Digital And The Everyday: From Codes To Cloud

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Lecture – 19
Digital and our everyday interactions with the state – Part 03

In this case the concern was that when you in when you entered into an agreement, yeah some of these agreements could run into a lot of pages yeah 20 pages, 30 pages, 40 pages and the way these transactions would get registered in thus yes our office initially was that they were copied. So, you had a document done when you took it for registration, they would take the document they would copy it into the register yeah. So, it would take a lot of time because you did not have a lot of copy writers. And then after sometime what happened was you started microfilming it, but microfilming equipment was not very easy to install in a sub registrar office.

So, in one district those are archive department and all this document were taken to that facility for microfilming and so, there was a lag sometimes up to 2 to 3 months in you getting back your original documents. So, you had entered into a transaction, you have got it registered, but getting back the original document would take anywhere between 2 to 3 months. And because they were so much of 2 and 4 involved, sometimes you would lose that document yeah.

So, that was a big concern in the system yeah. So, roughly again around the late 90s when the scanning technology became say are started proliferating, it was fell that we will it easy to get the documents scan and that would be fast enough and we can then return it back to the citizens. So, at least we will take care of that aspect of inconvenience that citizens are going through yeah and that is what this project is doing here. So, this is from a sub registrars office not all the sub registrar offices look like this, I am sure how the sub registrar offices in urban areas that you are gone to look slightly better at least in terms of this space that is available, but this is in taluk in Tumkur called Pavagada which is largely rural kind of taluk, but this is what happens there.

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So, you have a workstation, and you have an operator, you take your document there yeah. Document gets there is a basic entry form and that gets an entered there, they are based on the value of the transaction is a registration fees and stamp duty that is levied you are expected to pay those charges, and once you have done that and once sub registrars has a has approved, the document get scanned and you get your document back yeah. So, this is what this project is doing.

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Now if you will if you look at this project from the broader property transaction a process, yeah because this is a part the property registration is not a standalone activity, it is valuable in the when you are looking at or when you are considering the overall property transaction process yeah. I as a buyer want to sell my property you as a seller want tobuy that property yeah.

Ah sorry I as a seller want to sell that property, you as a buyer want to buy that property and we want to ensure that the it is a fair transaction between us, that is something that has that has as greater value to us as buyers and sellers, as the time that it takes for me to get the document back. In fact, in certain cases in the longer term I am I might be willing to wait for 5 days to get the document back. If it comes with a greater guarantee, that the transaction is legally secure. I the property that I claim is owned my me is actually owned my me, and if the state because it has access to a lot of data about that property about the history of that property, about me as a buyer about you as a seller can if provide can invoke all that access to data, and then tell me know this transaction seems to be legally valid. If it we are to do those 2 days, 5 days, 10 days 20 days, 5 hours is not at all our concern yeah.

But in the again in the choice of technology what was considered relevant or what was considered important was not that aspect in the property transaction process, but this convenience or efficiency in terms of returning the document. Not that that is not a that that is not a valid concern on that may not be a valid way of looking at it. What in the process you have left out certain things, which could also be a valued to a lot of buyers and sellers. Sometimes even more who will it be a greater value to someone who is able to navigate through the complex relationships and structures of the state yeah I know English, I have studied till a particular standard, I know people who the officers who sit in those officers yeah, I will have greater access to what the states data yeah. I am a farmer I am I do not know English, I profit do not have a lot of money, I do not have the kind of contacts that sub one of my urban count counterparts has in the sub registrar office, I will not have access to that kind of data yeah.

So, I as a rural farmer expect that service, I may be willing to wait for 10 days for my document to come back yeah. But I if it comes back with her greater say guarantee from the state that what you are engaging in his looks to be legally valid, that is a greater value for me yeah. Someone else who is working in say one of the company is down the road

and has to take a day off and it is not willing to that yeah what value the. So, I go there only once get it done and I do not have to take a day off yeah. So, that person because anyway that person has greater access to the state and it is database is existing database is, whether there digital or otherwise yeah would not value that as much because they would have mechanisms to ensure that the legal validity can be figured out a reasonable extra yeah.

So, certain groups and their and what the values value could get reflected in technology designs, and that is what here also what you are trying to say is just as in the case of PDS and in the case of Bhoomi the certain groups whose voice is fit get heard more or get considered more while you design technologies yeah. Nothing to say that is the only way technology should be design yeah you can always design a technology whereby you can think of linking these different databases, you can think of linking the land conversion plan that is very important I want to know whether the builder the land at the builder is selling to me has does this have a residential permission or not yeah.

So, that the builder has access to I as a buyer may not yeah for the state definitely knows this the state one of the BDA all the urban development authority or someone has sanctioned it definitely has access to that data yeah. So, that could be of value and digital technologies can be designed to factor in that value in terms of the design and then while they may be do not consider something as important yeah. So, end of it what I am trying to invoke is that technology designs are political technology designs and various other designs yeah they are political and their political.

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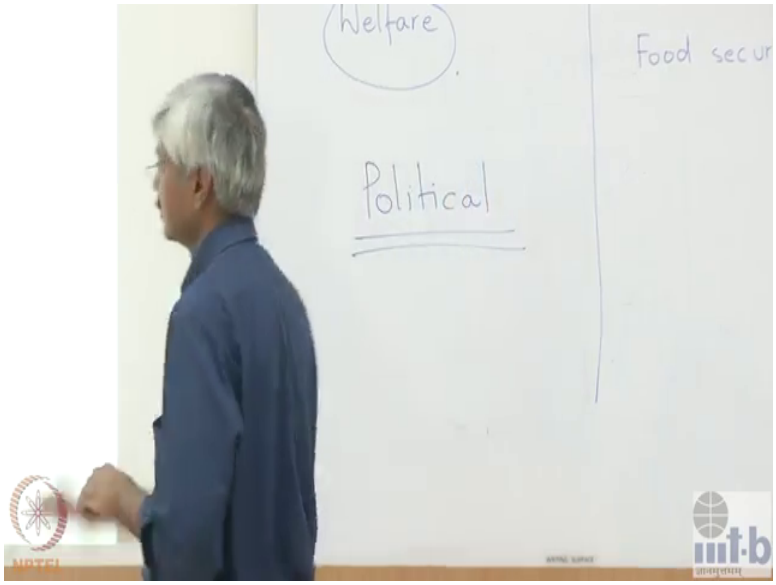

In this sense we include something we exclude something what we include depends on what we consider as valuable, what we exclude depends on what we do not consider as valuable yeah.

So, we do not consider this as valuable we do not consider this as valuable we consider this as valuable.

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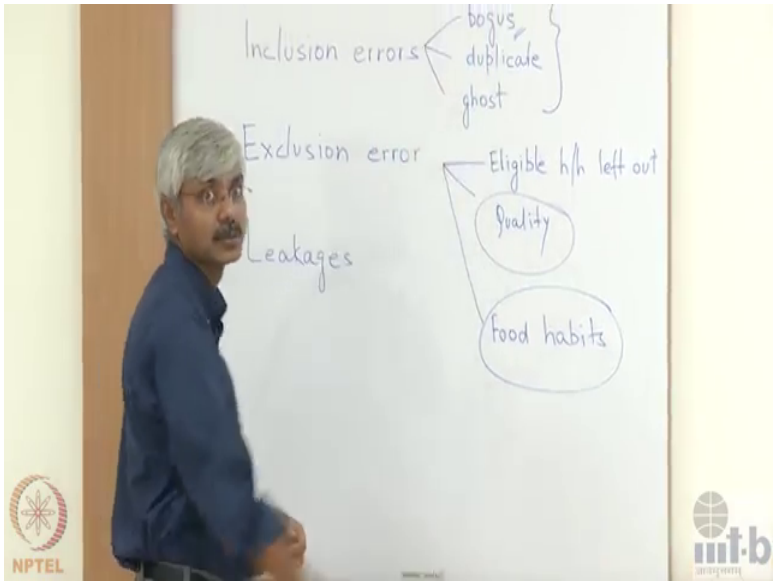

So, therefore, we include that in our design of technology yeah. So, one of the takeaway is that yeah. So, will probably skip this because we are now we are more or less there.

So, the takeaways is that technology designs are political how do you react to this as technol any technology you are there are few technologies we have or. So, somehow in our education system or in a social system we are led to believe that anything to do with politics is bad are we not yeah. Oh do not in do not in intelligent politicises what we are told what do we do? yeah With all things off of everything that can be a political technology differently is considered the most neutral or a IT is a very neutral kind of tool yeah IT technology is a neutral tool nothing to do with politics there is only way in which it can happen it is up to the people to decide what to do with it yeah.

But when we are doing all that, you are all doing politics where including we are excluding that is what we are all doing and there is no harm in acknowledging that. So, as technology designers, we have to understand that politics is as integral to designing as could be anything else yeah and there is so, many other examples in agricultural easy trade DBT MCT as UID digital financial all of that yeah we can get into all this.

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Quickly on the development priorities of the Indian state, this is something that we have all signed. So, as a country we have agreed we have we are signatory to the SDG. So, I will go with this I will I will go with as a country we want no poverty we want zero hunger, we want clean water and sanitation, responsible consumption and production all of that is what? All of us have signed has a country and as a global community. So, not only as a national community as a global community, all of us almost 100 6 75 are countries have signed on something like this yeah.

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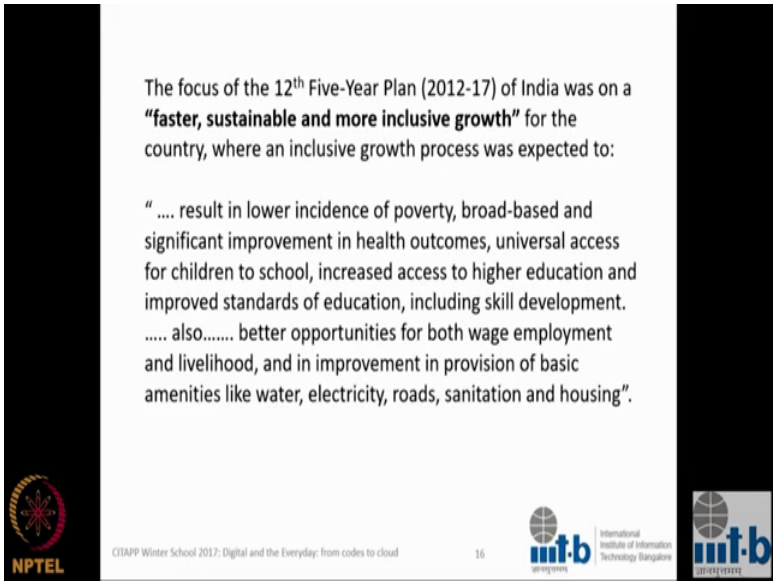

ah Now this 5 year plans exist no more but very recently the last 5 year plan this is what it talked about. It said faster sustainable and more inclusive growth yeah. So, our

development mantra and we not very it like even when the government has changed I do not think the new government is saying that; no we are not trying to do this yeah. We are saying [FL] your saying we want to grow yeah that is what we tried to do yeah. So, faster sustainable and more inclusive growth is again something that is driving or development priority, and then it should result in low incidence lower incidence of poverty broad based significant improvements in health outcomes all of that yeah.

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When the prime minister talks of good governance as transparent and accountable bring government closer to our citizens; so that they become active participants in the governance process, transparency, accountability, participation yeah these are still values in our inclusive faster and sustainable growth dialogues. Anything that you want to your concerned with at this point apart from the fact that we are running behind schedule ok. So, a slight detour, some of you would probably know this.

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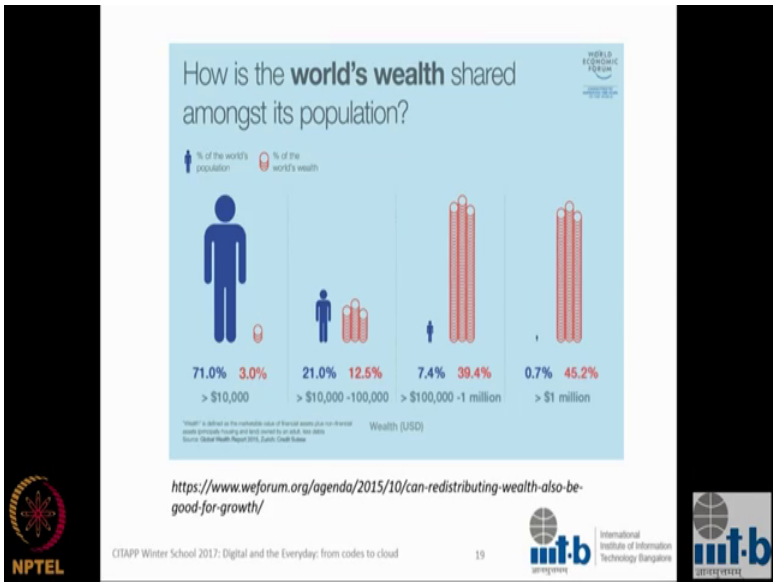

So, I Will run through this quickly this is how the worlds wealth shared amongst it is population this is a world economic forum 2016 data this actually less than 10,000 dollars yeah. So, 71 percent of the population and the wealth is defined as all the financial marketable value of financial assets plus non-financial assets, principally housing and land owned by an adult less all the dates that he or she would have yeah.

So, 71 percent of the world's population owns 3 percent of the world's wealth. 0.7 percent of the world's population owns 45 percent of the world's wealth in 2016. This is the global IT industry again I think 2017. Now 2016 data this is the estimated revenue at constant prices encompasses hardware, software services, telecom.

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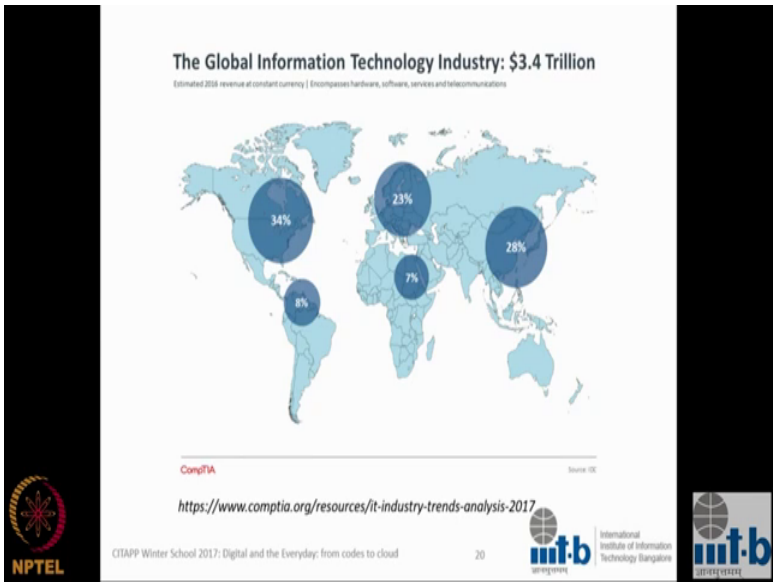

So, broadly the IT industry, it is a reflective of the consumption of IT yeah. So, we are taking this as most of the IT is being consumed here, almost one-third of the worlds IT is being consumed in North America, one-fourth is being consumed in Western Europe yeah the rest of the world this one is a high figure.

Because you also Japan and Australia some of these countries China two seconds can here, but it is fair to say that most of the IT consumption is happening in North America and Europe Western Europe one of the greatest consumers.

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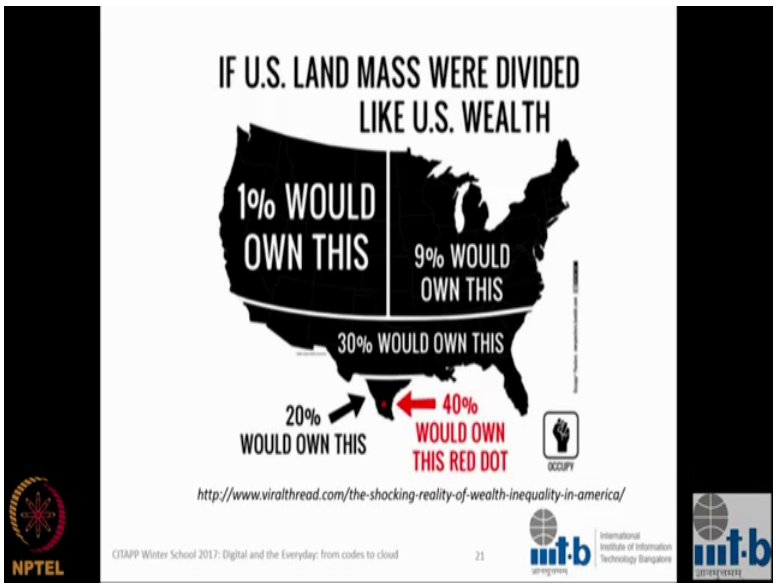

Of IT this is what it looks like yeah. If the land mass were and this is from the occupy wall street movement yeah, if it were divided like it is wealth. This is what 40 percent would own this dot yeah and this is what? 1 percent would own.

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Western Europe UK one of the poster choice there, who gained most from increasing wealth during this 15 year period, 20, 26 percent went to the richest 1 percent yeah.

So, the increase in wealth in UK during this 2000 to 2050 period of that increase one-forth went to the richest 1 percent yeah. 7 percent went to the poorest 50 percent yeah. So, the disparities significantly increase yeah. So, you looked at global distribution of wealth, we looked at heavy consumers of information technology digital technologies, we look that wealth ownership growth benefits in those geographies, this is where we are yeah.

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We are doing we have done a bit better, but in terms of hunger is still about 100 in a world ranking of 118.

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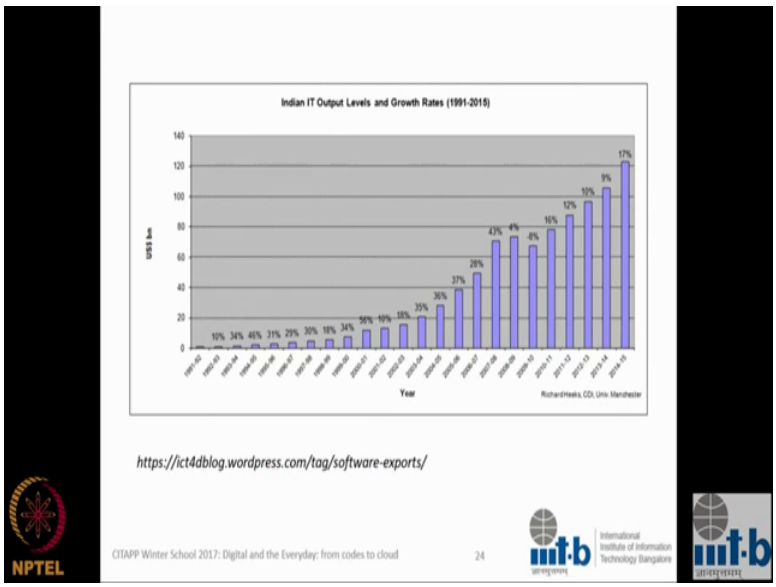

This is how a are IT industry has grown over the last 20, 25 years yeah very impressive numbers yeah

So, our IT industries grown pretty well, but we have concerns like hunger, we have concerns like you to malnutrition and various other concerns I am sure all of you are aware of some of our development concerns that exist here, but we are sitting in an area

which is known for it is IT capabilities yeah where at least producing IT yeah. So, this is production of IT and to a certain extent a very weak type of correlation to say certain and development indicators the earlier two, three slides were consumption of IT and what has consumption of IT again and I am not these are very weak correlations that you are trying to do, because I have not done them and what does it do to wealth concentration yeah.

So, initial feelers, but that the there are more empirical works which suggest that the current way in which IT is being produced and consumed is not leading to the kind of development priorities, we have set for ourselves as a global community or as a nation.

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Yeah the current global production system including of digital technology products is highly skewed towards the wealthy both individuals and nations yeah. So, that what is that the tool, but will come back to that once we bring everything together.

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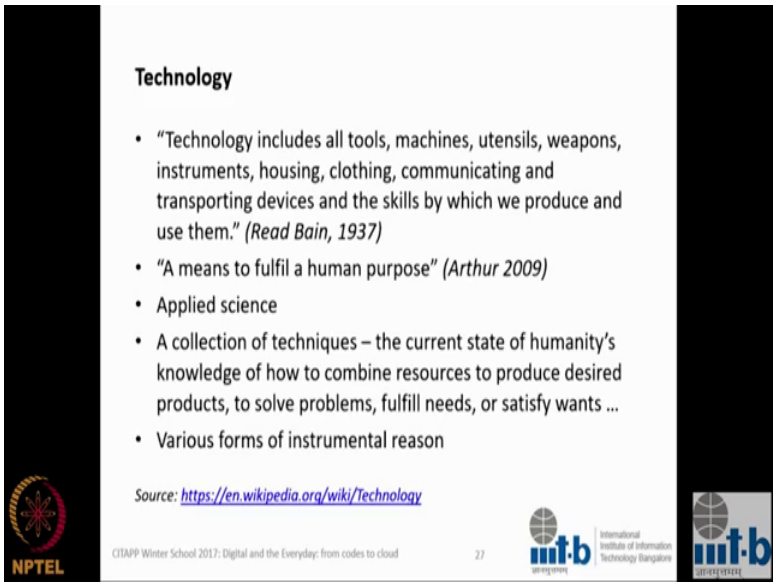

Some perspectives on technology design will not get into technology because this has been discussed, but we were referring I think by now you are more or less in agreement with what you are trying to see.

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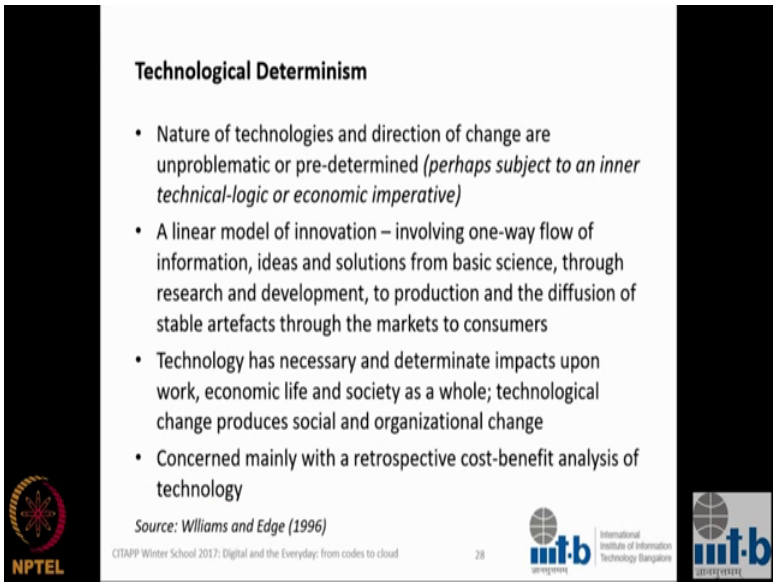

Now, within when the; we look at technology, there is one strand of the entire technology studies with says that technology is deterministic yeah. When we say it is deterministic we say that it is evolution is deterministic it is going to. So, artificial intelligence is going to take over the world that is a deterministic claim yeah. When we say that jobs are going

to go away, these are deterministic claims yeah. Unless we qualified for the artificial intelligence of this form applied in this context is going to say make these kinds of jobs redundant unless we get into the block black box of that statement deconstructed. So, that we have opportunities to analyze what could be the various choices that can be exercised, we are making highly deterministic claims about technology evolution, technology designs and this is this is gains significance in the case of digital technologies, largely because of something that has more or less stood the test of time over the last 50 years and what is that?

Student: Moores law.

Moores law. So, Moores law has some Moore Gordon Moore was one of the initial chip inventors and he had suggested something on what will happen to computing power in the world at that has more or less stood the test of time. And the because of that there is an increasing say or something like that has been appropriated by a lot of other technology designers, vendors to suggest that there is an inherent logic to how technology is advanced and there the other people have to consume it, they have to they just have it is not a question of whether it is a question of when yeah. So, so that is the kind of arguments that come out of this brand of looking at technology.

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But then apart from that I am because it has not found to hold for a lot of other contacts, there is this way of looking at technology which is which is called social shaping of

technology, and the desire is that will democratise technology, will free it of some of these claims that are being made often by those who have are those who are at a higher position of power in the entire technology value chain yeah. And because they do not want to subject themselves to scrutiny dev take deterministic claims yeah.

So, when IBM or Google or Microsoft makes those claims, yeah they are at a higher level in the value chain. They do not there algorithms to be subject to scrutiny by a village accountant in Tumkur yeah or buy a property buyer in Bangalore and therefore, they want to make claims like that and does not need to democratise technology yeah and when we say democratic technology, we say at least you should be able to understand what is going inside. So, the algorithms we should be able to understand what has gone into building that algorithm, what is gone what kind of data has gone into training a particular a I application etcetera yeah and that is where it is coming from. So, it says how does social institutional, economic and cultural factors shape? The direction as well as the rate of innovation the form of technology and the outcomes of technological change yeah.

So, this is saying that oh it is not a black box yeah. There are choices that are exercised by people while developing design technologies, and those choices should be made known to more and more people who are to be affected by consuming that technology yeah. So, where does all of this bring us to?

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The last one technologies we are increasingly realising as students of technology, that technologies can be socially shift yeah. And even in case of our PDS example in case of or other examples, we did see that depending on what is a value in that social context a particular choice can be made about technologies yeah. So, it can be socially shift this we have not come to just forget the middle portion this one.

The existing approach to designing digital technologies for used by the Indian state demonstrates elements of a lead capture. Yeah some of you who are looking at development studies etcetera, I am sure you would have come across this term. The existing attempt is trying to demonstrate that, when it says that all the village accountant are more corrupt, when it says that the fair price shop owners are the most inefficient yeah.

So, when it makes those kinds of claims, yeah there is a reflection of the elite in Delhi in Bangalore yeah the more educated not only within the government, but also some of these supporters of the current state in the corporate in the academy all of that yeah they are coming together and trying to influence, what kind of technology design should happen in this case yeah.

So, what should do we do? I am sorry I could not change this part technologies can be shaped and the current atoms a leading to a lead capture. So, what should we do? And we also saw that in that ditto that the existing production logic of digital technologies is create is making the rich richer individuals as well as nations and so, all the countries which are not as rich like us, we still have while we are producing a not consuming as much and maybe some of the reasons for our on the malnutrition, education concerns are not taken care of yeah. So, what should we do? What should we do in terms of a technology designs? So, will go to economics; so we should go to other we should look for look up to other disciplines.

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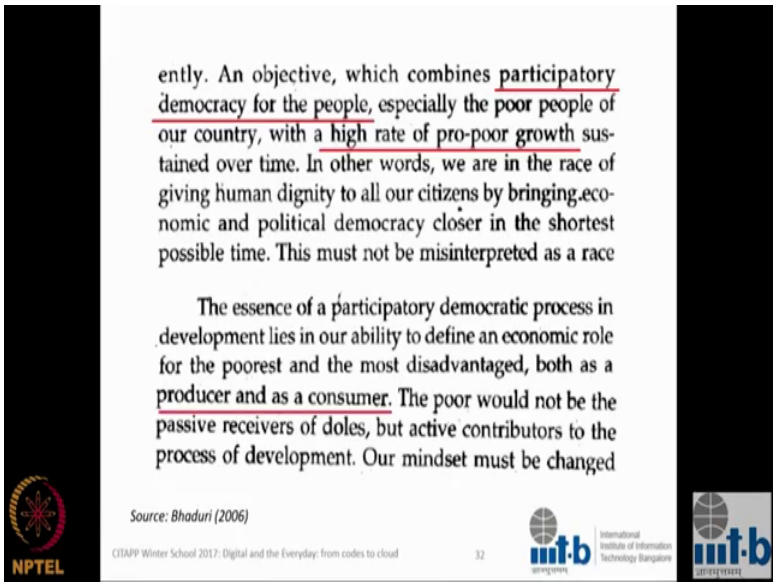

So, Amit Bhaduri is a development economist and this is what he has to say. An objective which combines participatory democracy for the people especially the poor people of our country with a high rate of pro poor growth, that is what the prime minister was saying participation of the people this is what are 12th plan was saying high inclusive growth yeah. So, when we have to combine participatory democracy for the people, when we have to get more and more people participate into our governance and technology design decisions, while we also want a high rate of pro poor growth to be sustained over time yeah we are and that is what we want to do yeah through our technology designs yeah as a nation, as a community. Anyone who does not want to do this? We do yeah more or less. Now given that what is it that we should be doing? The essence lies in our ability to define an economic role for the poorest and the most disadvantaged both as a producer and a consumer yeah.

So, we want them not only to consume. So, we should not be looking at them only from CK Prahalad bottom of the pyramid consumer say perspective, but we also need to bring them or make them producers and participate in the growth process yeah. The poor would not be passive receivers of those, but active contributors to the process of development yeah. So, that is something that Amit Bhaduri says. And I feel that this is this could be one of the ways we can adopt when we are designing technologies yeah.

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So, if digital technologies were to play a role in achieving the Indian states agenda of development and good governance, and SDG is in general in India and across the world some tall claims is what I am making here.

But I think it is at the at least it triggered some discussion; I hope I will be countered by some of you here. The design approach and production logic will have to change yeah. Production logic today is highly skewed it has to change and it has to change to include more and more people in the production value chain. Designs will have to be more appreciative of local context peoples their needs and their rights and entitlements yeah and maybe shift towards something what the situation was talking about co-creation, participatory design teams, going back to notions of appropriate technology yeah that could possibly be a way to go yeah do we have any presidents? Yes we do.

Student: (Refer Time: 30:12).

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We had something like this about 100 years back yes I expect some forunce and some strong arguments against using this.

Student: (Refer Time: 30:28).

Yes.

Student: (Refer Time: 30:31) some of asking even know (Refer Time: 30:3).

But, but this was a very powerful technology that was employed about 100 years back and that hurt and that went beyond and that that I feel incorporated some of the elements that we talked about later, yeah and that brought a bottle lot of change in terms of what we wanted to bring about at that point in time yeah. Because we are not at least this is what Gandhiji said it the spirit is service it is not exploitation. Yeah and we want production, he want more and more people to get involved in the production value chain yeah. So, that the skewed values that currently attribute or that currently accrue to people and nations yeah gets distributed more evenly. Because that is what as a community, as a global community, as a nation, as a nation most of us as individuals strive for; we want equity yeah we definitely Janaki was talking about equity we want a fair and just society yeah may not be equal we will we may not a first may want everyone to has the same access to resources but at least social norms and processes to be fair and equitable here

that there has to be something like that yeah. So,. So, this is what I had thank you very much any questions? You can be a run out of time, but any questions yes.

Student: sir (Refer Time: 32:19) production of (Refer Time: 32:21) design and cost rate (Refer Time: 32:27).

Student: (Refer Time: 32:28). So, (Refer Time: 32:32) actually, but take in front there are infrastructure required or literacy (Refer Time: 32:36) really mean, but taking the same kind of a proportion (Refer Time: 32:46) such infrastructure and (Refer Time: 32:48).

. So, the competition was with a similar kind of what is on at that point in time yeah at that point in time in Manchester you had big meals, yeah you had steam you had everything else there. Now at that point in time a similar question would have I am sure come to a lot of people, can we actually compete is that the only or an a deterministic approach would say oh that is the way to go.

There power looms, their big factories, this is a production system in that the way to go, but then when you had socio political economic cultural answer, which was which was put together it was it was not a pure say technology solution, yeah it was a it was all encompassing contextual approach that was suggested, you were able to find something like a charkha. You may be able to find something like a charkha equivalent today. In fact, is a very interesting book again it draws a lot from some of the Gandhi some of Gandhi's and other Buddhist thoughts which is book by Schumacher it is called small is beautiful yeah.

So, I will I will suggest you go through go through what Schumacher's says yeah. So, that again suggest that when your looking at technology design, yeah you should consider some of these factors. yeah Sometimes what happens is we as nations we start to believe that will do well if you behave as a good cooperation yeah and there a lot of differences between what a corporation is about what a profit making enterprises about and what the nation is about for an. So, one of the basic differences they show a wages yeah for a corporation profit making enterprise wages is cost, that is not true for the nation. We want more and more people to be employed to be paid better yeah for national economy to do well, we do not we do not look at wages as a nation as cost.

But as a profit making enterprise, we will look at wages as cost which has to be minimized. As a nation we would want wages to be maximized yeah. So, sometimes when we break ourselves free from some of these notions of deterministic ways in which societies technologies have to move, we may not be able to look beyond certain aspects, but they come give or not like if it that is to be the concern for us, let us look at certain technology designs which are decentralized now, which factor in the capacity is that exist in local communities and take it forward from there.

This nothing to suggest that knowledge search can only happen through a central database which Google has access to yeah. There can be various ways in which you can search knowledge, you can create knowledge, yeah again there is nothing to suggest empirically, that given all this access to information the knowledge creation process in the world has accelerated. And when I say knowledge I do not say patents and say those. (Refer Time: 36:08) I say knowledge in the sense that it leads to making certain changes in the way, people live that probably has not yeah. So, we need to question.

Student: Sir one question (Refer Time: 36:25) question on (Refer Time: 36:28) of the state. So, right now with all the advances that are happening in (Refer Time: 36:33) and machine learning etcetera. So, you have scenario that a lot of (Refer Time: 36:36) banking (Refer Time: 36:38) in the categories of (Refer Time: 36:42) to be eliminated the question has just is there whole for the state (Refer Time: 36:50) let the market (Refer Time: 36:55) who want to do and let those people (Refer Time: 37:00) want to do because the (Refer Time: 37:02) Google, Facebook amazon who have an outside impact who have more power information some cases (Refer Time: 37:09).

So, the state has role to play yes the state has a role to play and when people say that these this is what is going to happen, we need to and that is what I was referring to earlier. When these claims are being made we have to sit back and try to understand who is making these claims. Yeah is Google making this claim, how much should be considered Google as a valid upholder of human dignity and development the way we would want it to be? if we do then we should listen to them if you do not and if you feel that the Village Panchayat is a better decider what is development, yeah then we should the state should come in to say that no will not listen to you Google, whatever who whatever worth you have in international market, but will listen to this village Panchayat and the village comes that is where the state comes in.

Student: (Refer Time: 38:13) technology randification is that (Refer Time: 38:16).

Yes that is and that is. So, so and many a times these claims are deterministic claims and they are made to ensure that you are you are you are holier than the cow, you are not subject to scrutiny yeah. So, every step back and say ok. So, what is this what we want to do you want to people to have jobs? If you want that as a valid development priority, will just notthere will be a regulation which will say anything any technology which takes away a job in this way you are not going to support. And as a regulator you say I will have 200 percent tax on that. You do not give export promotion benefits if you feel that your software exports is leading to longer term deterioration in the skills, in the innovative skills of your industry yeah.

So, there is a lot of ways in which the state comes in, because what the state can look at private profit making corporations cannot and one of the examples I do not know you were here or not was that, something as simple as wages is cost for a corporation is investment for the nation yeah ok.

Thank you very much.