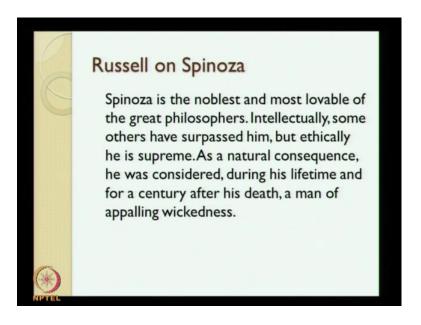
## Aspects of Western Philosophy Dr. Sreekumar Nellickappilly Department of Humanities and Social Sciences Indian Institution of Technology, Madras

Module - 11 Lecture - 11 Spinoza Concepts of Substance, Attributes and Modes

Welcome to this course on Aspects of Western Philosophy, module 11 and lecture 11. This lecture will try to understand Spinoza's, the modern philosopher Spinoza's concepts of substance attributes and modes.

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Spinoza is one of the most important philosophers of the modern age and there is a very interesting observation which Bertrand Russell makes about Spinoza when he writes his history of western philosophy he says; I quote Spinoza is the noblest and most lovable of the great philosophers intellectually some others have surpassed him, but ethically he is supreme as a natural consequence, he was considered during his life time and for a century after his death a man of appalling wickedness this is what very interesting observation Bertrand Russell makes about Spinoza. The one hand Spinoza is the noblest and most lovable of all the great philosophers because he was ethically supreme; this is Russell's comment.

Now, we will try to understand Spinoza's major philosophical themes and concepts. We have already discussed the contributions of Descartes and in one sense there is continuity because in Descartes philosophy we have seen some of the most important themes of modern philosophy were introduced. Descartes comes up with the very unique conception of knowledge, a notion of absolutely certain knowledge and most importantly he was suggesting a methodology to understand, to gain knowledge. So, he employs a method of doubt and following that you know he insisted that we should employ mathematically deductive method in philosophy as well to derive or to understand or to develop a system of knowledge and it is in this context we should also try to understand Spinoza.

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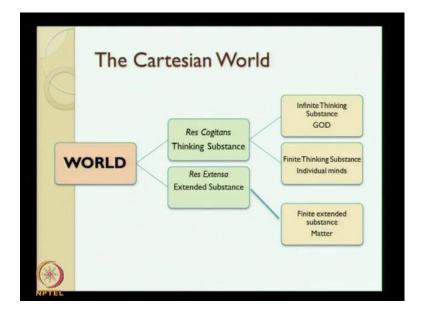
The background of Spinoza's work is that he was; obviously, influenced by Descartes and the modern philosophical temperament of his age and he has accepted Descartes materialistic and deterministic physics to a very great extent though he comes up with very significant modifications and also qualifications of this materialism. On the one hand we can see that Spinoza's major concerns were with religion and virtue; the question of virtue which is not the case with many of the modern philosophers, we can see that afterwards you know modern philosophy is trying to maintain a distance from questions about religion and eventually what happens were they encounter a crisis; later on we will see that in by the time we reach our discussions, start discussing Immanuel Kant; Kant was trying to highlight that there is a problem of segmentation, fragmentation

in society; the fragmentation of human reason into three compartments of ethics, logic and esthetics.

So, this actually begins with a very emergence of modern philosophy, so there was a concern that you know we can visibly see it in Spinoza's philosophy that the major concerns were with religion and virtue, though he was a modern philosopher who would be naturally concerned about modern sciences, scientific methods and questions about knowledge and certainty and so on and so forth. Now again I would just quote from Russell; what Russell says is that Spinoza's attempt was to find room for reverence and a life devoted to the good within the frame work of a materialistic and deterministic physics. So, this is the very interesting observation because on the one hand you can see that there is an emphasis on the materialistic and deterministic physics following the dominant temperament of modern philosophy and on the other hand we can see that the attempt was to find a room for reverence and a life devoted to the good within this framework. So, there is a concern for ethics and there is also an emphasis on materialistic and deterministic physics.

So, in one sense he was concerned about bringing these two compartments together ethics and science, which is a problem even today; to bring together science and ethics. The whole notion, the whole problem you know according to some philosophers there is a crisis in modern life and the crisis is due to this separation of ethics or moral concerns from scientific or other concerns; this is why I refer to Habermas and Immanuel Kant's philosophy. Habermas when talks about in Immanuel Kant's philosophy highlights that there is a fragmentation and the fragmentation is primarily resented in a rift between science and ethics or the domain of knowledge and the domain of (Refer Time: 05:19) and let us before we really delve in to the details of Spinoza's framework, let us have a brief look into the Cartesian world.

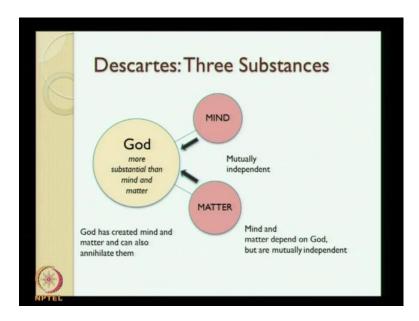
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So in Descartes we could see that we have already seen this, we have already explained it in the previous one or two lectures. The whole notion of world in Descartes we could see that it can be divided into two substances or two domains; two independent domains which can be termed as a Res Cogitans or the thinking substance and Res Extensa which is the extended substance and the Res Cogitans can be further divided into two infinite thinking substance or God and finite thinking substance or individual minds and Res Extensa or the extended substance is primarily constituted of finite extended substances or matter. So, this is what in the previous lecture we have examine we have seen as the mind body dualism.

So, we can see it here in Descartes there is a concept of substance or rather we can even say that there is a notion of three substances where God predominantly appears as more substantial than the other two substances which are mind and matter or mind and body.

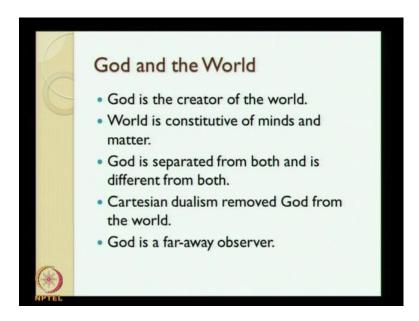
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God is the only substance in the two sense of the term something which exist independent of everything else. In that sense if you follow this definition God is only substance and everything else depends on God.

So, there are other two substances the dependent or relative substances which depend on God though they remain mutually independent. So, there is autonomy that mind and the domains of mind and the matter maintained. God has created mind and matter and can also annihilate them and mind and matter depend on God, but are mutually independent this is a Cartesian picture.

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In this context when you see God, there is a reason why I am referring to the concept of God because the notion of God appears in a very important manner in a Spinoza's framework. So in the Cartesian framework following scholastic predecessors, Descartes also asserts that God is a creator of the world, it is a primary substance or rather it is the only substance in true sense of the term. World is constitutive of minds and matter, so as I have already discussed there is a domain of the mind and there is a domain of body or matter. God is separated from both and is different from both because there is more reality attributed to God or God is substantially more than any of the other things bodies and minds in this world.

So, in this sense there is a major concern which Spinoza encounters that with that conception of God who is the creator of the world, but at the same time different from the world Cartesian dualism remove God from the world, there is a separation which Descartes dualism as among the two. God is a far away observer, once God has created the domains of minds and matter and made them separate, made them independent of each other, God becomes a faraway observer Cartesian dualism in that sense we remove God from the world and this is where you know Spinoza finds a certain problems; I mean this whole framework is problematic because of this separation. Spinoza says that Cartesian paradigm has emptied the idea of God of any content.

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So, God becomes too removed from the minds and matter, the minds and body which are there in the world and to which God is of course related in the sense that God has created them and can also annihilate them, but apart from that sort of Gods duty seems to be over. Devoid of God, we cannot give a real explanation of the world of things, so once God has created the world, the minds and the body and separated them, so there is no role God plays in this world in that sense.

So, devoid of God we cannot give a real explanation to the world of things and how to reestablish the major concern for Spinoza is this how reestablish the intimate connection between God and the world and again how to interpret all reality in terms of Gods ultimate perfection because we could see that our experience suggest that God we have already seen is an infinite substance it is infinite necessarily infinite because it is a substance, it can exist independent of everything else and such a substance which is absolutely free and which can exist independent of everything else cannot be a finite entity, cannot be limited by anything else.

So, now the problem is the minds and body which we come across, which we encounter in this world. So, if they are created by God what is the relationship with God now whether what sort of relationship what sort of reality do they have, how to interpret what reality in terms of Gods perfection because if God is perfect then how can his creation be

imperfect; that is a question. Now again what Spinoza does is he posits this entire problem as a problem between finite things verses infinite substance.

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Reality cannot be constitutive of finite things because if reality, if substance is something that exist independent of everything else absolutely free then there cannot be any other substances there cannot be finite substances. The world is not a collection of independent persons and objects each complete in itself and real in itself.

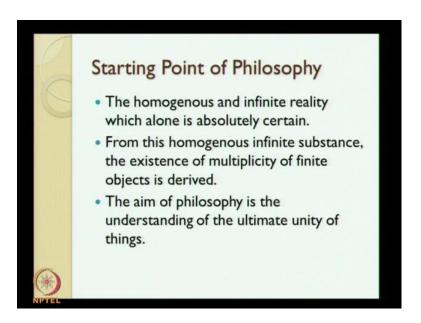
If that is a case, if the world is a mere collection of objects which are independent of each other then how do you establish, how do you explain their interconnection. If there is interconnections are necessary then you have to sort of ultimately go back to a substance a one single substance, a homogenous substance from where derive the reality. If they are not interconnected then you cannot explain anything, you cannot explain the very function of the world, of the universe no unity can be explains, so the unity in this world itself indirectly suggest something else. No object can be understood in isolation this is what Spinoza was trying to assert. Every object is connected with other object; you cannot understand one object independent of everything else.

Objects form an endless series from one relationship to another, so you can see an interconnected network of series of objects and finally, what Spinoza was trying to argue is that this series of objects constitutes one single reality ultimately they all refer to an infinite substance which is God. So, you can see that there is a craving or unity in this

approach and finally, taking us to the notion of ultimate unity of every existence. So, what Spinoza was trying to argue is that if at all there is a substance that substance must be infinite that cannot be a finite substance, but then the question is if that is the case then how do you explain the infinite substances which we come across, the bodies and the minds which we come across in our day to day life, how do you explain that and in an attempt to explain this; in an attempt to answer to this question Spinoza develops his philosophy centered around a notion of infinite homogenous substance.

So, here is the starting point of philosophy for Spinoza; the homogenous and infinite reality which alone is absolutely certain.

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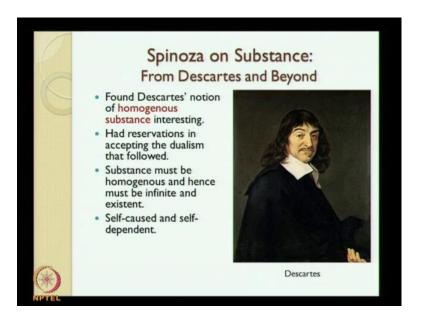


There cannot be more than one substance; if there is more than one substance then you will have to explain the relation. If there is a and b then you have to explain the relationship between a and b, in what sense a is related to b whether it is superior or inferior whether they are equals. All these things I mean some way they are related and the concept of relationship implies limitations. If a is related to b, in one sense we can say that a is also limited by b and infinite substance cannot be a limited substance. So, this is the way in which Spinoza would be arguing. From this homogenous infinite substance the existing of multiplicity of finite objects is derived.

So, the existence of all these multiple objects are derived from that one single homogenous infinite substance and the aim of philosophy is the understanding of the

ultimate unity of thing. It is not that I mean what makes this interconnections possible or what is the nature of this interconnectedness between objects that is the question and philosophy is trying to understand or trying to provide an answer to this question or rather philosophy is trying to respond to the quest or unity and now let us see Spinoza on substance (Refer Time: 15:36) this is the central concept in Spinoza's philosophy and here of course, that notion of substance has a history, as we have already indicated I have already mentioned it in the my previous lecture when we discussed Descartes that you know the concept of substance probably goes back to the Greek era, but a scholastic philosophers have taken it up and sort of discussed this extensively, but we will find a more systematic and a more modern approach to this concept of substance in Descartes.

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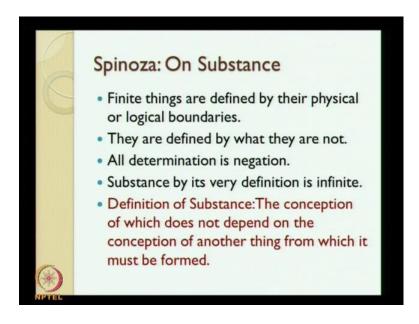
So, I will probably start with Descartes and from Descartes and beyond will go found Descartes notion of homogenous substance very interesting because it is Descartes who provides or rather who excepts this notion of substance which is there in the more or less not with much of different from this scholastic forefathers in history.

But at the same time Spinoza had certain very serious reservation in accepting the dualism that followed Cartesian concepts of or Cartesian definition and understanding of the notion of substance. We have already seen this you know when Descartes derived or Descartes develop a concept of substance he simultaneously developed a notion of relative substances as well mind and body and attributed to them certain quality certain

attributes mind, thinking and body extension and in terms of these attributes he makes a dualism a kind of fundamental dualism betweens minds and bodies and this dualism is actually let to a series of problems which Descartes founded difficult to answer and the Cartesian the later Cartesian is also his followers also where grappling with this problem of how to explain the mind body dualism and Spinoza also found it problematic and was trying to respond to that in a unique way.

Substance must be homogenous and hence must be infinite and existent I have already explained this, it must be self-caused and self-dependent. If it is caused by something else then it must be dependent on that something else and something which is finite cannot be depended on something else, it should be independent. So, it cannot be the effect of an external course, it must have been self-caused, so substance is self-caused. The same thing like when we talk about God, it is often stated that God has created the entire world. If God has created the entire world who was created God because you have already introduce the creation logic to explain the existence of this world you have invented a God who is the creator of this world while this world is infinite, the creator should be infinite, but then who was created the infinite God because this question is rather meaningless because the very notion, the very concept of infinity suggest that it is self-caused, it cannot be the effect of anything prior to that. There can be only one substance, homogenous, infinite, one, single substance which is God and when Spinoza talks about substance, he says that finite things are defined by their physical or logical boundaries.

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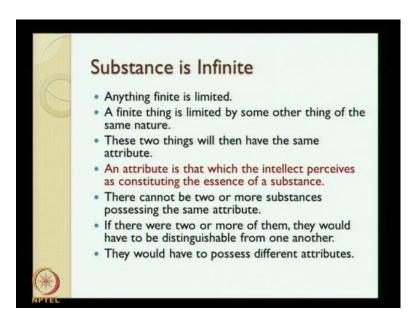
So, when I call a pen; a pen I am defining it, I am attributing certain qualities to that when I say that my pen is black in color, I am attributing a quality of color this pen is black in color and when I say this pen is black in color, I am also limiting it by qualifying it as black I am limiting it I am also saying that it is not white, it is not a knife it is rather a pen and it is not white or green or red or whatever other I am saying that it is a pen which has a certain property called blackness. So, by defining I am rather making certain boundaries that will limit it.

So every definition, every qualification is a limitation this is the reason why in Indian philosophies in the advaitic interestingly would say the there is certain interesting relationship between the advaitic perspective and Spinoza's prospective though they are entirely different I mean Spinoza actually advocates a kind of pantheism which is not there in advaita philosophy, but still there are certain interesting parallels even the advaitics also believe that something which is boundless cannot be defined because all definition involves a limitation and drawing boundaries. So, finite things are different by their physical or logical boundaries, they are different by what they are not.

So when I say I am this is a black pen, I am also saying that it is not a white knife. All determination is negation; substance by it is very definition is infinite. So here comes the definition of substance, it says that I read the conception of which does not depend on the conception of another thing from which it must be formed. I repeat the definition of

substance is the conception of which does not depend on the conception of another thing from which it must be formed.

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So it is absolutely independent, it is absolutely self-caused. It is independent and infinite, anything finite is limited it is limited by space and time, it is limited by other objects, it is limited by a sub specific shape and a specific location where it is situated, but anything infinite cannot be like that; infinite is limitless, boundless. A finite thing is limited by some other thing of the same nature; those two things will then have the same attribute. So this is the problem I mean when you talk about substance, you can never have a substance which is finite because if there are finite things then there are see when I say pen; I actually mean that it belongs to a class, a group of things which can all be termed as pen.

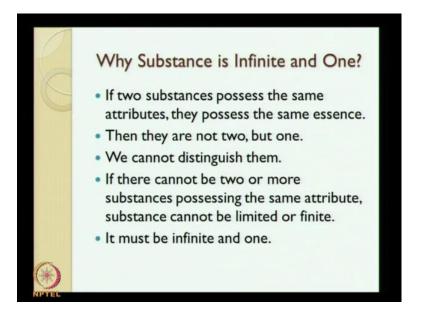
So, there is something common with pen a and pen b and these two things will have the same attribute; the pen has. An attribute is that which the intellect perceives, so this is another definition. So, an attribute is that which the intellect perceives as constituting the essence of a substance. So, here we can see that there is a slight deviation from the definition of attribute as it was given by Descartes; where attribute is a quality without which the substance cannot be even imagined of existing. So, here it is something which the intellect perceives as constituting the essence of a substance. So, while we can say that while Descartes advocates a concept of attribute in a very fundamental sense for

Spinoza, it is much limited for him it is qualified he brings the intellect, the perception of the intellect.

So, you can talk about an attribute only by relating it with an intellect which perceives this attribute or by means of this attribute perceives the object and its qualities. There cannot be two or more substances possessing the same attribute, if an attribute is something which the intellect perceives as constituting the essence of a substance then there cannot be more than one substance because if there are more than one substances then both of them must be sort of having the same essence and essence there cannot be two essences; one object as an essence, if another object as it is essence then these two are two different objects so there cannot be two different objects.

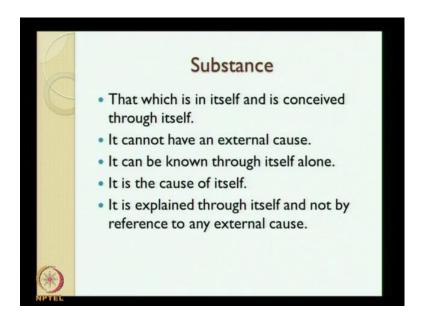
If there were two or more of them, they would have to be distinguishable from one another, they would have to possess different attributes. So, difference in attributes is a prerequisite for conceiving difference in substances.

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Now, the question is why substance is infinite and one and Spinoza says if two substances possess the same attributes, they possess the same essence then they are not two, but one because it is the essence which makes an object distinguishable, distinct. We cannot distinguish them two objects if they have the same essence, if there cannot be two or more substances possessing the same attributes substance cannot be limited or finite, it must be infinite and one.

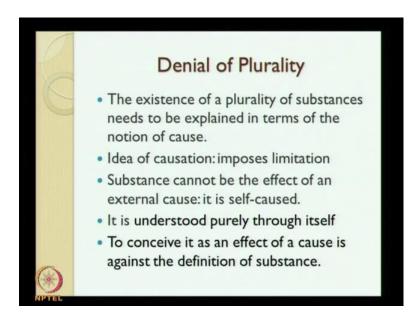
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So, that is the concept of substance which Spinoza advocates such homogenous infinite single substance that which is in itself and is conceived through itself; this is again a kind of definition of substance. I repeat that which is in itself something which is the essence and existence are coinciding that thing and is conceive through itself, it is not conceive through something else if there is something else then it is not infinite then there are two or more than one, but substance is single, one, homogeneous and it is in itself and conceive through itself, it cannot have an external cause if it is an external cause then it is limited and condition by that external cause then it is not infinite and since substance is infinite, it cannot have an external cause.

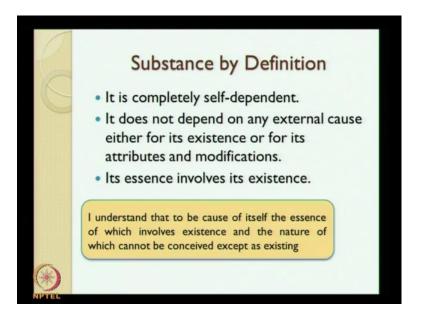
It can be known through itself alone because if it is known through something else then it is limited by that thing then it is related to that thing and infinite substance is absolutely non relative, it is absolute; it cannot be a relative thing. It is the cause of itself; it is explained through itself and not by reference to an external cause because any external cause would impose conditions and restrictions.

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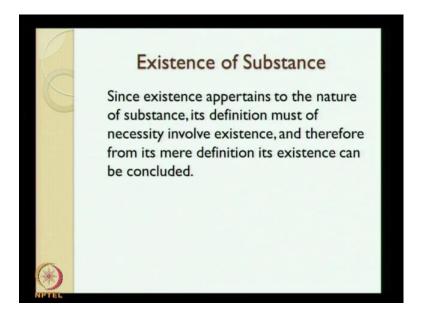
So it is in this context Spinoza denies plurality of substances, the existence of a plurality of substances needs to be explained in terms of the notion of cause because this plurality there is these different substances would have been derived from one single substance. So, there must be a cause for that, if there must be a cause for that then these substances are not substantial then they are not real something which is conditioned and limited by a cause cannot be real. Idea of causation imposes restrictions and limitations and again substance cannot be the effect of an external cause, it is self-caused, I have already mentioned this. It is understood purely through itself to conceive it as an effect or a cause is against the definition of substance because definition of substance insists that there is only one such thing.

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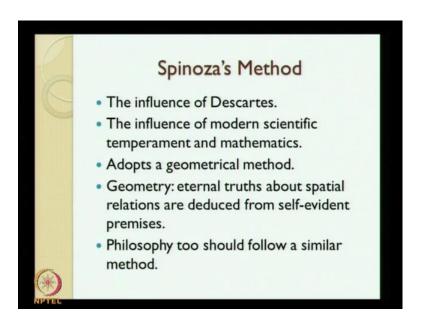
If you follow this definition which I have mentioned slightly above, if you follow this definition of substance, it is completely self dependent not dependent on anything, if it is dependent on something then it is limited. It does not depend on any external cause either for its existence or for its attributes and modifications. Its essence involves its existence, so this is what I mentioned existence and essence coincides in the notion of substance, I read I understand that to be cause of itself the essence of which involves existence and the nature of which cannot be conceived except as existing.

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So, existence and essence converges, coincides since existence appertains to the nature of substance this is what Spinoza's says; I repeat since existence appertains to the nature of substance, its definition must be necessarily involve existence and therefore, from its mere definition of its existence can be concluded. So, everything is derived from the mere definition from its mere definition its existence is derived.

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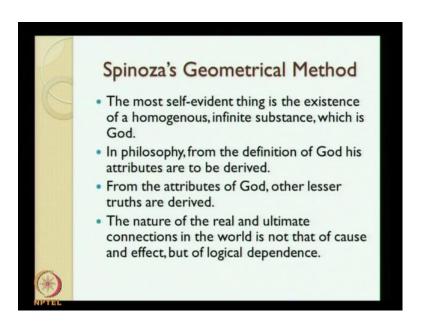
Now, one important aspect about modern philosophy as we have examined Descartes a Cartesian philosophy, we have seen that Descartes possessed a very unique conception of knowledge and his very objective was to arrive it, a absolutely certain clearly and clarity and distinctive clear and distinct knowledge, this is what he was trying to postulate and to arrive at this Descartes devices a method, he suggest that a method should be employed and Descartes methods is as we have already seen it is the mathematical deductive method.

Spinoza also in the same things in the same line and suggest that we should employ a method. So, here we can see the influence of Descartes, the influence of modern scientific temperament which all employs a method and the influence of mathematics where mathematical certainty is possible because mathematics employs a method. All these things we can see in Spinoza as well, adopts a geometrical method. So, in the case of Spinoza there is a slight difference, he adopts geometrical not just mathematical method; in geometry is a science which deals with space and infinity. So, in that sense

you know we can see the notion of substance as something which is infinite while developing this notion Spinoza is substantially influenced by geometry.

Geometry deals with eternal truths about spatial relations and deduces from self-evident which are deduced from self-evident premises. So, you have eternal truths about spatial relations which are deduced from self-evident premises and you adopt the same method apply it into philosophy; philosophy too should follow a similar method.

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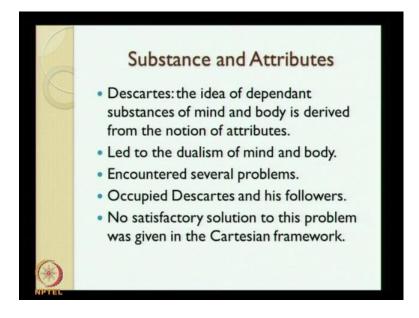
So, what is it the most self evident thing is the existence of a homogenous infinite substance which is God. So, since in the previous slide I have shown you geometry eternal truths about spatial relations are deduced from self evident premises in geometry. In a similar passion we are trying to do that in philosophy, so what is the most self evident thing in philosophy, it is the existence of a homogenous infinite substance whose existence is actually proved by its very definition.

In philosophy from the definition of God, his attributes are to be derived. So, you come up with a concept of substance which is identical with God and from that derive the attributes and modes and other things from the attributes of God other lesser truths are derived. So, it is all from the self evident premises you derive everything in geometry, the nature of the real and ultimate connections in the world is not that of cause and effect, but of logical dependence.

So, here again because if you introduce the notion of causation to explain the relationship between God and other things then you are sort of getting into the same trap, causation would impose limitation any causal relationship suggest limitations which is not acceptable for Spinoza because he is dealing with infinity the concept of infinity and so he says that the nature of the real and ultimate connections in the world is not that of cause and effect which is the popular way in which it is understood, but of logical dependence. See the difference is that if the case of cause and effect there is something which is prior and after effect is after the cause. So, cause is prior to the effect and by virtue of being prior to the effect cause contains more reality than the effect or cause is more important than the effect we can say, but in the case of logical dependence there is no prior and after, everything is interconnected there is a logical necessary interconnections between everything and that everything put together that collective whole is what reality is.

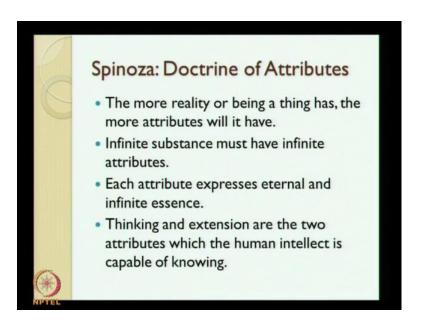
So for understanding the notion of substance, Spinoza adopts the geometrical method and he ultimately suggest that we have to see the entire world interconnected connections with each other each one is connected with the other, but these interconnections need not I mean need to be explained in terms of logical necessary connections rather than causal connections.

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In Descartes for example, when he talks about substance and attributes Descartes says that the idea of dependent substance of mind and body is derived from the notion of attributes. So, it is by virtue of this concept of attributes Descartes talks about mind and body; mind with the attribute of thinking and body with the attribute of extension and this as we have already seen led to the dualism of mind and body and all sort of problems which Descartes and later Cartesians encounter. So, this one single problem which occupied Descartes and his followers throughout their career and no satisfactory solution to this problem was given in the Cartesian framework.

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If you try to understand this from Spinoza's perspective, Spinoza's doctrine of attributes again it is very interesting here Spinoza is trying to sort of argue or trying to derive this concept of attributes from the definition of substance which he has already presented as infinite homogeneous single substance.

So, what is it the more reality or being a thing has the more attributes it will have. So, if this is the principle the more reality or being a thing has the more attribute it will have then what about an infinite substance, how many attributes an infinite substance should possess that is a question. So, infinite substance must have infinite attributes, this is Spinoza's answer each attributes expresses eternal and infinite essence because they are all the attributes of the infinite substance since they are the attribute of the infinite substance, they are also infinite and they express eternal and infinite essence of the

substance to which their attributes and actually we have already seen that an attribute is something which the intellect can perceive.

Thinking and extension are the two attributes which the human intellect is capable of knowing that does not mean that there are no other attributes Descartes talks only about two attributes thinking and extension because they are the things which we can understand Spinoza says this is not correct the infinite substance should possess infinite attributes though only two of them out of this infinite attributes only two of them we are capable of doing our intellect is capable of understanding and comprehending.

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So, here there are certain difficulties of the dualism which Descartes for example, ultimately reached an encounter. How does one substance act upon another of a wholly different nature, how does the mind act on the body and how does the body act on the mind; something which we have already discuss in the previous lecture. So, this is the problem because mind and body they possess diametrically opposite features and attributes and qualities how can it entirely different substance like mind acts upon an entirely different substance body; how is it possible.

The problem of interactionism this is what something which the Cartesian have grappled with and occasionalism all kinds of explanations where given we have not gone to the details of this, but all kinds of explanations where given to accounts for this very peculiar

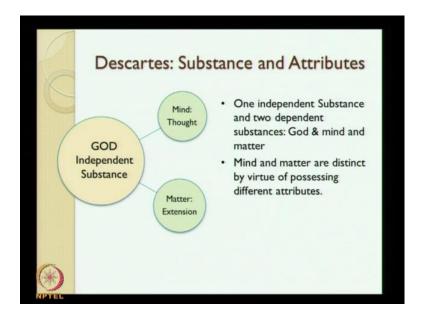
unique kind of relationship, but ultimately they all fell short of clarity and they ultimately fail to provide a satisfactory explanation to this problem.

On the other hand Spinoza says that attributes of thought and extension are not two separate things that is the interesting thing, they are not two separate things, but only aspects of one and the same thing. Parallelism between the attributes without any interaction, so he says that there is only one substance which is God whatever attributes we perceive; however, contradictory they will appear to each other they all belong to one and the same substance God.

So, there are, but the only aspects of one and the same thing their aspects of a one and the same thing, but there is a parallelism between the attributes without any interaction we do not see them, the minds and the body there is the attributes of thinking and the attributes of extension they sort of go parallel to each other. Whenever I want to rise my hand in my mind, I can raise it, my hand goes up, my body obeys. So, it is not that the body the hand goes up in response to the command of my mind, it is not that the mental thinking of my wanting to my desire to raise my hand as caused the movement in my hand, but rather on the other hand Spinoza says that there is a desire in the mind and the hand goes up, so they run parallel to each other.

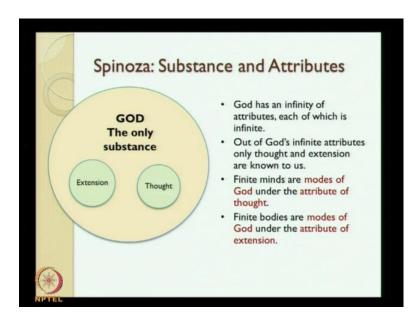
For each mode of thought, a mode of extension will exists, so for each mode of thought let my hand goes up a mode of extension my hand going up exist. So, they go parallel to each other not that one is cause by the other.

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So, in Descartes frame work this is the substance attribute frame work we have already discussed it God is the independent substance mind with the attribute of thinking and mater with the attribute of extension exist one independent substance and the two dependent substances God and mind and matter are distinct by virtue of possessing different attributes.

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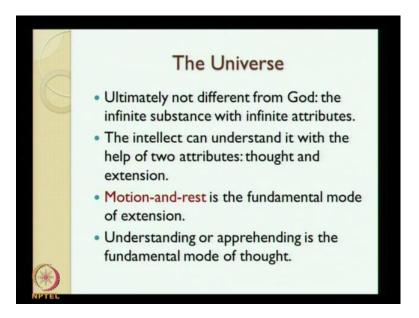
But in Spinoza this would picturize Spinoza's perception, God the only substance and extension and thought are within that which means that they are both are attributes of

God. God has infinity of attributes; each of which is infinite out of Gods infinite attributes only and extension are known to us.

Now, comes the important point finite minds are modes of God under the attribute of thought and finite bodies are modes of God under the attribute of extension. So, they are all modes of God there is nothing, but only God that is the reason why Spinoza is called as a God intoxicated thinker, it is quite interesting that some of his critics even view him as atheist as I already mentioned that Spinoza had a very interesting life very eventful life. He started his career as a Jew; he belongs to the Jewish community. So, he started his career in a very conventional way his parents send him to, I mean he was considered as one of the promising sort of intellectuals in the Jewish community by the community, but soon he found that some of these explanations given by the theologians are not really satisfying some of his (Refer Time: 41:37) concerns.

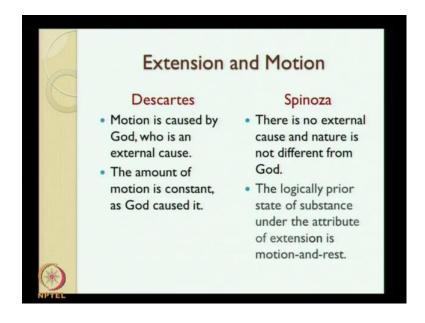
So, he sort of started questioning the kind of the traditional interpretations given in a Jewish theology, which ultimately led to his excommunication event from the community and there was even a murder attempt, but Spinoza held very unorthodox views about God. So, that is what this conception of God where which we will explain in the next lecture which is called pantheism, which is a very unorthodox view of God which cannot be accepted by any of these three Abrahamic religions of Judaism, Christianity and Islam. So, these three religions find this picturisation of God, identification of God with nature God and nature are one and the same as extremely problematic and this is what precisely Spinoza says. Out of Gods infinite attributes only true we will know and finite minds are more modes of God under the attribute of thought and finite bodies are modes of God under the attribute of extension.

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And the universe is ultimately not different from God the infinite substance which has infinite attribute and the intellect can understand it with the help of two attributes thought and extension. Motion and rest is the fundamental mode of extension, understanding or apprehending is the fundamental mode of thought. I repeat motion and rest is the fundamental mode of extension, understanding and apprehending is the fundamental mode of thought they run parallel to each other.

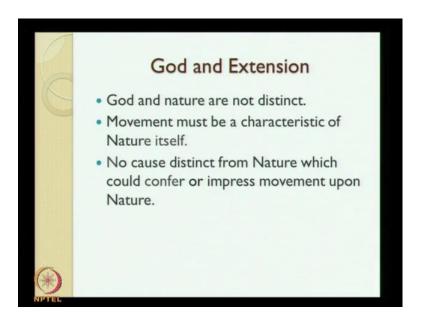
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And extensional motion in Descartes for example, we have already seen motion is caused by God who is an external cause and Descartes even says that the amount of motion is constant has God caused it, so there is a kind notion of initial push the first move which is caused by God and the amount of motion is constant and Spinoza says that there is no external cause; he denies the idea of external cause and nature is not different from God. So, the motion in nature is not caused by an external God with a push, but rather nature and God are one and the same. So, every motion every movement motion and rest everything is caused by itself. So, it is not different from it the logically prior state of substance under the attribute of extension is motion and rest it is logically prior not causally prior.

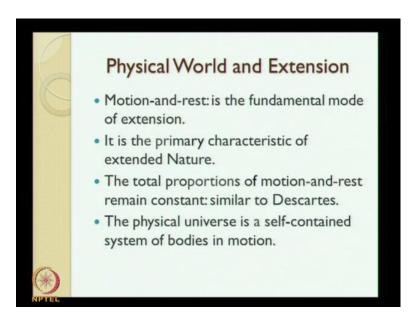
So, there is no sort of sequence in time there is only logical sequencing. So, the logically prior state of substance under the attribute of extension is motion and rest and God and nature are not distinct; movement must be a characteristic of nature itself.

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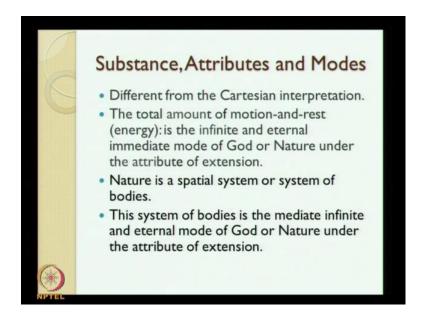
No cause distinct from nature which could confer or impress movement upon nature. So, whatever motion, whatever movement is there in nature is not caused by an external entity or God, but it is self-caused because God and nature are one and the same. So, motion is already there in nature in God and it is the root of Spinoza's pantheism.

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It is in this context the physical world and extension can be understood I mean Descartes understand it as substance and attribute, but for Spinoza motion and rest is the fundamental mode of extension. It is the primary characteristic of extended nature and the total proportion of motion and rest remain constant here there is some similarity with Descartes and the physical universe is a self contained system of bodies in motion because they are necessarily self contained.

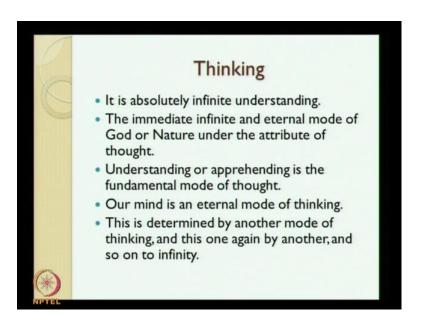
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If you try to understand the concept s of substance attributes and modes from this context it is different from the Cartesian interpretation because the total amount of motion and rest or what in today's modern terminology can be understood as energy law of conservation of energy is the infinite eternal immediate mode of God or nature under the attribute of extension.

So, you can understand it in that way the total amount of motion and rest is the infinite and eternal immediate mode of God or nature under the attribute of extension and nature is a spatial system or system of bodies logically interconnected. The system of bodies is the mediate infinite and eternal mode of God or nature under the attribute of extension.

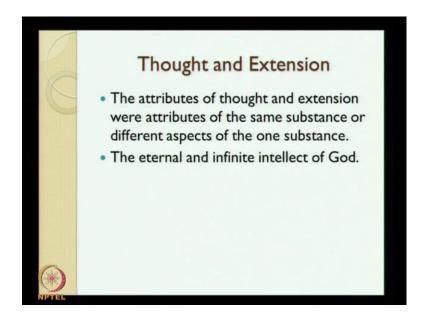
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When we come to thinking which is Descartes another attribute of the substance of mind, it is absolutely infinite understanding for Spinoza, it is not a fine attribute of a finite thinking substance, but thinking is an absolutely infinite understanding, the immediate infinite and eternal mode of God or nature under the attribute of thought; will explain this in the next lecture when we discuss the concept of God. Understanding or apprehending is the fundamental mode of thought and again our mind is an eternal mode of thinking.

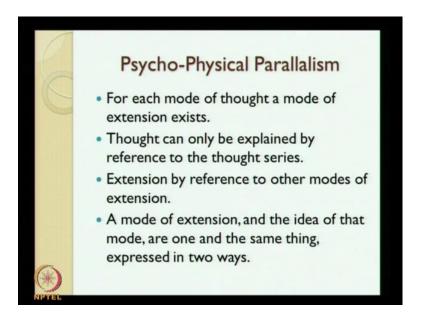
This is determined by another mode of thinking. So, it is all logically I mean interconnected in that way and this one again by another and so on to infinity.

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So you ultimately take us to infinity, the thought and extension the two attributes of Descartes the attributes of thought and extension were attributes of the same substance or different aspects of one and the same substance, the eternal and infinite intellect of God possess them and this is what the psycho physical parallelism means; for each mode of thought a mode of extension exists parallel.

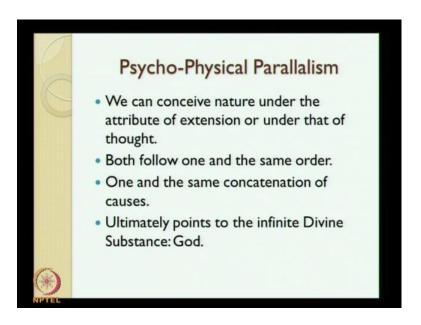
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Thought can only be explained by referenced to series so there is a thought series and there is a series of bodies, they run parallel to each other. Extension by reference to other

modes of extension, a mode of extension and the idea of that mode are one and the same thing expressed in two way, so though they run parallel, they are not different they are one and the same thing because they belong to one and the same homogenous infinite substance which is God and they are expressed in two ways that is all and this is called the psycho physical parallelism.

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We can conceive nature under the attribute of extension or under that of thought. Both follow one and the same order, one and the same concatenation of causes, ultimately points to the infinite divine substance which is God. This we will explain in the next lecture the concept of God which is a very central concept in Spinoza's philosophy, so we will wind up this lecture here.

Thank you.