is human being's brain structure is completely, ah not completely, human beings brain's structure is different from a bat's brain structure so it is impossible to induce or generate bat's sensation in our brain.

That is a possible objection I guess in 문성보's position.

This is impossible because human beings' brain structure is radically different from a bat's brain structure.

it's what 신이슬 said. If we have perfect neuroscience, we might be able to duplicate the bat's brain state in our brain then we would know what it is like to be a bat.

Again, this is impossible if human being's brain structure is radically different from bat's brain structure.

Okay I guess this is what an idealist theorists would say to Nagel.

If we know everything about the bat's brain, then we know everything about bat's mind because they are one of the same things.

So if Nagel will stick to his original position, he will not be moved, swayed by this argument.

This argument is not impressive according to idealist theorists.

If we know everything about the bat's brain, then we know everything about bat's mind because mind and brain are the same things.

[55:00]

Question is whose position is more reasonable? Thomas Nagel's position or The idealist theorists' position.

Any comment? Ah,오윤겸.

okay, We make distinction between mock and more, mental state and mock more real state.

We can have only mock mental state when we imagine, when we put ourselves into other people's situation.

Suppose that 정채은 is in pain, if I put myself, project myself into 전영주's situation and I will pain too and that kind of pain is called mock pain as opposed to real pain.

Okay. This is a joke. Uh when I was teaching a course in the united states, a student said, American student said there is a human being now who can know what it is to be a bat. Does anybody know who he is?

Yeah, Batman. Batman can know what it is to be a bat so Nagel's argument does not work to Batman.

He was like, uh I know what it is to be a bat.

Okay, this is what the ideal theorist says. Pain is reducable to see and find similations just that Accanties[?] are reducable to Superman. They are the same things.

This is what follows from the ideal thoery, well, there's no Superman, there is no Clark Kent.

If Superman is dead, So is Clark Kent. Right, is that right? If Superman died, so did Clark kent.

Therefore where there is no followed similations there is no pain.

If there is no followed similations there is no pain. This is what follows from ideal theory.

Okay, Lewis. Lewis was a professor at Princeton University for a long time. Here comes Lewis' argument against idealist theory.

If C-fiber stimulations, I want to do same things. Martian whose brain is made out of silicon, should not be able to feel pain.

I suppose we have, there are martians in Mars, and their brain is made out of silicon.

##########

Then, if the idealist theory is true, it follows that marian cannot feel pain.

Well, there is no Superman, there is no Clark Kent. Similarly well there is no C- fiber stimulation, there is no pain according to ideal theory.

But martians can feel pain, therefore pain is distinct from C-fiber stimulation.

Martians can feel pain, after all martian behaves as if people's pain. If you pinch, a martian, he would say "Ouch." Input, Output.

If you pinch 장태호, he will say "Ouch". Right? Or 아야, right?

[60:00]

And martian will do the same thing. So if 장태호 feels pain so does martian.

Ah, we wouldn't know martian exists or not. Uh, silicon? Okay.

Okay. These premises are not plausible because, okay. This argument is bad because it is based on imaginary creature, not real creature.

Okay. Fair enough. Lewis will say "Well, just imagine. Imagine whether martian will feel pain or not, if martian's brain is made out of silicon. "

What does your intuition say? Does the martian feel pain or not?

Feel pain? No? If you don't like this example because it is based on an imaginary creature, now think about a computer.

Sophisticate computer. A chess playing computer, can it feel pain? A computer is not an imaginary thing. It is a real thing.

I guess professor Shelly Keagan in the video clip you watched few weeks ago, that it is merely a prejudice. It is a prejudice not to attribute beliefs and desires to a chess playing computer.

In other words, it is wrong not to think that a computer does not have beliefs and desires.

In other words, computers can have desires and beliefs, pain, hope, anger and so on.

What is the real reason? What would be the reason for not attributing mental states to computers?

What would be the reason for thinking that 박세희 feels pain but a sophisticated computer does not feel pain. Shelly Keagan said there is no reason, there is no reason for thinking that 박세희 feels pain but a sophisticated computer does not feel pain.

So Shelly Keagan would agree with Lewis and Putnam. How about me?

Do I agree with them? Ah, 윤성.

유인성? Ah, 황윤성. These are what you said,right? Yeah. Martial pain must be different from human pain.

[65:00]

안국민. You agree with 황윤성. I guess this is what idealist theorists would say.

The martian cannot feel pain. Simply because it doesn't have C-fibers. Martian cannot feel pain. It only acts as if it feels pain but in fact it does not feel pain.

Why not? Because it does not have C-fibers. It does not have C-fiber stimulation.

The martian can feel pain. This is what Lewis said. Do you think the second premise, this premise is plausible? We don't know.

So the second premise is questionable. According to Thomas Nagel, we can't never know what it is to be a bat. We can say the same thing.

We can never know what it is like to be a martian. So the second premise is questionable.

This second premise is questionable. We don't have to accept the conclusion

Putnam uses a different example to make the same point. Namely, the same kind of mental state can be realised in different kinds of physical state.

Pain can be realised in C-fiber stimulation and next fiber stimulation and so on.

This is what the multiple realisation argument says.

According to Lewis and Putnam, Minds to brain is software to hardware.

The same kind of software can be realised in different kinds of hardware. Similarly, a same kind of mental states, pain, can be realised in the same kind of physical states.

Think about this analogy false. Does this analogy make sense?

According to this analogy, mind is a software warning on the brain. What is mind? Mind is a program. Mind is a computation machine, computing machine. Ah, Brain is a computing machine.

Brain is a computing machine and mind is a program warning on the computer program, the brain.

Any comment on this analogy? Is it theorism or physicalism? That's a good question.

Theorism or Physicalism? 장재희 said physicalism.

What is a software? Ah, That's an excellent point. A software is nothing but a certain way, atoms. So it is wrong to say a software is over here and a hardware is over there. They are not separate things.

So according to this analogy, this analogy goes with Physicalism. All that exist is hardware.

All that exist is physical things according to this analogy. So Lewis, Putnam.

They are physicalists. 오윤겸.

Nobody needs to say that software is equal as hardware and mind. Nobody was saying software equals hardware. But the idealist say mind equals brain. So the idealist theorists would disagree with this analogy here.

They reject this analogy. Kreak, the biologist would reject this analogy.

Mind and brain are the same thing according to Kreak and Churchillland. Okay, other question?

Okay, Last question. Ah.

Brain is both software and hardware. At the fundamental level, I would say yes.

What is a software? It is just a way brain functions. Ah, okay yeah. Yes.

According to this analogy, all that exist at fundamental level is physical things. Brain, hardware and so on.

Okay. We passed the time to finish. Okay. Thank you for your active participation, okay see you next time.

Check the announcement section on this Monday at the black board.

I will let you know whether we will have a class or not.