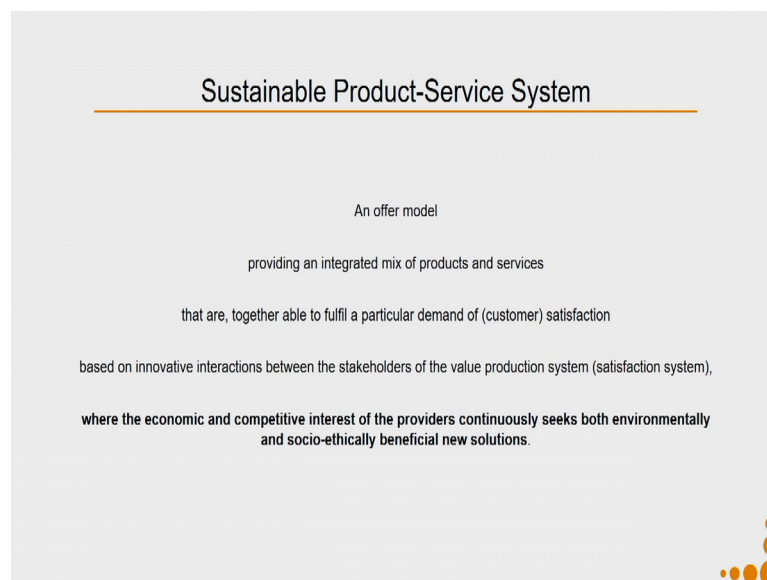


System Design for Sustainability
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Week – 05
Lecture - 04
Khadi Movement as a Precursor to PSS thinking

Hello everyone. So, today's lecture will be about the Khadi Movement and we will see how the Khadi Movement can be seen as a precursor to PSS thinking. So, we just got introduced ourselves to what PSS thinking is and what S PSS, thinking is that a Sustainable Product Service System design.

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So, before we analyze the components of Khadi Movement and see it is link to PSS thinking as well as sustainability. Let us do a quick recap of the definitions of sustainable product service system design and what do we considered as, the economic social and environmental dimension, in terms of sustainability to achieve a sustainable product service system. Then we can create a parallel between the Khadi Movement and what we are trying to discuss over here, the sustainable PSS model.

So, a sustainable product service system is an offer model providing an integrated mix of products and services that are together able to fulfill a particular demand of customer satisfaction. Based on innovative interactions between the stakeholders of the value

production system which we also call as the satisfaction system, where the economic and competitive interest of the providers, continuously seeks both environmentally and socio ethically beneficial new solutions.

So, in this particular definition we learn that it is in the economic interest, of the stakeholders, the providers, to be environmentally, socio ethically beneficial. We saw examples, like providing the water services by Sarvajal, was an example of a sustainable product service system. We also discussed, about empower, which was talking about sustainable PSS, in terms of solar energy along with the bulb, socket and the mobile charging unit. All of them are available as part of the whole package. The, customer does not need to own any of these. They can pay on, the basis of per unit of consumption.

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When a PSS is Socio-ethical?

When the offer model is such as, it is in the **economic interest** of the providers to make opportunities **accessible to poor and middle income contexts**.

This can be done in the following ways:

- Improve employment/working conditions
- Improve equity and justice in relation to stakeholders
- Enable a responsible/sustainable consumption
- Favour/integrate the weaker and marginalised
- Improve social cohesion
- Empower/enhance local resources

So, when is a PSS as socio ethically sustainable? 1, when the offer model is such as, it is in the economic interest of the providers to make opportunity accessible to poor and middle-income context as well. It does not mean that a sustainable PSS is meant only for poor or middle-income, people. It is meant for everyone. It can be designed for anybody and everybody. But, for it to have the socio ethical sustainability dimension, one aspect is that, how do we design the offer model in which the economic interest of the providers is to make opportunities accessible to poor as well as middle income context which would have otherwise not been possible.

Also, it advocates following certain other, aspects like, improve employment and or working conditions, improve equity and justice in relation to stakeholders, enable a responsible or sustainable consumption, favor or integrate the weaker and the marginalized, improve social cohesion and empower or enhance local resources.

When, we start discussing about the design methodology, which we call as MSDS methodology for designing for a sustainable PSS. You will know that each of these aspects, they have different degrees of importance in our different priorities that we can say, depending on the design context in head. As well as, they can be certain aspects which are not applicable. So, we give 0 priority to that, but overall these are the aspects which needs to be considered in order to give a sustainable socio ethical dimension to a PSS.

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When a PSS is Eco-Efficient?

When the offer model is such as to **decouple the economic interests from resource consumption** and in general from **environmental impact increase**. [Vezzoli, et. al. 2014]

This can be done in the following ways:

- System life optimisation
- Transportation/ distribution reduction
- Resource Reduction
- Waste Minimisation/ Valorisation
- Conservation/ Biocompatibility
- Toxicity Reduction

Now, what is the eco efficient dimension? So, when the offer model is such as to decouple the economic interest from resource consumption. So, economic interest is not based on how much resources are consumed, but in and in general, from environmental impact increase.

So, like we saw in the example of Kluber. So, economic interest was not about selling more and more of the lubricants, but the economic interest was decoupled from resource consumption. So, the service component added to the Kluber lubricants, give us the

possibility to have good economic interest. So, the company crystal makes or make more money out of the whole, PSS combination.

Hence, economic interest, in this case was decoupled from resource consumption and environmental impact increase. This can be done by say for example, system life optimization transportation distribution reduction, resource reduction, waste minimization or valorization, conservation or biocompatibility and toxicity reduction. Again, when we go into the MSDS methodology, we will see how depending on different contexts we will assign different weightages to each of these different parameters which makes a PSS eco-efficient.

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This aspect, we have not discussed in our previous lectures on what is sustainable PSS, because a sustainable PSS definition came as, like in the economic interest the providers try to offer socially and environmentally sustainable solution. So, the parameters to consider for economic sustainability of a PSS are: what is the kind of market positioning or competitiveness.

So, you have to place it in a manner, that it offers you a good market position and competitiveness can be avoided. So, say for example, the Sarvajal example or say the example, of the, empower or say the Kluber services they inherently have the potential to, give you a better market position as compared to your competitors. Why? Because, you placed in a good service component and usually it takes much longer time to

establish the entire service network than to just provide the product only. So, PSS inherently has a better keep a possibility to offer a good market position and in a better degree of competitiveness, but you have to also see that in your design that is possible.

Profitability or the added value for the companies has to be checked upon. You have to check, the added value for the customers, because the customers are going to buy it. Why should they buy a more expensive way of drinking clean water or why should they buy a more expensive way of travelling from point a to b? They will not opt for that option in case, it is more expensive for as compared to the current solution. They might accept something which is equally expensive or something, which is like say a little expensive but there, should be enough value associated to make that expenditure. So, that is why we are talking about added value for customers. So, say for example, when I can have an app on my mobile and using which I can call for a taxi with a driver whenever, I require that particular service; it adds on convenience.

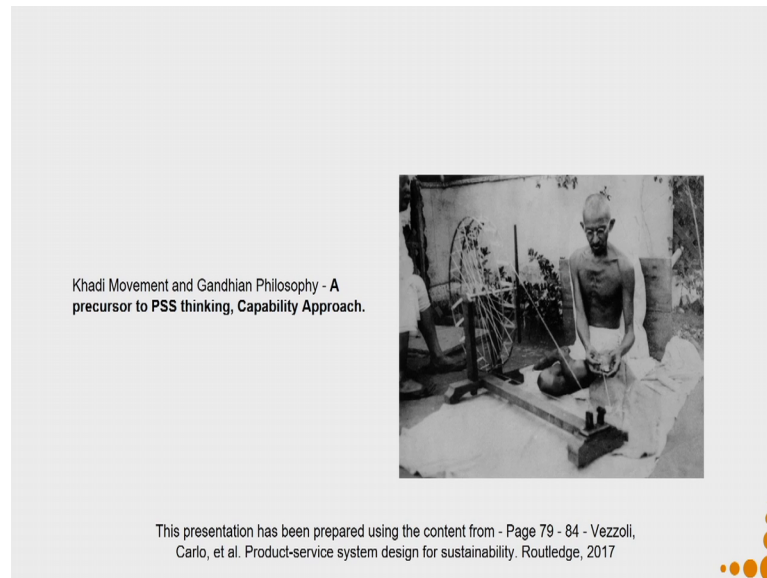
At the same time, I know, because I do not travel so much, I really do not need to own a vehicle. I do not need to bother about maintaining my vehicle, fueling my vehicle or learning to drive and so many things. So, these particular service add those values to a customer. So, all those customers, who will think that is a good value for them they would like to opt for that kind of service. So, added value for customers.

Then comes, long term business development risk, because a S PSS requires huge amount of investment, in terms of setting up the service infrastructure as well. So, one has to consider what are the long-term business development and or listen what and the sustainability in those terms. Then, what are the possible partnerships and corporations are their unsustainability, is involved in those partnerships or corporations. Say for example, if I am a company which places myself as a sustainable PSS company, but the product part of my offering is being manufactured in a factory by using, child labor.

So, in that particular context, there is an unsustainability, social unsustainability involved because of one of my partners who is producing the product part of it is involved in unsustainable socio ethical practices. So, that is again disrupts the sustainability of your entire S PSS. So, we have to also consider the sustainability of the partnerships and the corporations that we engage in to provide the S PSS.

Then, we have to also talk about, try to understand the macroeconomic effects which means, the overall national level economics or the global economics that trends and directions and in the light of that is my current S PSS solutions a sustainable solution or not. So, we will discuss more about the sub parameters under each of these categories when we get into discussing the MSDS methodology.

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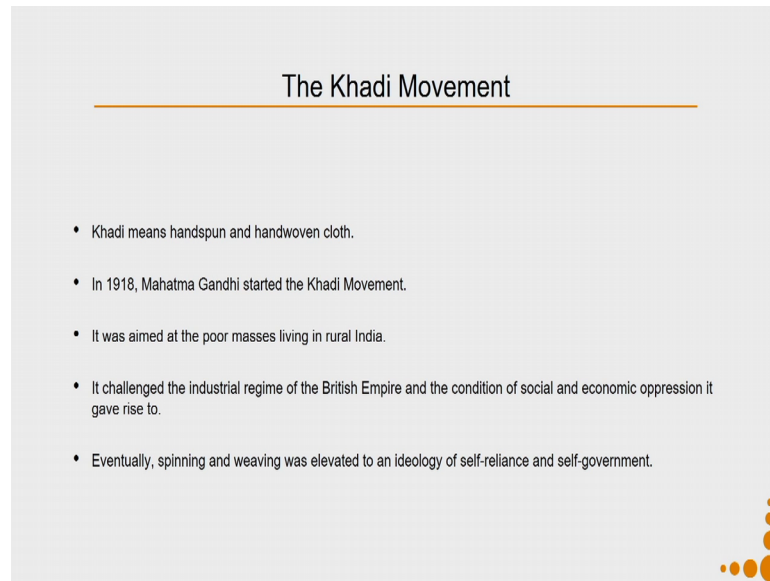


Now, let us try to understand, the Khadi Movement and the Gandhian Philosophy has why it is been called as a precursor to the modern-day PSS thinking? It is also a precursor to the capability approach. It is also a precursor to corporate social responsibility approach. So, if you know what corporate social responsibility is.

So, each and every company is because they are making certain kind of money by using the resources the natural resources the human resources and so on. So, it is suggested that the also get involved, into certain kind of responsibility. So, corporate social responsibility under which they are supposed to do activities which will, at large help in the improvement or the progress of the society.

So, the this particular lecture that we are talking about this entire presentation has been prepared using the content from the products service system, design for sustainability book. So, let us go ahead and see first we will discuss about the movement and then we will discuss about the different components and create a relationship between PSS and sustainability.

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The Khadi Movement

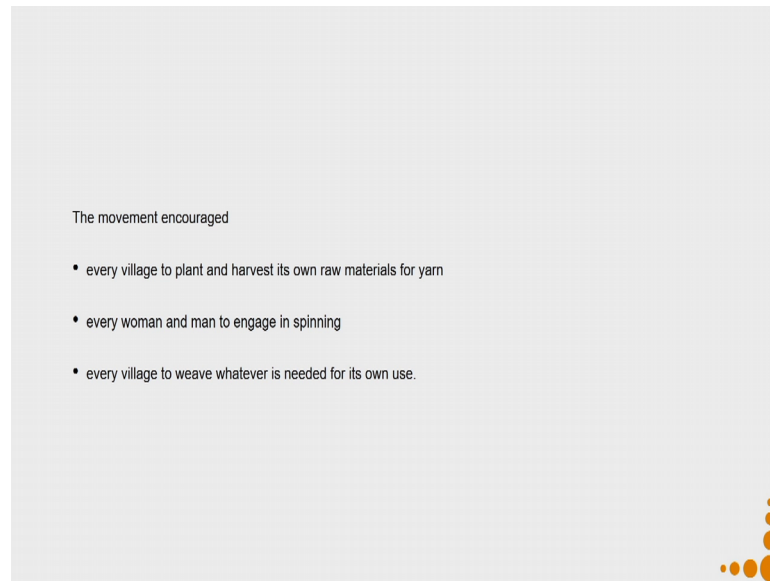
- Khadi means handspun and handwoven cloth.
- In 1918, Mahatma Gandhi started the Khadi Movement.
- It was aimed at the poor masses living in rural India.
- It challenged the industrial regime of the British Empire and the condition of social and economic oppression it gave rise to.
- Eventually, spinning and weaving was elevated to an ideology of self-reliance and self-government.

So, the Khadi Movement so, Khadi means handspun and hand-woven cloth. Mostly, it is in the context of cotton, but it can also have, a certain amount of silk, in into it. As well, but the Khadi Movement, as we know, is mostly about handspun and hand-woven cotton cloth. So, in 1981 sorry 1918, Mahatma Gandhi started the Khadi Movement. It was aimed at the poor masses living in rural India. It challenges the industrial regime of the British Empire and the conditions of social and economic operation, it gave rise to but slowly spinning and weaving was elevated to an ideology of self-reliance of self-government.

So, although it started with an aim, that the poor mass is living in rural India were suffering, because they had to buy more expensive garments from the British Empire and the raw material, cheaper raw material which was being produced by them was taken away to the, British empire for production of these clothe. So, initially it started as a movement in which the poor masses living in rural India, can, be, generate their own clothe. They can produce their, the raw material and generate their own cloth.

But, eventually as the, movement progressed, it was elevated, just merely from spinning and weaving as activities to an ideology of self-reliance, that I am not dependent on anybody else. Me (Refer time: 14.26) as a r society, me as an entire village we are self-relined and eventually into self-government.

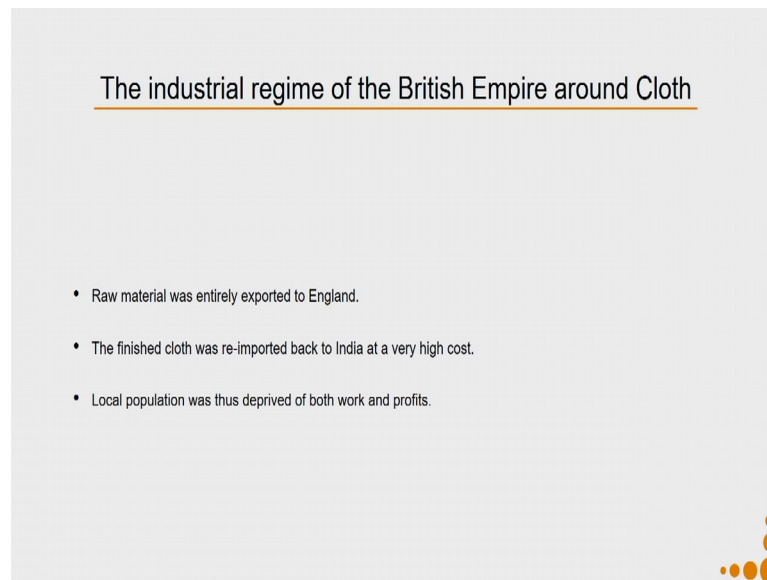
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So, the movement encourage, that every village should plant and harvest its own raw materials for yarn. That was also a time when almost when very large population of the country, lived in the rural areas only and their major, economic activity is agriculture. So, the movement first before initiating the movement there was lot of study done to understand the society, understand the economic activities and the movement was put into place. So, every village plants and village harvest its own raw material for yarn. Every woman and man should engage in spinning. Every village to we whatever is needed for its own use.

So, you can see every village to weave. So, now, it does not say every person has to be what he or she needs. It is like as a village, as a community you full fill the requirements of the whole community, which means it does not say, that you cannot trade between your own, sell between your with your neighbors and so on. So, the aim was every village should become self-relined so, the each village as a self-sufficient entity.

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The industrial regime of the British Empire around Cloth

- Raw material was entirely exported to England.
- The finished cloth was re-imported back to India at a very high cost.
- Local population was thus deprived of both work and profits.

Now, let us, talk about the industrial regime of the British Empire around cloth. So, the raw material the cotton was which was grown in India was entirely exported to England and because its raw materials. So, the amount of money received by selling of that was very very less. So, the people of the country made, who did the farmers, who are engaged into raw material production made very less money. The finished cloth was which was made into finished cloth by using the machines in England were reimported back to India at a very high cost.

So, the local population was thus deprived of both works. So, if the mills were located in India, then that would have given the possibility of some work being generated. Also, because of the mill the entire traditional weaving industry was destroyed. So, that is why deprived of both work and as well as the profits, because all the profits of the cloth went to, the British Empire.

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- In 1934-35, Mahatma Gandhi expanded the idea from helping the poor individual to self-reliance of whole villages.
- In 1942-43, he had sessions with workers' groups and village organisers as the whole program was expanded to a nation-wide scale.
- In order to elevate the importance of physical labour and to bridge the divide between the rich and the poor, he asked all, irrespective of need, to spin for at least an hour per day - as sacrifice to the country and duty towards the poor.

So, that is how, the Khadi Movement got introduced in 1934-35. Mahatma Gandhi expanded the idea from helping the poor individual to self-reliance of whole villages. So, you can see that the whole movement progress slowly. See if you remember the, video that we discussed about Warnapura that was also something similar in these lines. So, go and make your own community self-relined.

So, the visionary inspired by this kind of a thought process, went back to, his community and try to understand: what does my community need. So, he realizes that his community strength was in sugarcane production. So, what I have to do is industrialize the processing of sugar cane into making something which is more high value, that is sugar which also adds gives long shelf life to the product and thereby I can bring in self-reliance of my own community and thereby that that initiative kept on increasing, keeping in mind the self-reliance perspective.

In 1942-43, he had sessions with workers groups and village organizers as the whole program was expanded to a nationwide scale. So, the whole movement took many years and slowly it graduated from being something which was to help in poor individuals to self-reliance of the whole villages and then finally, expanded to a national nationwide scale; so, in order to elevate the importance of physical labor.

So, here in this particular context what was Mahatma Gandhi's vision was physical labor is very very important and everybody should do physical labor. In our country we also

had, status of a person is also dependent on the, type and amount of physical labor put in. So, the physical labor can also lead to a divide between the rich and the poor, because the poor have to put more physical labor and the rich has to put lesser physical labor. But, to get the whole country together, the aim was to elevate the importance of physical labor, which can intern bridge the divide between the rich and the poor.

So, he asked all irrespective of need, to spend for at least an hour per day, as sacrifice to the country and duty towards the poor. This is where the concept of service comes into picture, service to your nation; service to your country men.

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The PSS thinking

- Serving the **poorest person's needs and satisfactions** through promoting **local manufacture** was the key to achieving **freedom**.
- The mass protest it raised against British imperialism was simultaneously **questioning the entire product design thinking behind industrial manufacture**.
- The local, systems approach to **social change by locating 'design' of products within the community (and not in research labs) by using**
- appropriate and intermediate technology tools, methods and processes
- **knowledge as common property, embedded in the society**
- production of goods through large-scale people's participation.

Now, let us talk about the PSS thinking involved. So, serving the, poorest persons needs and satisfactions through promoting, local manufacture was the key to achieving freedom. So, here you can see I am talking about needs and satisfactions. So, we already, learn that the whole PSS approach is based on trying to identify the satisfaction unit.

So, this, need was not, industry made clothes, the need was closing. Now so, the satisfaction was in clothing. So, when you realize, the satisfaction is not clothing the satisfaction is not being self-reliant satisfaction is being a in able to generate income for oneself or being self-reliant as a group. So, this needs satisfactions by promoting local manufacture was the key to the achieving this particular, freedom.

So, the mass protest it raised against British imperialism was simultaneously questioning, the entire product design thinking behind industrial manufacture. So, what was product design thinking behind industrial manufacture at that time produce a central in a centrally located industries, which were also very polluting in nature and they sell it off.

So, whereas, the existing way, before those industrial manufacturing of cloth came, was, production at every body's house home, for self-consumption of production in local centers by using, technology which were way much more cleaner. So, if as a whole thought process, if you look at the Khadi Movement it is also questioning, the product design thinking behind industrial manufacture. You can see, that the same product design thinking when we were trying to discuss about the sustainability evolution., how the whole concept came;, because we realize, we have damaged our environment.

That hole, journey is caused due to this product design thinking, behind industrial manufacturing, that I need to increase consumption. People has to consume more and more and I can produce without giving any consideration to the environmental impact and the socially Impact. The local or systems approach so, P S the P the Khadi Movements thinking was about local approach; so, your manufacturer locally for local consumption. It also had a system driven approach, why, because you are considering many different aspects. So, you have to grow the cotton, grow the raw materials, you have to have spinning, you have to have waving and you have to as a group be able to satisfy each other, requirements.

When we go into for the agriculture model and the, business model, which was being, prescribed so, you can see more and more the systems approach is coming into the limelight. So, the local and the systems approach to social change by locating, design of products within the community and not in research labs. So, a main thinking why we call it as like a precursor of PSS thinking was because, it realizes that the social change can be achieved by designing the products within the community. When we start discussing the MSDS methodology, you will see, a lot of stress is given on this particular aspect. Design it along with your stakeholders. These stakeholders may be the entire producer group, along with the consumer group.

So, bringing in a social change or bring in the sustainability by locating design a product within the community. How do we do that; in order to do that, by using appropriate and

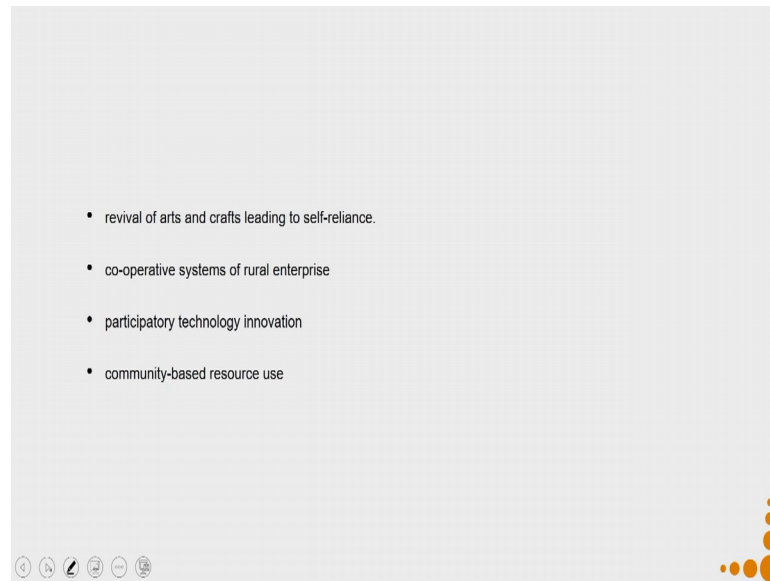
intermediate technology tools methods and processes. So, as soon as I say appropriate it already means that I have to study the context in. It might be a small scale farming situation, it might be a large-scale farming situation, it might be a medium scale farming situation. It might be a rural location, it might be a semi urban location, it might be, located in the hills, it might be located in the plains.

So, depending on the context, I have to look at appropriate technology tools methods and processes. I have to also sometimes go for intermediate. So, although I can set a vision for 20 years, where in it will go ahead with certain progresses, but in between I might have to bring certain intermediate technology tools methods and processes, which are more appropriate, under the given context. Then, knowledge as common property and embedded in the society. So, why this so, in order to locate your designer products and so, products and services within the community, you have to consider knowledge, as a common property in its embedded in the society which when you are using it, you there will be certain knowledge partners. So, they are providing you the service in this particular context of knowledge.

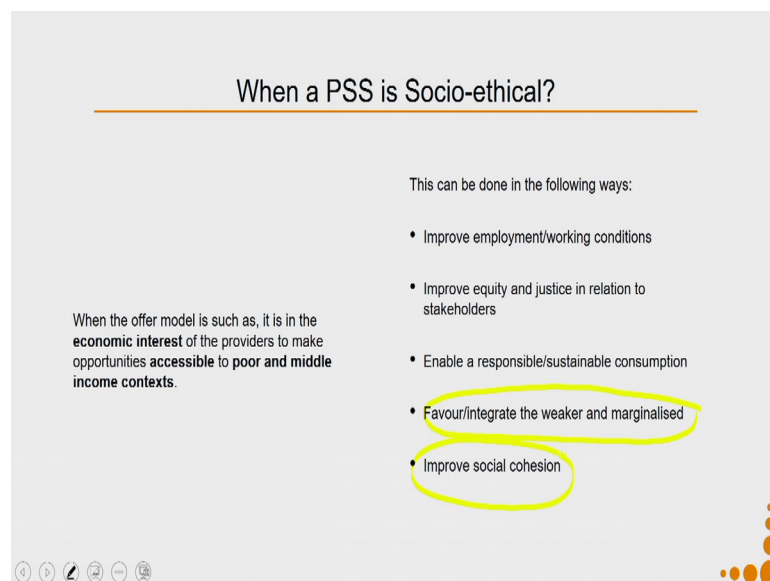
Then production of goods through large scale peoples participation. This was another approach which was used in Khadi Movement. Every individual was asked to contribute towards it if were the irrespective of your gender irrespective of your income, irrespective of your location. So, production of goods through large scale people's participation, products service system design also follows same kind of a principal. Say for example, when I am talking about the empower, the, solar, power based, PSS service. it.

It involves lot of stakeholders, who need to be brought in together. So, somebody will be, having a franchise, local franchise to sell those, hardware components. There will be others who will have to a large network, of repair individual has to be set up, the consumers. They are actually no longer absolute consumers, because they are the producer plus consumer. You are producing, your own electricity. So, the production of goods sold large scale people's participation was part of Khadi Movement, which is also regarded as a PSS thinking which is broaden.

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Then it was based on revival of arts and crafts leading to self-reliance. So, we will go to when a PSS socio ethical. So, we again come back to this particular slide. When the offer model is such as it is in the economic interest of the providers to make opportunities, accessible to poor and middle-income context. So, that is how, the PSS in today's context has been defined.

Now, let us try to bring in parallels with the Khadi Movement. The whole aim of the movement was, that clothing should be made accessible to the poor and middle-income

context, everybody and for people to engage into the whole activity of producing their clothes for themselves was in their economic interest. So, sustainable being socio ethical is sustainable over they, became very much in the economic interest of peoples.

You can see the parallels. Again the, there are certain issues, over here, you might not see like exact parallels. The aim of this lecture is not to bringing exact parallels, what we are trying to say is that; that was a precursor to the PSS thinking in a model and it is also very applicable model in Indian context till now. Examples of that are a Warnapura, which we have already discussed or the Amul, as a model you can also look up Lijjat papad as a model.

There are many such business models, which are following similar philosophy and they come under this sustainable PSS category and a very suitable for the Indian context. So, let us see, we were talking about improve m employment of working conditions. We were talking about equity and justice in relation to stakeholders. It should help to improve that. As I describe to you the Khadi Movement, you can see it is all about improving equity and justice in relation to stakeholders, enable a responsible and sustainable consumption. It favors or integrates the weaker and the marginalized, it has the potential to improve social cohesion, it empowers and enhances local resources.

You can see all make so much meaning right now when we again go back to this slide. So, let us complete this whole list. So, revival of arts and crafts leading to self-reliance, was what the Khadi Movement could bring in the inherent way of living in rural areas, was a cooperative system. So, people in villages even in those times and even in today's times they work in close cooperation with each other. So, this particular aspect was taken into, the design of the Khadi Movement.

So, the village as whole was supposed to become self-reliant so, which does not really imply that each and every person has to engage in production of raw materials. As well as, weaving and spinning all the entire gamut, division of labor was possible. So, together they as a village, they are supposed to meet their own requirements; so, cooperative system of rural enterprise. Participatory technology innovation, again, how it helps is, because when the entire society entire community participates to do technological innovation, there is a better integration, better social cohesion. There is

cognitive equity which is being built up. They were using community-based resources so, it again.

So, in S PSS we discuss, that, S PSS want to shift the way of, consumption away from ownership. So, you consume, but you do not own. So, we are not all of us own one-one washing machine, one-one car which we are using for very small time, but we are still able to consume the services, offered by a washing machine or by a car. So, community-based resource use so, that we can have better optimization, in terms of the environmental footprint. Also, there because of this way of consumption, we can lower down the price as a result we can make up, PSS together more affordable, more accessible, as a result to the poor or the middle-income context.

So, even when you see, when I talk about fever or integrate the weaker and the marginalized in this particular context when my entire community or through peoples participation technological innovation is brought in, what it is trying to integrate, is it gives it sends out a message that the poor or the community is not weak. But they are very powerful, very strong in terms of their contribution that they can make towards the upliftment of the entire society as a whole.

When, we were talking about that all weather poor or rich everybody was, encouraged to practice at least one hour of weaving and spinning each day. That was meant to reduce the divide, between the poor and the rich. So, improve social cohesion in that particular manner.

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When a PSS is Eco-Efficient?

This can be done in the following ways:

- System life optimisation
- Transportation/ distribution reduction
- Resource Reduction
- Waste Minimisation/ Valorisation
- Conservation/ Biocompatibility
- Toxicity Reduction

When the offer model is such as to **decouple the economic interests from resource consumption** and in general from **environmental impact increase**. [Vezzoli, et. al. 2014]

Now, let us check out what are the eco efficiencies in this particular way. So, when we were talking about when the often model suggest to decouple the economic interest from resource consumption and in general from environmental impact increase. So, as soon as you want to have your own clothing, which is woven or span by you and no longer produced in England in very polluting manner and travels all the way, using ships which are also very polluting in nature to the length and breadth of the country. So, here in this particular context I am to certain extend bringing in reducing the environmental impact I am also able to, reduce the amount of economic resources which is being consumed from the people side.

How am I bringing system life optimization in this case? So, say for example, when, I am talking about that the entire village is supposed to, produce in a manner that as a village they can get self reliance in terms of clothing. So, I am talking about system life optimization, as village as a unit. Transportation and distribution reduction of course, happens in this case. There is lot of resource reduction, because I no longer read need all the coal which is required to run the industries producing the cloth or the ships which will carry the cloth. There is lost a lot of waste minimization and valorization.

There is lot of toxicity reduction also, because most of these garments which will be produced by people themselves they will be dyed using natural dyes rather than using chemical dyes which are highly toxic in nature

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The Agricultural Model of Khadi

- The khaki cloth movement did not see itself as a competition to the British industrial cloth.
- It was rather conceived as an enterprise which is close to the agricultural production.
- It was a more sustainable alternative to industrial cloth making.
- It was close to the rural society's way of living.
- It had the potential to recover India's wealth and bring in subsequent economic freedom from British rule.
- All this was to be achieved by targeting the villager's need, satisfactions and capacities.
- It created the bridge between the agriculture, rural society and the Indian industry.

Now, let us look at the agricultural model of Khadi. So, you might be wondering, whether khadi was introduced as a competitor to British industrial cloth. So, the Khadi Movement's aim was not to compete it, against the British industrial cloth. The quality of that cloth, the price of that cloth, the quality of khadi, the price of khadi they were nowhere in competition with each other. So, the whole concept of khadi was not in competition to British industrial cloth.

It was rather conceived as an enterprise which is close to the agricultural production. So, because most of India was agrarian in nature; so, like as in PSS we try to understand what are the social aspects or rather economic aspects or the environmental aspects of the consumer that we are trying to target and create an appropriate, PSS offering for them.

So, in similarly in the khadi model it was realized that, India is basically agrarian and the whole Khadi Movement was placed, very close to the agricultural production, why so, because you are producing your own raw materials and then you are weaving your own clothes. So, it was a way more sustainable alternative to industrial cloth making; why, because it was close to the rural societies' way of living in.

So, what was rural societies way of living they were self-reliant, in terms of production of everything that they consume themselves. So, now, they can produce their own cloth, as well they were mostly agrarian and the cloth industry was very close to the agrarian

society. The rural society was also, used to, work out its own chores in a cooperative manner and the Khadi Movement also emphasized on the same thing. So, it had the potential to recover India's wealth and bring in subsequent economic freedom from British rule of course, because clothing was not supposed to be bought which was a very important aspect at that point of time.

So, all this was to be achieved by targeting the villagers need satisfactions and capabilities. So, like we talk in the PSS model our first aim is to identify the needs and what is the satisfaction unit. So, here you can see again the Khadi model was completely based on, what is the satisfaction unit what is the need what are their cap capacities and capabilities and let us create a model on the basis of that.

So, it created the bridge between agriculture rural society and the Indian industry. How? So, in the Khadi Movement of course, you can see there is production of raw material which is related to agriculture the way of in which rural society lives and it gets connected to the cloth making industry which is right now, in this particular context, it becomes a cottage industry. So, everybody has one weaving spinning unit at their own home.

If you try to see the broader picture of it so, say for example, the context of Amul, which is also a contemporary, follows a contemporary thought process. So, what was the agriculture produce over this. So, it was cow milk or buffalo milk and with the milk the way how the rural society lives cooperative was formed and Amul cooperative was found and then processing of milk started happening in. So, that was an industrial, process.

So, you can see, another model which developed out of it which is combining milk the rural society and the, industry another example the Warnapura. In that particular context it was sugar cane, then sugar manufacturing industry and. So, on the whole pura grew up so, connecting agricultural rural society and Indian industry. Let us say, papad making industry, it again follow something similar one could always make papad in a huge, industry you do not really need to make it in a cooperative wherein you are combining the, wherein, the production happens through people's participation. So, again another enterprise in which you are combining agriculture the rural society or the way in which a society functions and the Indian industry so, there are multitudes of such examples which follow similar model; the idea of service in the khadi model.

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The idea of "service" in the Khadi Model

"What is the kind of *service* that the teeming millions of India most need at the present time, that can be easily understood and appreciated by all, that is easy to perform and will at the same time enable scores of our semi-starved countrymen to live?"

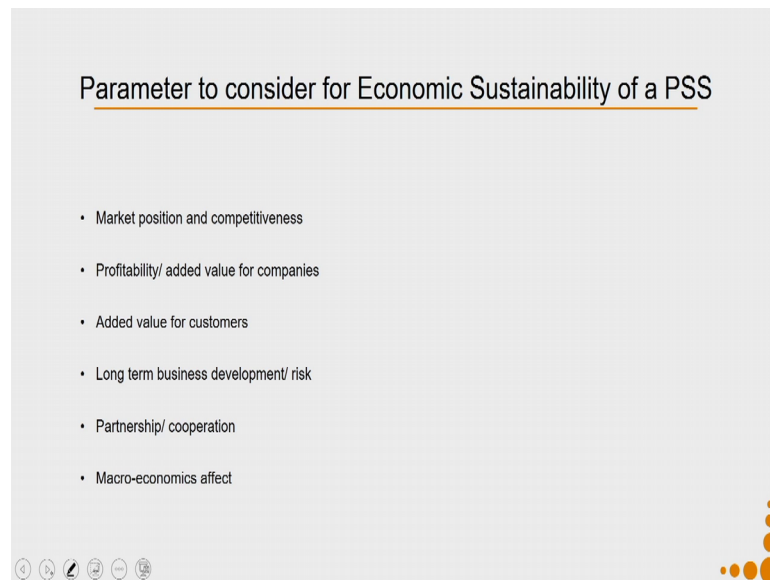
The answer was: "the *universalising* of the spinning wheel"

Mahatma Gandhi, 1932 (from a British Jail)

So, as per Mahatma Gandhi; what is the kind of service? That the teeming millions of India, most need at the present time. That can be easily understood and appreciated by all. That is easy to perform and will at the same time enable scores of our semi start country meant to live.

So, this was the, question which Mahatma Gandhi post to himself and the answer, that he got, for himself was the universalizing of the spinning wheel. So, each and every one spin the wheel as a service to the country as a service to the fellow countrymen so, that was the idea of service in the khadi model. And, what was the product became the cloth itself, the yarn itself all the tools used to produce it; so, parameters to consider for economic sustainability of a PSS.

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Let us try to compare it was it a taking thought about in the Khadi Movement or not. Market position and competitiveness we already discussed not placed in a as a competitive to British industrially produced cloth, but it was the market positioning was that lets position it close to the agricultural model. Because, that is agricultural model the way the rural society was because that is where its market position lies. So, it never had to compete against British main cloth, profitability or added value for the companies.

So, what is the added value for people over here; the idea of service that they are doing the idea of self-reliance that it is bringing in, same for the customers. Long term business development or risk partnership corporations macro-economic effect. So, a large part of the whole movement was design keeping in mind the macro-economic, effect of buying clothes from the British Empire.

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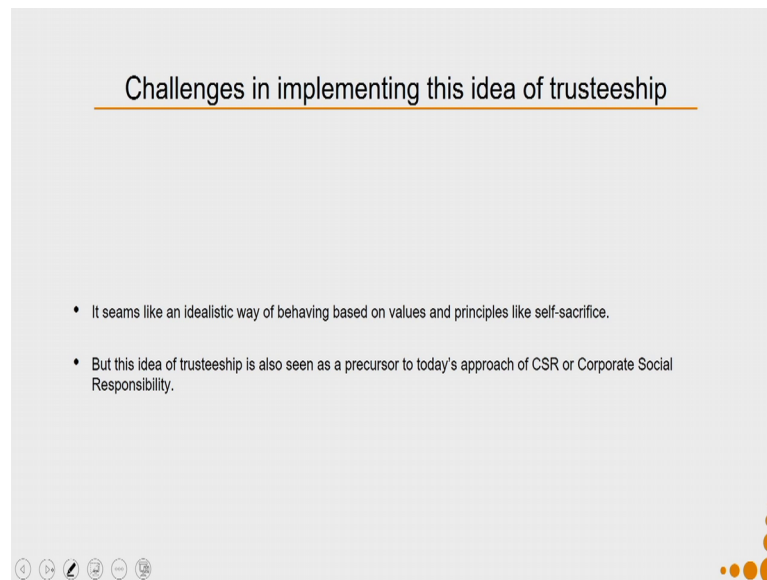
Khadi's Business idea of Trusteeship

- It emphasised the need for creating business and the necessity for the creation of wealth for Free India.
- But the idea of trusteeship was emphasised.
- This implies, that the rich don't truly own their wealth but are only trustees of it.
- Hence they have to manage business profits for the benefit of the community.
- But the concept of trusteeship was not equal to charity or philanthropy.
- It was about equity and sustainable growth.

Another aspect of this particular, Khadi Movement was, khadi is business idea of trusteeship. Let us see, what it means. So, it emphasizes the need for creating business and the necessity for the creation of wealth for free India. So, the Khadi Movement never said that business is bad, neither it discourages business it. In fact, emphasize the need for creating businesses and the necessity for the creation of wealth for free India, because that is a must have, but the idea of trusteeship was emphasized.

So, as we, spoke in the beginning business idea of trusteeship. So, what is it? This implies, that the rich do not truly own their wealth, but are only trustees of it. Hence, they have to manage business profits for the benefit of the community, but the concept of trusteeship was not equal to charity of philanthropy. So, here you can see they have to manage the business profits for the benefit of the community, but not charity or philanthropy. So, the business idea of trusteeship does not imply charity of philanthropy. What it employees; it was about equity and sustainable growth.

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So, let us discuss, what are the challenges and implementing what are the misconceptions and then we will get back into, how the model was discussed, how it aim to operationalize it. So, challenges in implementing the idea of trusteeship is, it seems like an idealistic way of behaving based on, values and principles like self-reliance or that.

So, but this idea of trusteeship is also seen as a precursor to today's approach of CSR or corporate social responsibility. So, it does not make it is not an ideal resting way of behaving based on values and principles like self-sacrifice. But the idea of trusteeship implies cheese the focus of surplus wealth of profit to serving the public go after satisfying one's own needs.

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But the idea of trusteeship implies...

- change the focus of surplus wealth or profit to serving the public good, after satisfying one's own needs.
- don't re-distribute wealth through philanthropy and welfare but change the very structures of capitalist business and industry in a manner that they raise the economic value of social consciousness.
- thus providing services.

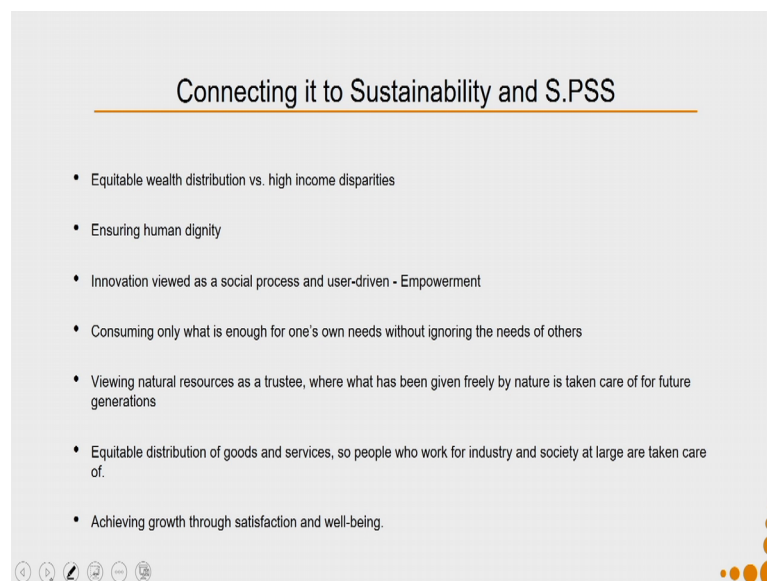
If you remember how do we started discussion on the idea on the definition of sustainable development. The definition of sustainable development said, a development which is able to meet today's needs in a manner that the needs of future generations are not compromised whose needs have to be given higher priority, especially the overarching needs of the, poor people of the, world. Now, as soon as I say satisfying once own needs so, it clearly gives some idea that the idea of trusteeship does not say talk about self-sacrifice, what it is talking about is consumption under limits. So, once your own needs are satisfied you have to consider you have to focus how the surplus wealth of profit can serve the public good.

So, do not redistribute wealth through philanthropy and welfare, but change the very structure of capitalist business and industry, in a manner that there is the economic value of social consciousness. Say for example, if I may a lot of profit out of my business can a part of the profit be invested in creating certain educational institutions. What these educational institutions will do is educate the youth and build the society build the nation as a whole and I will also be able to use many of these well trained youth into my own business that can be a particular way in which you can, see this idea of trusteeship.

So, that can be a particular implication or say for example, if a company out of its excess profit decides to create certain income generating opportunities. Say for example, trains a set of people in tailoring activities gives them swing machine and as a result enables

them to start their own tailoring shops. That can be also regarded, because by doing all these activities you are trying to distribute your surplus wealth of profit to serve the public good in a manner that you are enabling increasing their capabilities to support themselves and thus provide services. So, the idea of trusteeship was also like providing the services. So, me as a business person after satisfying my own needs the surplus wealth of profit I use it for serving the public good raise the economic value of social consciousness that is the service that I provide as a business.

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Now, connecting it to sustainability and S PSS, the Khadi Movement to all these concepts; so, equitable wealth distribution versus high income disparities. So, as we discussed in all the definitions of sustainability we were all so, a parameter for measuring the sustainability of a urban settlement or a city in our circles of sustainability was how good the wealth distribution is. So, if your equitable wealth distribution is regarded as a measure of sustainability, that you can see in this particular context.

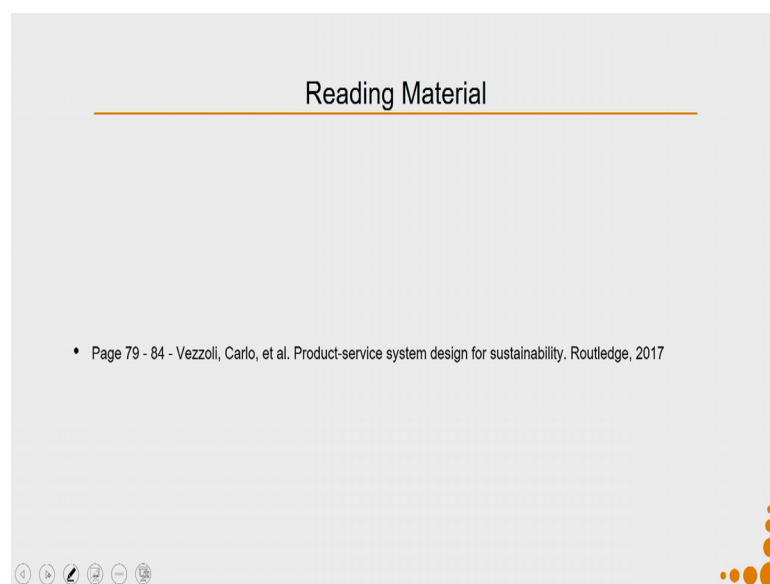
So, the Khadi Movement stressed on equitable wealth distribution and not high income disparities. Even in the eye, in the through the idea of trusteeship for businesses the same model was being stressed. So, you can see, how the sustainability ideas, where so, much of a core of the Khadi Movement Ensuring human dignity, is again something, which is very very important part of, all sustainable development definitions criteria and also S PSS, and was very much part of the Khadi Movement.

Innovation viewed as a social process and user driven and as a result leads to empowerment again think about the circles of sustainability which is applicable for cities. They had pointers which measured empowerment which they had pointers which measured innovation ingrained in the social processes user driven innovations, whether they are given the opportunity weather to what extent a particular a settlement offers them, that which offers more of that they are more sustainable and they are also very very in grain aspects of the Khadi Movement. Consuming only, what is enough for once own need without ignoring the needs of others.

Again, another very important aspect that we saw, in the discussion about Khadi Movement and we know that is what we call for in our definitions of sustainability and S PSS. Weaving natural resources as a trustee where what has been given freely by nature is taken care of for future generations. Something, which was core of Khadi Movement is also a part of the whole idea of sustainability and S PSS. Equitable distribution of goods and services so, people who work for industry and society at large are taken care of.

Another important part which again connects the Khadi Movement to the sustainability thought process; achieving growth through satisfaction and well-being and not through consumption. The core of the Khadi Movement, again something what we talk about when we are talking about sustainability and S PSS.

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So, for this particular lecture you can go through in the book product service system design for sustainability, there is a section which talks about the Khadi Movement as a precursor to the PSS thought process and brings in all the sustainability. There are links to some other authors also in that section, you can go through the works of those authors also and you can learn more about this particular topic.

Thank you so much.