

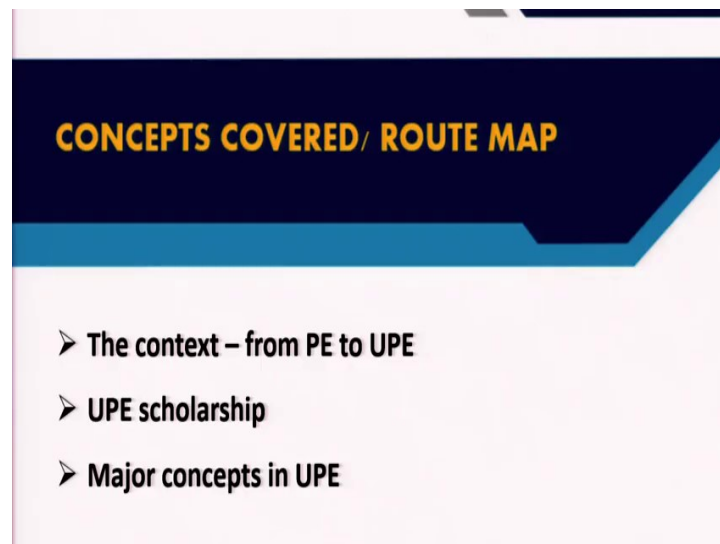
Urbanization and Environment
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Module - 04
Urban environmental social sciences frameworks
Lecture - 28
Urban Political Ecology Part I: Emergence and Development

So hello everyone, so with this now and today we would be entering into the exciting domain of Urban Political Ecology. So, I have actually divided urban political ecology into 3 parts the in the first part I will be talking about the Emergence and Development of the field, in the second part I would be discussing more recent trends within urban political ecology.

And in the last lecture that is part three I would be actually talking about the internal shifts and debates you know within the field of urban political ecology and also talking about the new political possibilities that urban political ecological scholars are you know discussing about. So, in this particular lecture that is part 1 of urban political ecology.

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I would be mainly covering you know the context or the historical backdrop that actually played an important part in this transformation or the shift from political ecology to urban political ecology. So, urban political ecology of course it needs to be understand ,

understood as an offshoot of the larger domain of political ecology. So, I will be discussing you know this transition from political ecology to UPE or urban political ecology.

Then I would be shedding light on the UPE scholarship. So, mainly I will be you know focusing on the early literature, the earlier works by urban political ecologists and finally, I would be talking about the fundamental or the major concepts in UPE.

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Political Ecology

- a vast field...
- Marxian roots – critical development research; peasant studies; environmental history; cultural ecology; postcolonial theory
- unpacks 'processes, players, and dynamics that are at work politicizing the natural environment' (Robbins 2012: 4)
- Actor-Network Theory (ANT) to strengthen theory and method in political ecology
- group specific access to nature + negotiation processes around environmental justice

So, to begin with first I need to really focus a bit on what political ecology is all about, I think some of you must be knowing what political ecology is and some of you who had actually kind of you know, who did my water society sustainability course the earlier one. So, there also I had discussed political ecology mainly focusing on the political ecology of water.

So, again to give you a brief overview about what political ecology is all about. So, the first disclaimer is it is such a vast field that you know its not possible to do a historiographical survey of the entire literature, the entire gamut that is available before us.

And the political ecology is such a field which has actually made major advancements you know in the last 2 and a half or 3 decades in that sense and Paul Robbins he wrote a

book a few years back I think it was published in 2012 on political ecology and this book is known as Political Ecology an Introduction.

So, in that book Paul Robbin says that political ecology is such a vast field that you know I mean and it is also quite difficult to say whether it is an academic discipline or is it kind of a domain or is it also a community of practice. And Paul Robbins seem to be more comfortable with his idea of community of practice.

So, by this we then immediately understand that political ecology is not only pursued by hardcore academic researchers. But it is also a field which is pursued and practiced you know by practitioners. People who work in close association with communities for example, communities inhabiting ecosystems zones and you know ecosystem dependent communities etcetera.

So, this is a vast field its kind of an umbrella framework and umbrella discipline and community of practice, etcetera. And of course, you know its definitely it drew whole lot of insights from Marxian theories and Marxian literature you know specifically from domains like critical development research, peasant studies, environmental history, cultural ecology, post colonial theory etcetera.

And when I would be discussing you know some of the; some of the works I will be basically shedding light on UPE scholarship. You will be able to see that how you know all these various I mean the different arguments or the different methodologies used by these theories like post colonial theory or cultural ecology. How these theories and methodologies also had made way, you know to kind of build the framework of political ecology.

So, this particular domain is very very significant because it unpacks processes, players and dynamics that are at work, politicising the natural environment. And you know why political ecology is my favourite or you know for that matter political ecology is such a like it is such a popular field I must say, because it help us to understand and you know it enable us to understand what is not natural in nature.

So, and that is why you know Paul Robbins is saying that it is such a significant framework it is such a significant tool or lens of analysis that I mean for so far as any practitioner is concerned. So far as any academic researcher is concerned he or she if he

or she is actually deploying this particular lens of analysis immediately he or she will be able to unfurl and unpack the various processes you know the dynamics, the actors, the players all these things.

How the interactions you know go on among these, among people and how the entire production of environment actually remains extremely political. So, lot of developments actually took place later and as the framework or as a discipline kept advancing. So for example, there is a particular; there is a particular framework again which is ANT or the Actor Network Theory and there are some debates about like the relation between ANT and PE actor network theory and political ecology.

But generally it is understood or ANT is perceived as kind of a tool to strengthen the theory and method in urban political ecology and in political ecology as a whole. So, political ecology enables us to kind of understand and unveil group specific access to nature and also study the negotiation processes around entitlements, entitlements to ecological resources. So, it not only discusses you know environmental conflicts or environmental degradation relating to quantity and quality of resource. But also relating to access who gains what who are remained the gainers and who are the losers.

So, it helps us to understand this negotiation processes or mediations among various actors classified along you know social hierarchies around entitlement to ecological resources. So, that is why this field is so very significant and you know this is something which I have taken from Anne Rademacher, Rademacher says that just you know concentrate on this particular quote at the bottom of this particular slide.

So, because natural resource stocks are often found at the margins of dense human settlements, early ethnographic work associated with political ecology was largely located in rural or agrarian setting, yes this is also true. That why the you know early scholars the scholars who initiated this field actually they remain restricted to the rural setting, because for example if you see this particular book land degradation and society by Blaikie and Brookfield.

So, this is a seminal book and you go through any state of the art analysis literature on political ecology you will see that this book is actually cited as the first major work, you know that kind of introduce political ecology and they also deployed a methodology which they say you know regional political ecology.

So, in this particular book Blaikie and Brookfield they discuss land management and they argue that land management is such an important thing, because several other things like salinization flooding soil erosion productivity all these things are related you know to land management.

But then how is land managed who are the various actors and not only that land managers, but several other actors who play an important part in land management and how land management is also related to the larger processes of society and what kind of human responses are elicited. So, everything together they take into consideration and they you know try to discuss land management.

And so you know from Blaikie to Brookfield from Blaikie Brookfield to several other works that had gone you know that had facilitated the evolution and emergence of political ecology. You will see that basically the scholars during the initial years maybe during the first decade or maybe little less than, the less than a decade they concentrated mainly on agrarian settings.

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<i>Thesis</i>	<i>What is explained?</i>	<i>Relevance</i>
Degradation and marginalization	<i>Environmental conditions</i> (especially degradation) and the reasons for their change	Environmental degradation blamed on marginal populations shown in its larger political and economic context.
Conservation and control	<i>Conservation outcomes</i> (especially failures)	Usually viewed as benign at environmental conservation are shown to have pernicious effects, and sometimes result.
Environmental conflict and exclusion	<i>Access to the environment and conflicts over exclusion from it</i> (especially natural resources)	Environmental conflicts shown to be part of larger social processes, gendered, classed, and struggles and vice versa.
Environmental subjects and identity	<i>Identities of people and social groups</i> (especially new or emerging ones)	Political identities and struggles are shown to be linked to basic issues of livelihood and environmental activity.

And that is why it remained you know the focus remained mainly on the underdeveloped and also on the rural areas or the rural sites. So, before I move on to the shift from political ecology to urban political ecology I think it is important for us to discuss the 5 thesis of political ecology, this is again from Paul Robbins I will definitely encourage

you to go through the like introductory book on Political Ecology by Paul Robbins and there he discusses this 5 thesis.

And if you know try to understand these 5 thesis then I think more or less your job is done. So, if you really, if you familiarise yourself with these 5 thesis of political ecology and what is explained in each of these thesis and what is the relevance you know of each of these thesis because the relevance lies in the explanation. And that is why political ecology comes out as such a significant tool as such an important framework enabling us to understand environmental degradation in a way which unfortunately environmental sciences are not able to do.

So, the first thesis is about degradation and marginalization. So, what is explained in degradation and marginalization environmental conditions, of course relating to degradation and the reasons for the change alright. And what is the relevance of you know this particular thesis of political ecology, because these thesis why is it important because environmental degradation has long been blamed on marginal people.

So, just think about Malthus, so Malthus you know or unfortunately this Malthusian understanding or paradigm it is having a long lasting legacy on us. You ask anyone you know you ask any student for that matter you ask any politician immediately they will say you know we are not being able to do anything because our population is increasing.

So, immediately the entire blame is actually put on numbers. So, I am I do not want to make an extreme comment by saying that yes population is not a problem at all, definitely population is a problem numbers definitely you know numbers and population density. They are major challenges and during the Covid times especially you know we from India we can really realise the importance of population density or the kind of I mean importance of population impacting several other variables.

But at the same time that environmental degradation cannot be explained solely on the basis of increase in numbers and that this kind of an idea is actually a fallacy this is I think a seminal contribution of the political ecologists. So, you know here the relevance of the thesis is that it has long been blamed on marginal people.

So, environmental degradation long being blamed on marginal people and political ecologists show that how environmental degradation and marginalization are actually related to the larger political historical and economic context.

Conservation and control, so what is explained conservation outcomes and especially failures, so the failures of the conservation initiatives this is again something on which the political ecologists had written a lot. And what is the relevance because usually conservation initiatives are viewed as benign right viewed as positive benign efforts and efforts at environmental conservation are here shown to have pernicious effects and sometimes fail as a result.

So, political ecologists again I think they have done a wonderful job in basically showing you know the limits of these conservation efforts and how you know it is absolutely how conservation discourses from global to the local level are extremely power laden, how they are imbued with power hierarchies.

So, the third thesis is environmental conflict and exclusion. So, what is explained access to the environment and conflicts over exclusion from a especially natural resources. And what is the relevance? Environmental conflicts are shown to be part of larger gender class and race struggles and vice versa this is also very very important. That I just mentioned that you know power laden I just talked about how we know all these efforts remain imbued with power hierarchies.

So, every analysis what you do so far as ecological degradation or environmental conflicts or environmental management are concerned, these discussions cannot remain politically neutral. You have to look into in these discussions there is several other social aspects like class, like race, like gender, etcetera. So, because you have to understand that finally you know mediations or negotiations are continuously, constantly getting produced and reproduced you know where the actors come from different classes and they are part of the social hierarchical pyramid.

So, any analysis for that matter any ecological analysis, any analysis on ecological conflicts and degradation definitely need to incorporate you know this class, gender, race angles. So, and this is again one of the fundamental contributions in I mean so far as this particular field of political ecology is concerned.

So, the last thesis particular objects and actors, socio political conditions deeply or especially deeply structured ones relevance, political and economic systems are shown to be underpinned and affected by the non human actors with which they are intertwined right. So, though it is I mean though and we will discuss that though you know the role of human definitely is very much acknowledged, because human beings really play a very important role you know in manipulation and mediations.

But at the same time the agency and role of the non human actors whether animate or inanimate is also very much recognised and acknowledged within the field of political ecology and the environmental humanities scholars they had also drawn or they are still drawing a whole lot of insights from the field of political ecology.

So, I mean, I so this is my opinion that you know the idea that environment humanities and political ecology they are connected fields. So, one of the major connection is this focus on the non human world or the non human actors, who play as equally significant, who play an equally significant role in the making of environment alright.

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From Political Ecology to Urban Political Ecology

➤ PE – too focused on the “underdeveloped” world, too focused on the

‘...political ecology developed in happy indifference to the urban world, and by the 1990s it had focused mainly on the politics of land use in non-urban (and non-Western) spaces’ (Angelo and W)

- re-inserting questions of nature and ecology into the urban debate
- untangling the economic, political, social and ecological processes that form landscapes

Capitalism Nature Socialism

‘there is nothing un

So, now I move on to you know this particular discussion of this shift from political ecology to urban political ecology. So, we will actually not shift, but this is basically you know how after a particular point of time scholars or the I mean the academicians with a political ecology you know as the bent of mind they started focusing on urban settings

and they started focusing on the making and remaking the shaping and reshaping of the urban environment.

And definitely I have to mention Erik Swyngedouw, so the Belgian scholar who is the, who was the disciple or the student of David Harvey. The famous Marxist geographer David Harvey, so Erik Swyngedouw he actually published this particular article called 'The City as a Hybrid on Nature Society and Cyborg Urbanisation' So, Erik Swyngedouw that the spelling is a little difficult like his works.

But yeah, but you know Swyngedouw has to be discussed because Swyngedouw I do not know whether it will be an exaggeration if I say or if I consider a Swyngedouw to be the father of urban political ecology. So, what happened is that in the context if we think about the context then definitely we know that since the 1990s I mean.

So, far this is Brundtland report and these different conferences which are going on focusing on urban development rather you know focusing on sustainability or sustainable development, that also started discussing urban sustainability or sustainable urban development.

And because the definitely it was getting clear that the world was rapidly urbanising with whole lot of additional challenges, you know for mainly for the cities of the global south. So, it became important to kind of now I mean remove the focus from the underdeveloped world and the rural to the urban settings. And that is why you know reinserting questions of nature and ecology into the urban debate became so very significant.

And the urban political ecologists they started untangling economic, political, social and ecological processes that form contemporary urban landscapes. And as I mentioned you know Swyngedouw is I mean he is the his works are seminal. So, far as urban political ecology is concerned and Swyngedouw for I mean Swyngedouw as I remember I think he is the, he is the first scholar or for the first time he conceptualized city as a hybrid.

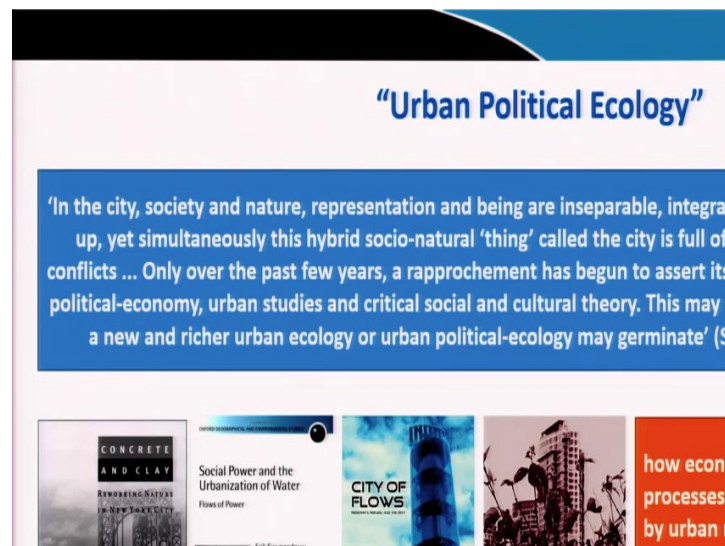
So, as socio natural assemblage, so what do we mean by this? So, Swyngedouw actually you know thinks about the city as a hybrid because, he takes into consideration several you know parameters or several variables from biophysical and biochemical processes to

material aspects to socio economic characteristics, cultural attributes everything together you know that make the social production of urban environment possible.

So, that is why he you know he visualized the city as these quote unquote socio natural assemblage and he also introduced this term socio nature right. And definitely you know David Harvey in the same year in this particular book which was published in 1996, the same year when Erik Swyngedouw wrote this article.

So, David Harvey said that there is nothing unnatural about New York City and Erik Swyngedouw also made it quite evident that yes there is nothing unnatural about you know about any city for that matter in any part of the world. So, it is important to understand city as socio natural assemblage.

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Yes, these are some very significant earlier works by scholars like Erik Swyngedouw Maria Kaika, Nick Heynen and also Matthew Gandy. And I know there are groups so they work in close association with each other you will see later I will also discuss some of the books. For example, this particular book the last one from the right hand side.

So, in the nature of cities so this is an edited volume, so this book has been edited by Maria Kaika, Nick Heynen and Erik Swyngedouw and it has number of chapters that discuss several aspects you know of urban environment.

And so these are the books which are so very significant including *Concrete and Clay* by Matthew Gandy, *Social power and the urbanization of water* by Erik Swyngedouw, *City of flows* you know by Maria Kaika and this edited volume that I just talked about *In nature of cities*.

And you know in this book definitely in all these works we will see that city actually has been kind of explained as socio natural assemblage and I would definitely like to you know I mean, I found this particular quote by Swyngedouw to be very very significant, because this captures the essence and the flavour of urban political ecology.

So, please concentrate on all the words. So, all these words are so very significant and this is very this is, how do I say this is strong this is very very strong and this is deep. So, you have to really concentrate on this quote a lot. So, Swyngedouw says that 'in the city society and nature representation and being are inseparable.'

So, everything that they are together they are interacting continuously society, city, nature representation being, integral to each other. Infinitely bound up yet simultaneously this hybrid socio natural thing called the city is full of contradictions tensions and conflicts. So, these contradictions tensions and conflict actually shape urban environment in cityscapes.

Only over the past few years a rapprochement has begun to assert itself between ecological thinking, political economy, urban studies and critical social and cultural theory. So, later I will discuss I think in my subsequent presentation that how you know how different fields actually have come together to kind of make the emergence and evolution of urban political ecology actually possible.

So, this may provide the ferment from which a new and richer urban ecology or urban political ecology may germinate. So, this is from Swyngedouw 1996 and this is extremely powerful because it captures the essence and the depth and flavour of this particular domain called urban political ecology.

So, what the this scholars have done this the authors of this book. So, they have talked about how economic political and cultural processes in cities shape and shaped by urban metabolism and ecological conditions.

So, definitely I will now discuss urban metabolism what urban metabolism is all about, because you know urban metabolism is one of the fundamental concepts in urban political ecology and not only in urban political ecology. But in several other urban studies so I think when we discuss urban environmental history we also discussed urban metabolism.

But here we will see how urban political ecologists actually they try to understand urban metabolism and why urban political ecological understanding of urban metabolism is so very significant for us to kind of unfurl, unpack you know unveil urban ecological processes you know at the global, regional, national and local scales at large.

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The slide has a light pink background with a blue header bar at the top. The title 'Urban Metabolism and Early V' is in blue. There are two bullet points, each preceded by a blue arrow. The first bullet point is 'robust conceptualization of UM in UPE'. Below it is a blue box containing a quote: 'a dynamic process by which new sociospatial formations, intertwining of collaborative enmeshing of social nature emerge and present themselves and are explicitly created through human labor and non-human processes simultaneously'. The second bullet point is 'contestation of water to show the uneven socionatural production of urban hydroscapes (Bakker, 2013; Budds, 2009; Loftus, 2007)'.

Urban Metabolism and Early V

- **robust conceptualization of UM in UPE**

'a dynamic process by which new sociospatial formations, intertwining of collaborative enmeshing of social nature emerge and present themselves and are explicitly created through human labor and non-human processes simultaneously' (
- **contestation of water to show the uneven socionatural production of urban hydroscapes (Bakker, 2013; Budds, 2009; Loftus, 2007)**

So, yes urban metabolism is one of the fundamental concepts in urban political ecology and how the UPE you know the UPE scholars have kind of defined urban metabolism or explained urban metabolism.

So, this is from Nick Heynen where he says that urban metabolism can be understood you know from the frame of urban political ecology it can be understood as a dynamic process by which new socio spatial formations intertwining of materials and collaborative enmeshing of social nature emerge and present themselves and are explicitly created through human labour and non human processes simultaneously.

This will I know this is like this is quite difficult you know to grasp, but I think I will be able to make it clearer in my next slide alright. So, but what is very important you know from all these arguments whether it is by Nick Heynen or it is by Maria Kaika or it is by Erik Swyngedouw we will see all the terms or the terminologies or words or vocabulary which seem to be the most important are end machines right? Interactions, intertwining's collaborations, inseparability.

So, these this end machine or this collaboration interaction they really occupy the predominant space in political ecological or more specifically urban political ecological understanding. So, this is something which I would like to highlight that you have to really focus on hybridity as a concept and this we will discuss in the next slide which is which will be the last slide you know for this presentation.

So, yes this and I must say again that the early in the early works the scholars also their discussions. I mean surrounded on contestations on I mean drinking water mainly tensions and negotiations relating to access to drinking water, where they try to show or capture the uneven socio natural production of urban hydro scape.

So, particular ecology of water in that sense or urban particular ecology of water in that sense is such it is a very very significant field, because you know the whole discussion is surrounding urban political ecology of infrastructures and drinking water occupy a very significant space in this entire you know discussion and scholarship.

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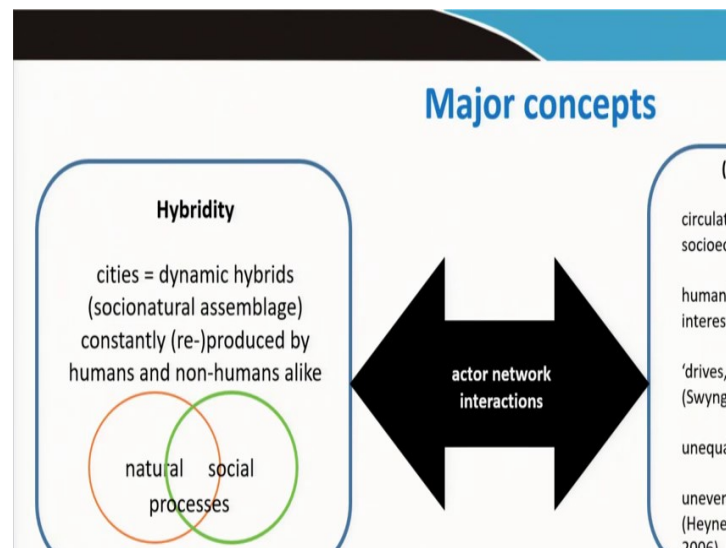
➤ **host of other vectors**

- **air pollution (Buzzelli 2008; Véron 2006)**
- **parks (Brownlow 2006)**
- **urban forests (Heynen 2006a)**
- **urban wildlife corridors (Evans 2007)**
- **gentrification (Quastel 2009)**
- **insects and pesticides (Biehler 2009)**
- **gardens and food (Domene and Sauri' 2007; McClintock 2012; Shillington 2013)**

So, apart from drinking water or apart from urban utilities, there are several other host of vectors which have kind of you know have added the empirical heft of urban political ecology including research on air pollution, parks, urban forests, urban wildlife, gentrification, insects and pesticides, gardens and food, explicitly organic food, alcohol, hunger.

So, these are the several other vectors which have added the empirical heft of urban political ecology and it has also expanded in axiomatic ways the notion that there is truly nothing unnatural about the making of the urban environment.

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So, yes the 2 fundamental concepts and definitely the 2 fundamental concepts related to each other according to my argument or proposition is that. I mean these are the 2 fundamental concepts that define urban political ecology. So, one is metabolism and urban metabolism and the other one is hybridity.

Now, so what is urban metabolism I think we had already discussed urban metabolism when we discussed urban environmental history and when we also you know had a presentation on urban the significance of urban environmental social sciences frameworks right.

And what is why urban metabolism is so important you know in urban political ecology or rather what kind of additional inputs or insights this urban political ecologists or urban

political ecologist scholars bring to this concept of urban metabolism is that, in UPE urban metabolism is highly political it is understood and it is explained in highly political sense of the term.

So, here the idea is that he Swyngedouw himself says why it is important to kind of mobilise you know circulation and metabolism as a socio ecological processes. Because this will enable us to a better frame you know the questions surrounding environment and questions that are radically political. So, and the idea is that you know urban metabolism also it is a concept which had been discussed and explained for long by eco socialists theoreticians and they explained urban metabolism in terms of flow of energy, flow of matter etcetera.

But here urban political ecologists they try to explain and they say that you know they argue that energy exchanges are definitely they remain historical products. And human input remains so very important, because human input in this entire process of metabolism is actually controlled by human needs and interests human drives and desires and imaginations.

But who are the human beings we are talking about, whose interests and needs are made the interests and needs of every human being no that is not how you know it works the needs and interests of the powerful people in the society for sure the elite people. So, it is important to kind of highlight the political part of it.

So, the whole process metabolism does not remain politically neutral rather it is shaped and you know it is kind of manipulated by human beings to a great extent and human beings who are powerful, who are located in the upper rung or upper echelon of the society.

So, definitely uneven power hierarchies unequal power hierarchies is something which shapes the process of metabolism or urban metabolism for that matter. And like some scholars like Hollifield and others they had mentioned that you know better than urban metabolism I mean or maybe like better than urban political ecology scholars. The scholars focusing on ANT or Actor Network Theory they had done a good job you know to explain urban metabolism, because they ask more socio naturally oriented questions.

But I really do not you know I do not very much agree with this argument, because to me this a ANT and PE they are not they are not contradicted rather they complement each other. And similarly you know the Latourian paradigm of hybridity and the Swyngedouwian paradigm on urban metabolism, they really talk to each other and they complement each other in a very rich sense and potentially you know fruitful ways.

So, what is hybrid? So, hybrid or hybridity has been explained by Bruno Latour. So, he explains hybrid as mixtures of nature and culture. So, to him hybrids are tangle beings assemblages of different entities that cannot be divided in 2 poles. So, looking at hybrids allows a new visibility of matters of concern which include non-humans, humans as well as the producers of assemblages.

So, in similar vein like Swyngedouw also not only tries to understand hybrid as piece of matter for that matter. But he focuses on the processual characters right so and he says that the hybridization is also to a great extent manipulated.

So, because he kind of investigates the commodification of hybrids or he investigates you know the commodification aspect of the hybridization process. So, I will give an example, so for example, let us think about how non human entities they are sometimes introduced to kind in sewage treatment plants.

So, immediately you know hybrid process gets commodified, similarly the production of nuclear energy or solar energy they also remain extremely power laden and the actors they manipulate and they kind of you know, they do to a great extent they shape hybridization as a process. And say Swyngedouw is right see he is absolutely right to you know say that though, yes it is true that metabolism is actually co-produced by humans and non- humans.

But at the same time humans dominate and human manipulate and mediate the entire system, because you know because the whole thing is so much, is so very power laden remains power laden to a great extent.

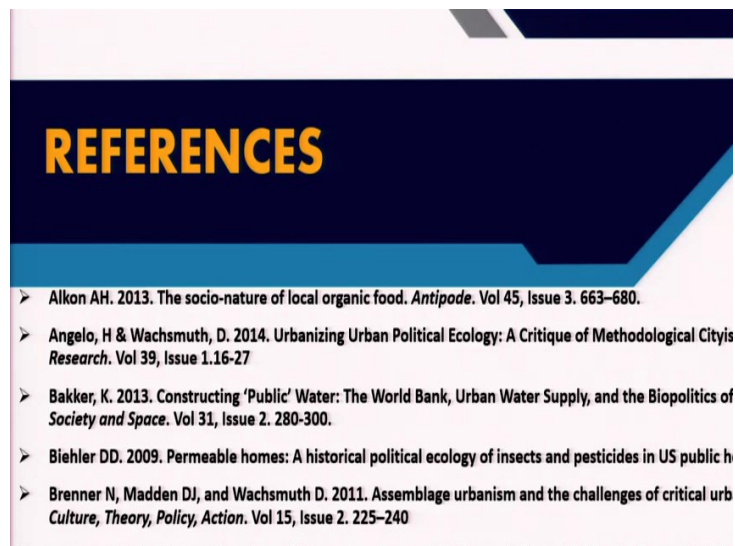
So, I mean the whole thing the entire process is actually politicised and that is why and you know these concepts and I mean their politicization as an as a part of this whole discussion of urban political ecology is so very significant for us to kind of unpack you know this uneven geographies of power and this uneven urban or this uneven

geographical processes at large, where we are able to see you know this domination and subordination and these hierarchies in the making and remaking continuous in the constant production and reproduction of urban nature.

So, contestations negotiations tensions these are the processes that remain so very important and that is why it remains important to understand you know the processual characters of the of these of the interactions and you know the interactive agencies that make urban nature and that you know kind of facilitate the production and reproduction of the urban environment.

So, these are the concepts, these are the major concepts that make urban political ecology such a significant and such an exciting domain.

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So, these are some of the references there are a number of references.


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Because there are I mean the its very very rich the whole domain the UPE is really a very significant domain which has made major advances in the last few years.


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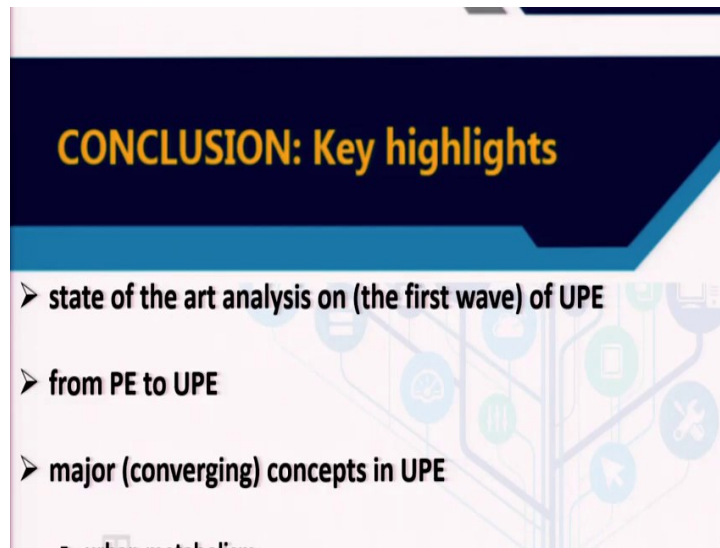
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And so we had discussed the state I mean I had done I have I had tried to do a state of the art analysis mainly focusing on the first wave of urban political ecology, there is the earlier works by scholars. I have discussed this transformation from PE to UPE or more importantly how urban was accommodated within the larger political ecological literature.

I had talked about two major concepts here and they are in the in if I try to use you know the urban political ecology jargon or vocabulary then you know how urban metabolism and hybridity these concepts are enmeshed and how they are intertwined with each other.

So, these are the some of the things that we had discussed in this particular lecture which is focused on urban political ecology and the first part of urban political ecology. Because now we are left with 2 other lectures which will again be focusing on the UPE domain.

Thank you.