An Introduction to Microeconomics
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Lecture – 49
Behavioral Assumption: More is Better

Right now we have enough structure to talk about preference of a person and then by combining that we have already learned that the budget set by combining these two a person can make a choice. But sometime it is a good idea because we observed certain regularity in the world in human's, in human's preferences. So, we are going to learn about them also and how it would change the problem.

I am not saying if these are less important in a way, but it helps us immensely mathematically that is why we are going to learn some more if you want to call them you should call them psychological assumption about human behavior. And the first of those is nonsatiation.

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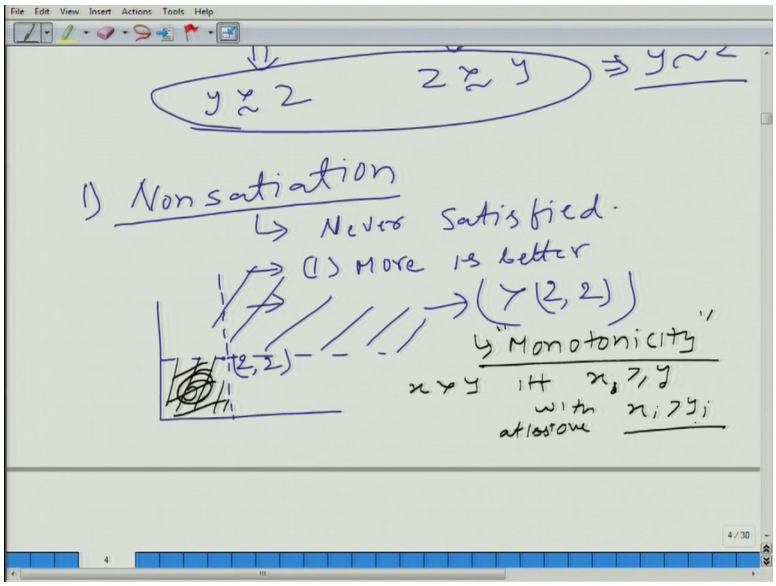

What does it mean? Nonsatiation, it simply means simple translation would be never satisfied never satisfied. And it has two forms there are two different forms of nonsatiation that we are going to learn. I am not saying that these are true all the time, but these are true most of the time and when these are true our problem becomes much simpler to solve. So, the first form is more is better. So, whatever you have let us say in

two good world, in two good world you have a bundle here let us say it is 2 comma 2, any bundle which has at least more of one of these two goods would be preferred over this bundle that is what it says that more is better. So, in other word we can say, we can take like this and whatever we have here would be preferred over 2 comma 2 or in other word whatever we have here we get.

Student: (Refer Time: 02:48).

Is strictly better than 2 comma 2, and then here whatever you take here clearly you would prefer that whichever bundle you take from this zone you will prefer 2 comma 2 over that particular bundle because 2 comma 2 has at least more of one of these two items. So, that is what we figure out. And that is more is better in economics Jorgen it is called monotonicity. Mathematically speaking x is preferred to y, if x is greater than or equal to y with at least one x i, with at least one x i is greater than y i, fine, this is monotonicity; it is clear.

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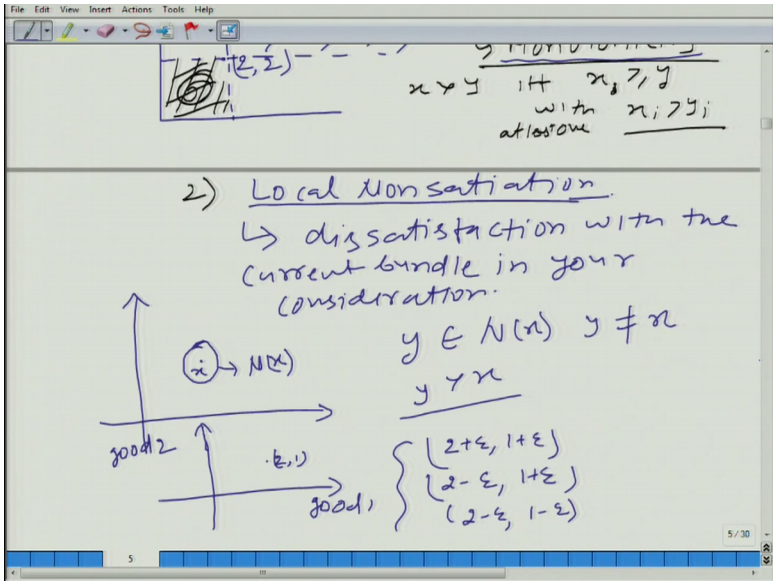

Can you think of any other version of being never satisfied? Have you ever heard term called nv?

Student: Nv, yes.

Nv, whatever you have you are not happy about it, you want something different, not necessarily something more what you want what your neighbor has in one way to put it.

So, that is called local nonsatiation. And what does it means? This satisfaction of course, this is the technical term local nonsatiation as the technical term here is monotonicity, what it means is that dissatisfaction with the current bundle in your consideration.

Mathematically speaking its bit technical in a way that you take a bundle here x, you take a bundle here x and take a small region that is close to x of course, if there can be more stringent mathematical definition, but we are not getting into it. So, what we have, we are talking about different bundles which are very similar to x.

So, when no matter how small zone how small region we always find a bundle in that zone that you prefer over x. Let us say this zone is called neighborhood of x. So, there exist a y in neighborhood of x and y is of course, not x, but prefer y over x. Whatever you have, you do not like, you want something different basically you want something different, do you understand, you did not understand.

Student: No sir.

So for example, let me give you more one more example here. Let us take here good 1 and here we have good 2; good 1 can be food, good 2 can be cloth and here we are taking 2 comma 1. If we take a small zone small region near 2 comma 1, what kind of good we get? Either we will get 2 plus epsilon 1 plus epsilon where epsilon is some small number or we will get 2 minus epsilon 1 plus epsilon or we will get 2 minus epsilon 1 minus epsilon and of course, epsilon can have different value because we are taking a zone.

So, what we are saying then that one of these elements would be preferred over 2 comma 1 by u because that bundle is different. So, here this is simple, that you are unhappy with what you have you must have heard from your parents and teacher that feel satisfied you know whatever you have you should be content about that thing, but that is what I am saying here in economics that this is human nature not to be content about what you have, you want something difference.

And this property is trying to capture that particular nature of that particular angle of human behavior. That you are not happy about what you have, you would always prefer something different, little bit different. No, matter how small the change, but in that zone also you would prefer something else over the original bundle.

Now, the funny part is that when you get what you refer and you take small zone around the new bundle again you will have something. So, basically what we are talking about is [FL], that you are not happy about what you have you are trying to search for another bundle and no matter how you know, no matter how small zone you consider you will always have another bundle in your mind that you would say that you prefer over the original bundle. I am not saying that all the bundles one bundle, at least there will be one bundle in that zone that you would prefer over the original bundle.

So, first one says more is better, second one says that you are not happy about what you have. Which one do you think is more stringent or let me put in another way that do you think nonsatiation would imply monotonicity or monotonicity will nonsatiation or they are quite different, they are very different. Think about it. Are they very different or one implies the other or they are the same that if they are the same it means that one implies the other and the second one implies the first one, which one is the case now.

Student: Same.

They are the same. Let me ask you this.

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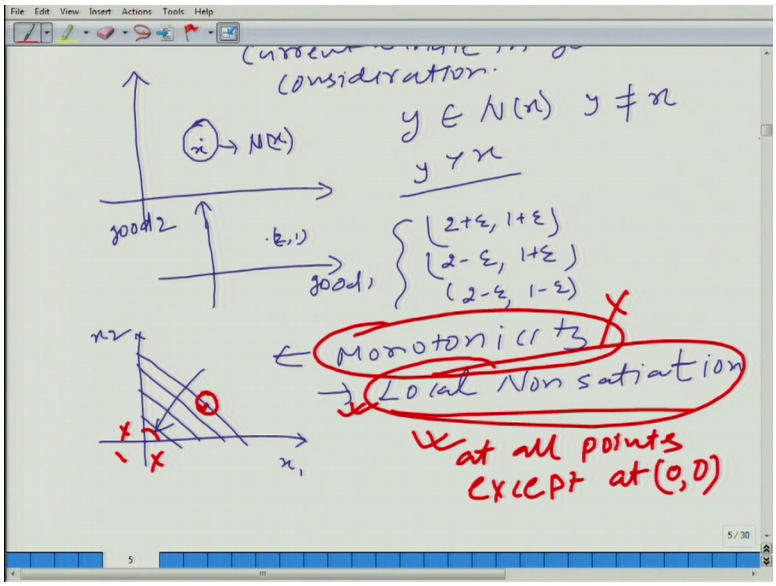

Go with the example that we have in the class. This is the indifference curve, its moving in this direction in it means the utility is increasing in this direction here we have good 1, here we have good 2. Does it satisfy monotonicity or local nonsatiation?

Student: Both.

Or both are satisfied. Think about it, this is very simple. Of course, monotonicity is not satisfied what does it say less is better.

Student: Yes sir.

And monotonicity is just reverse that more is better. So, of course, monotonicity is not satisfied. How about local nonsatiation?

Student: It is satisfied.

It is satisfied at all point in except at 0 comma 0, except at 0 comma 0. Take any bundle here and take a small neighborhood and if you move in this direction of course, you will find a bundle that you prefer more over the original bundle. So, what we are saying we are not talking about direction we are talking about that any small neighborhood that we take and we are able to find a bundle that is preferred over original bundle and if that happens local nonsatiation is satisfied.

But come to 0 now what is happening at 0 of course, we will get the whole circle because this part is not in the consumption zone consumption set. So, we will consider only small sector. And what is happening in that sector? We cannot find any bundle which is preferred over 0 comma 0. So, local nonsatiation is not satisfied at 0 comma 0, but it is satisfied at everywhere else fine.

So, of course, monotonicity is not satisfied at any point. Local satiation is satisfied at all points except at 0 comma 0, is it clear. So, which is one is more strict requirement which would be violated.

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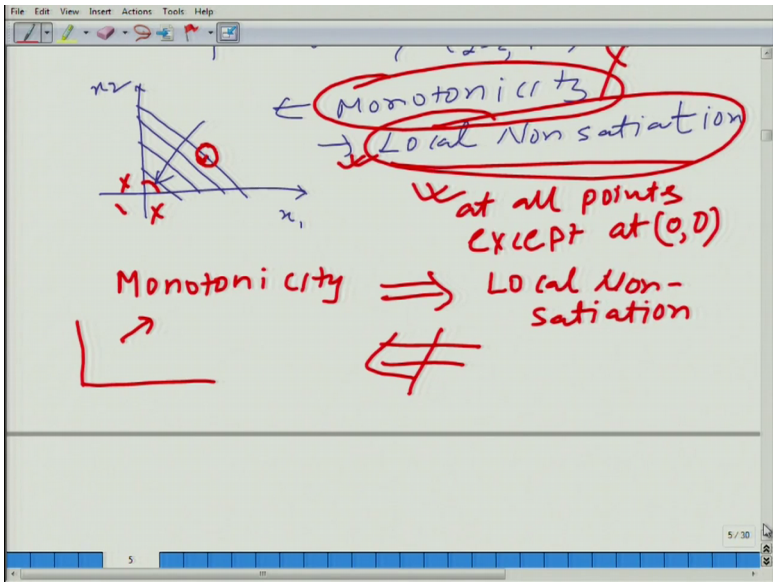

Student: Monotonicity.

Monotonicity.

Student: Yes sir.

Monotonicity will always imply local. If monotonicity is satisfied, monotonicity implies local nonsatiation, but this does not imply monotonicity because local nonsatiation does not restrict the direction, but you need to move away from the original bundle, but monotonicity is clearly about a direction that you will have to move in the in two dimensional world I can say that you will have to move in the north to east direction, anywhere in the north east direction its northeast or northwest quite poor with the direction.

Student: Northeast that side.

Northeast. So, you have to move in the north east direction to find the bundle that is preferred over original bundle, fine, it is clear. So, this concept is clear.

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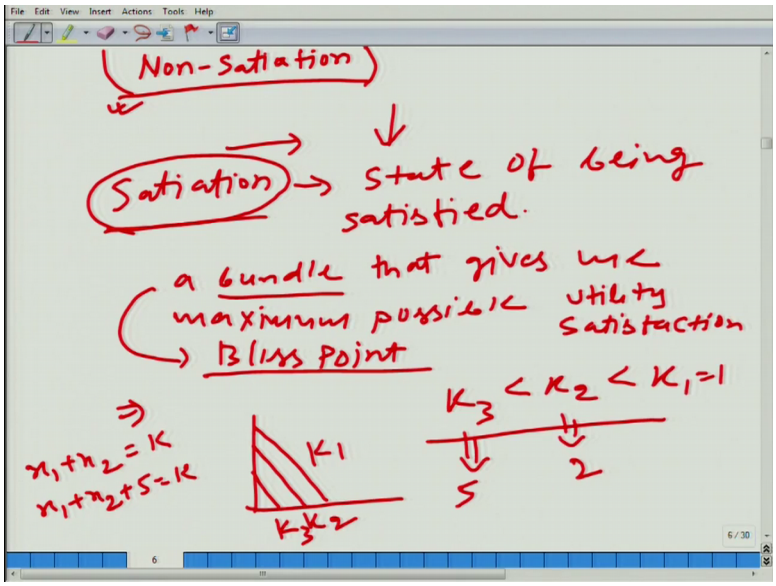

Now let us talk about it I already told you that this is, do you think nonsatiation forget about local or just I am saying in general. Do you think nonsatiation we always do we always exhibit nonsatiation property, do we always exhibit I am talking about real world not theoretical construct I am talking about real human.

Student: No sir, no sir.

Can you give me an example when it is violated?

Student: Weight.

Ah?

Student: Weight.

Weight.

Student: Body weight.

But body weight is not good we are talking about goods.

Student: Goods.

Which gives, no, goods which give us pleasure if we consume.

Student: Sir food, food.

Food.

Student: After (Refer Time: 14:29) level we do not like it.

Ha. So, what we are saying that after certain level of food.

Student: Nothing comes (Refer Time: 14:42).

Our happy if we eat more our level of happiness will decrease. So, there is a point which gives us maximum there is a finite point that gives us maximum satisfaction. So, nonsatiation is not satisfied in that case. But if I say let us say you are allowed to dispose a food freely disposing throwing food does not have any cost. Remember right now we are talking about consumption set. So, we are not considering any cost one way to say that we are talking about all these bundles at 0 cost. So, does not matter.

So, if we go with the same theoretic construct then if we are allowed to you let say disposal of food is costless, then this assumption is satisfied, we can get food and we can throw it off probably. Later on you will see that the budget constraint would kick in and food would be costly. So, if you get maximum satisfaction at such level then you do not want to consume more. So, it is not that bigger problem, fine. So, it is clear. But still it is not always that we should keep in mind that it is not always satisfied. So, when we are using the utility function which uses or indifference curve is uses concepts from non satiation then we need to be very we need to be careful about it, fine.

We have talked about satiation nonsatiation. So, let us talk about satiation also. What is satiation? State of.

Student: Satisfied.

Being satisfied, state of being satisfied. And we can consider a bundle let us say if our preference if my preference exhibit this satiation property what it means, that there exist a bundle that there exist a bundle that gives me maximum possible maximum possible happiness, satisfaction, utility or satisfaction and that bundle a point representing that bundle is called bliss point. That is a name we use, that you are in bliss, you know nothing can be better than this or nirvana point also you can call, is it clear. And when

you exhibit satiation what typically happens? Nearer you are to the nearer you are to the bliss point happier you would be. So, if you have if you are comparing two bundles the bundle that would be closer to the bliss point you would prefer that particular bundle.

And just one more thing because you said just 2 3 minutes, one more thing I should tell you going back. Now, what we have here going back to this, this example here we had K 1, K 2, K 3 and these are the value associated with these indifference curve and what we have is K 3 is greater than K 2, K 2 is greater than.

Student: K 1.

Or K 3 is in this particular K sorry K 3 is less than K 2 and K 2 is less than K 1 fine. And let us say the value that we have taken K 1 is equal to 1, K 2 is equal to 2, and K 3 is equal to 5. What we can do simply rather than using x 1 plus x 2 is equal to K, what we can do x 1 plus x 2 plus 5 is equal to K nothing will change you will get the same indifference map. So, that is, it is the ordinal property, fine, done.