

# INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

## NPTEL

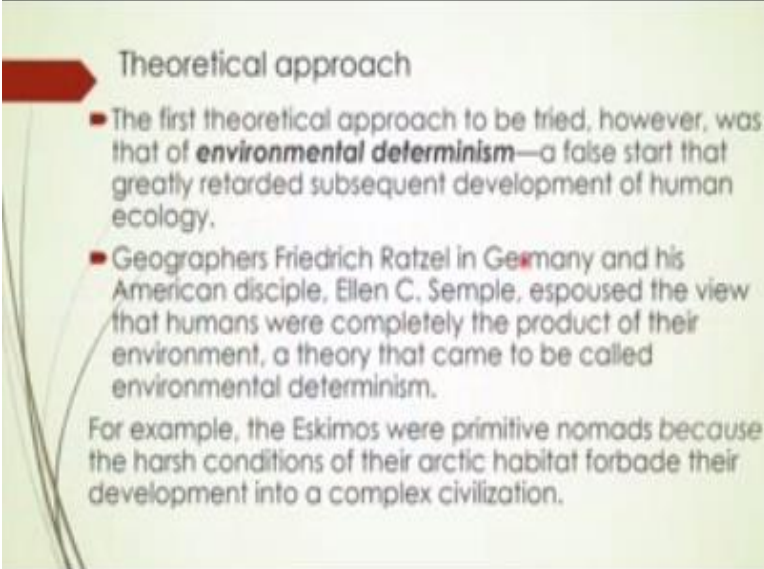
### NPTEL ONLINE CERTIFICATION COURSE An Initiative of MHRD

#### Ecology and Society

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Yeah after discussing on the origin of human equality and also we have covered the Chicago School where in human ecology that was initially being conceived and in this lecture we would this have an overview of the theoretical approach which is being very much used in human ecology and they are environmental determination and environmental possibility. Now what is environmental determinism?

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**Theoretical approach**

- The first theoretical approach to be tried, however, was that of **environmental determinism**—a false start that greatly retarded subsequent development of human ecology.
- Geographers Friedrich Ratzel in Germany and his American disciple, Ellen C. Semple, espoused the view that humans were completely the product of their environment, a theory that came to be called environmental determinism.

For example, the Eskimos were primitive nomads because the harsh conditions of their arctic habitat forbade their development into a complex civilization.

And what exactly is determination now in a very simple sense we can say that environment strongly influenced or if not tends to determine the behavior is not the culture of human society

now and when the determination is the first theoretical approach which were being used in order to look at the development of human ecology now for instance the developers freedrick result from Germany and his American disciple LMC samples were the first to espouse the view that humans were completely the product of their environment that is a cheery debt come to be called environmental determinism.

Now if we look around globally we can cite certain examples of human society where their environment influences the behavior or determines their behavior now if we take our examples of the Eskimos which were in essence perceived to be primitive if not seen to be an homage and this is primarily because of the kind of the hurts conditions in Vick's they have I mean inhabited, now in essence this kind of environment or the habitat which they inhabit to some extent has influenced them in order to go on with that kind of culture.

Now one of the lesion works which is being the carried forward by the historian James H Scott if you would like to further look into these on the idea of his environmental determinism he actually made an extensive study in South Asia and Southeast Asia where as we try to look at the kind of experience which the landscape which are being inhabited by mostly the mongoloid race and in one of the works of the JMC Scott you can actually see when he argued why civilization cannot climb the hills.

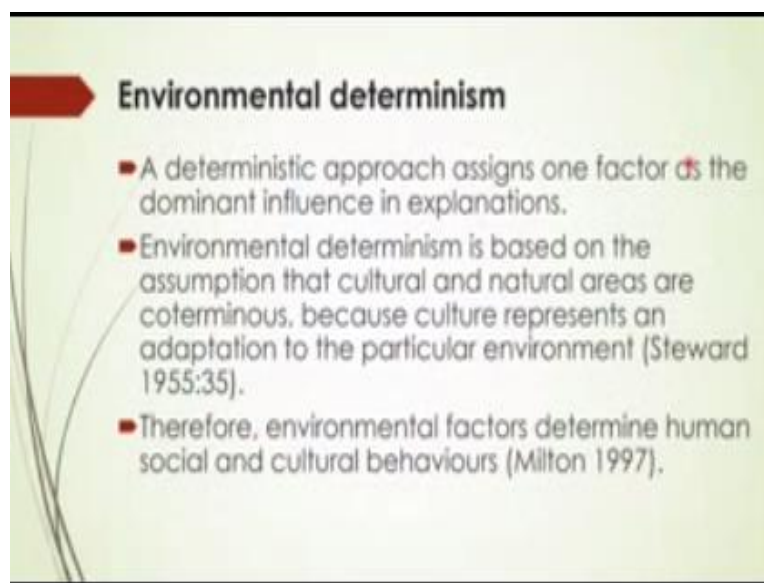
Now in depth he tries to come up with an idea that the High lender or those who inhabit the uplands where innocence four-post me trying to evade civilizations or evading the state now ideally this concept of state or the modern state or is something which is to be sealed in relationship with how the civilizations come into being now there are communities who in essence purposely temps to EBIT the state and have their own kind of sort of the means of livelihood.

Now in that you can actually see the kind of graphical landscape how they are being influenced by the kind of any culture practices for instance the zooming is not shifting cultivation now why are these people practicing these agriculture practices now what James could find out and argued is in a way this agriculture practices we're easy for them to move on or find new pastures or

newer areas so that they are not confined to a single physical landscape now reason why partly discussed James's got work is if you like to in essence try to look further of the relationship between this environment and how it influences the culture if not the cultural community we can further refer to the work of James H Scott.

Now moving on what actually is environmental determinism this deterministic approach in essence dominates the influence in the explanations and it is primarily based on the Egyptian that cultural and natural areas are coterminous that is nature and culture because culture represents an adaptation to the particular environment.

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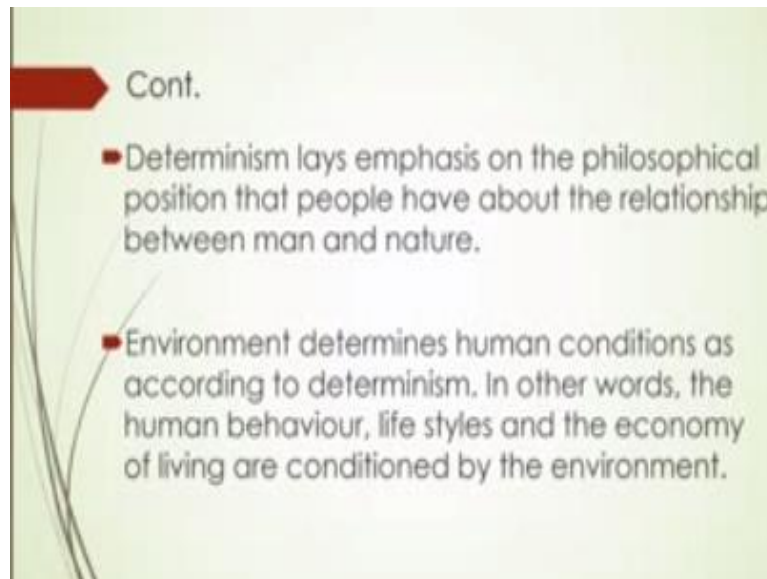
Now this is espoused by Steven now in this if you look at the relationship between nature and culture and we service adaptations some of them may be agriculture practices or maybe those who carried forward the caste or religion or any kind of economic production for that matter it is being something which is decided by not just the cultural group but rather it is the environment in this that community adapt or innocence are influenced by their environment now therefore these environmental factors to some extent determined the human social and cultural behavior now for instance if you look at the kind of let's say the food and drink practices.

Now even the food habits which in essence are influenced by the environment and in environment to some extent strongly determined the human social and cultural divinities now or maybe the kind of dressed or is not clothing is also to some extent determined by the let us say the environment. Now you can in essence look at the diverse form of humans social and cultural behavior if not the kind of cultural traits which humans have practices over the years or over the past generations in essence is not something which is created overnight but rather which has been personally evolving over a different generations.

Now by saying so we do not maybe super perceive that culture as such is static rather it is changing and evolving and there are some recent works which looks at how the climate change in essence influences or rather the agricultural practices of many communities now they find a way out how to adopt the kind of environmental changes now these are to be seen in the context of how human society or community tends to adapt with the changing environment now therefore this environmental determinism in essence has to be located in the context of the culture and nature relationship.

Now in upcoming lectures we will try to also look at the debates on nature and culture and how this perception of nature and culture has changes and how it is to be situated in the context of the modern development paradigm now one of the main emphases which is being led by determinism is also on the philosophical position.

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That people have perceived their relationship between men and nature now there are some works which perhaps now the works of like variable change and also there are many and one of those loss of us who tends to locate the relationship between man and nature. Now there is a Norwegian philosopher by the name cold our meanness he come up with a term coined a term called Deep Ecology and in that Deep Ecology he tends to espouse an idea where in human needs to and gets more deeply in order to understand the ecological crisis which we humans have witnessed.

Now in Deep Ecology what he mainly emphasized was the self realization that is human needs to understand themselves first that is needed to situate ourselves in the context of the ecosystem now dig ecology in essence is in opposition to anthropocentrism now in answer anthropocentrism it believes in the superiority of human that is human is the center of the ecosystem which means it has some sort of an inalienable rights against other beings now this sort of idea of dominance over nature in essence has to be challenged.

Now therefore our nearness to some extent come up with this idea of difficult that is difficult logical thinking now we will try to perhaps look-in more in-depth way about difficulty in the

coming lectures now I am just partly highlighting how the idea of engagement philosophically between man and nature has to be innocence situated now how does environmental determined the behavior of human conditions in essence the human behavior lifestyles and the economy of living are to some extent being conditioned by the environment, now if there is a changes in the environment obviously it will have an impact on the human community.

Now for instance if you look at an example of let us say a dam being a hydroelectric project wherein a dam is to be built now across the globe we can actually witness the thousands and millions of people who are being displaced by these development projects now if you look at the plights of these displaced people now since we are being displaced from their original habitations it will definitely have an impact on not only their lifestyle but primarily on their economic conditions.

Now partly these are to be seen as how the environment has a strong or impinge upon the kind of behavior is not the culture of humans now it has to be looked at how the environment has conditions human behavior therefore the unwanted determinism strongly tries to advocate in looking at that now determinism what exactly is the Tunisian determinism in essence gives a maximum emphasis on the value of nature what is then the value of nature what is very satirist in the value of nature.

Now the value of nature can be sinned or located from different perspectives the extra act the intrinsic and the extrinsic now intrinsically it is to be located it needs a further exploration rather than just what it appears it should not be just from the face value now by saying so primarily in the modern context maybe from the capitalist point of view or the capitalist economic point of view nature to some extent is since from a utilitarian perspective what is he tilted in perspective it tends to equate the value of nature by judging from output or maybe in the context of the market value.

Now once nature is sinned from this perspective it is seen as more of commodity now this commodity in essence from the capitalist economic point of view is seen as something which has to be exploited and then where profit has to be extracted from it now in contrast to this there is

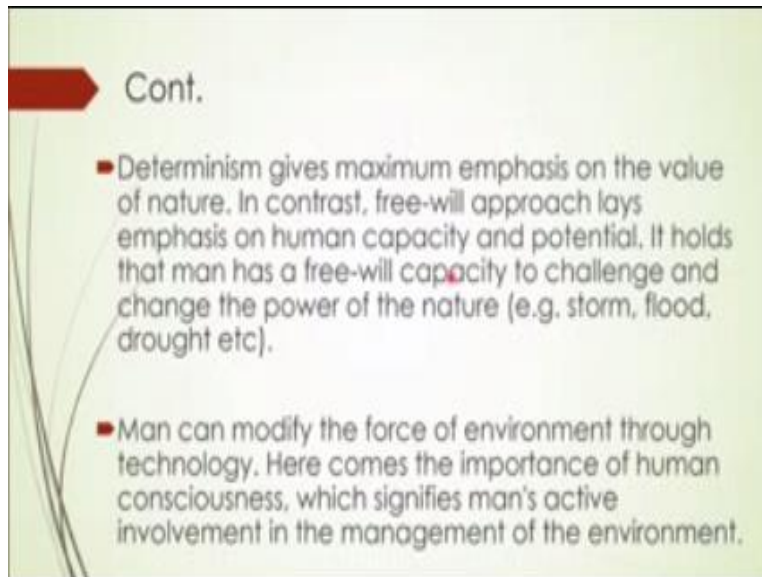
something called a freewill approach which lays emphasis on the human capacity and potential that is the individual self.

Now in this it tends to hold that humans have a free will capacity to challenge and change the power of death that is examples like storm flood drought etc now the question is can humans control nature there are some debates which have been going on now how humans tend to come up with different ideas and to cope or rather to encounter the plan counter the power of this nature that is the natural disasters.

Now the second question is can also humans modify this force of environment through technology is technology sort of an answer to look or locate or encounter these changes of nature now you if you if you look at the evolution of human society as humans evolved from a simple to a more complex society so is the kind of technology and tools which we use and the kind of technology which we used becomes finer and finer depending on the needs or rather how we tend to adapt or cope with the changing nature.

Now therein lies the importance of human consciousness the ideas which evolve over a period of time is to be seen in terms of human adjustment with nature.

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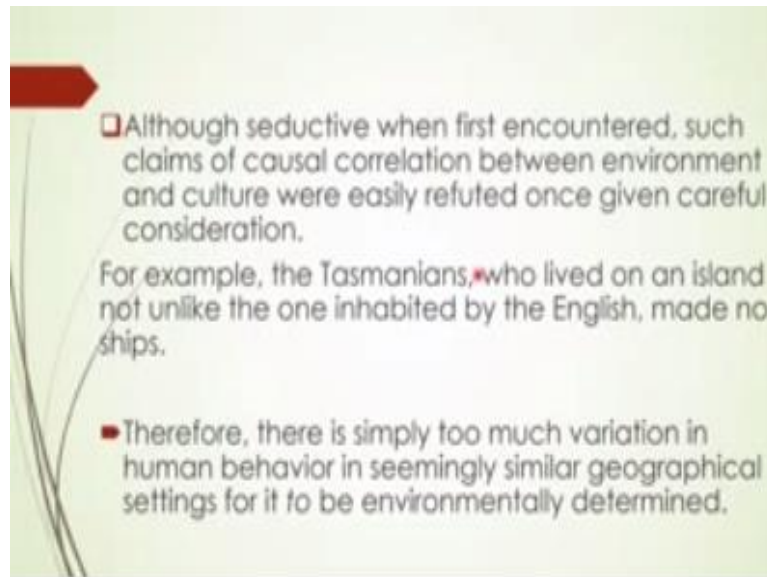
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- Determinism gives maximum emphasis on the value of nature. In contrast, free-will approach lays emphasis on human capacity and potential. It holds that man has a free-will capacity to challenge and change the power of the nature (e.g. storm, flood, drought etc).
- Man can modify the force of environment through technology. Here comes the importance of human consciousness, which signifies man's active involvement in the management of the environment.

Now this in essence is to be in essence symbolizes men's active involvement in the management of the environment, now the idea now is thus humans able to is humans able to manage the environment in a more sustainable manner the kind of management they want to management which we all engage into, now this sort of questions needs to be asked therefore we tends to bring in how human tends to exist attempts to encounter the environment through the modifications of technology no doubt through the use of changes of this technology we humans are able to manage the environment.



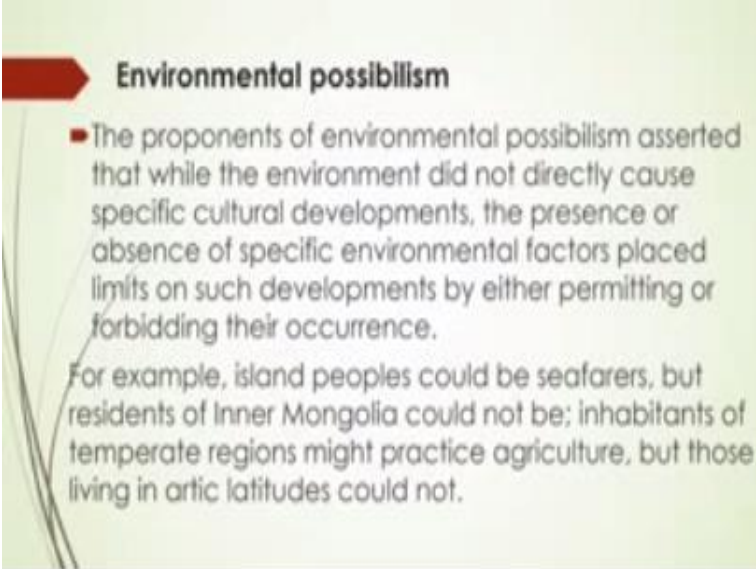
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Therefore apparently this sort of approach sounds to be quite attractive but such claims of the environmentally determinisms of causal relations between the environment and culture were easily refuted by certain school of thought now for instance contradicting to what we had certain example on this elemental determinism if we look at some of the examples like for instance the Tasmanians who in essence live in an island not unlike the ones inhabited by the English made no ships..

Now the idea is in order to poke or managed living in an island is it really important to build ships right now in that we can try to in essence look at why it is not just the environment which influences the human society but rather human tends to behave in a different way because they don't have that consciousness or the urge to in a way loose lips even if they are living in an island now therefore such kind of variations in human behavior in a seemingly similar the geographical settings is to be environmentally determined.

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**Environmental possibilism**

- The proponents of environmental possibilism asserted that while the environment did not directly cause specific cultural developments, the presence or absence of specific environmental factors placed limits on such developments by either permitting or forbidding their occurrence.

For example, island peoples could be seafarers, but residents of Inner Mongolia could not be; inhabitants of temperate regions might practice agriculture, but those living in arctic latitudes could not.

Now therefore environmentally determined is not primarily determined rather it has to be seen in a different perspective now we'll just basically look at the second that is environmental possibility what then is environmental possibility. Now the scholars who have propagated or the proponents of this advantage or diligent strongly asserted that while the environment the sort will necessarily contribute or do not directly cause or influences specific cultural developments rather the presence of a specific or absence of specific in terms of factors in essence place limits on such development by either permitting or forbidding the occurrences.

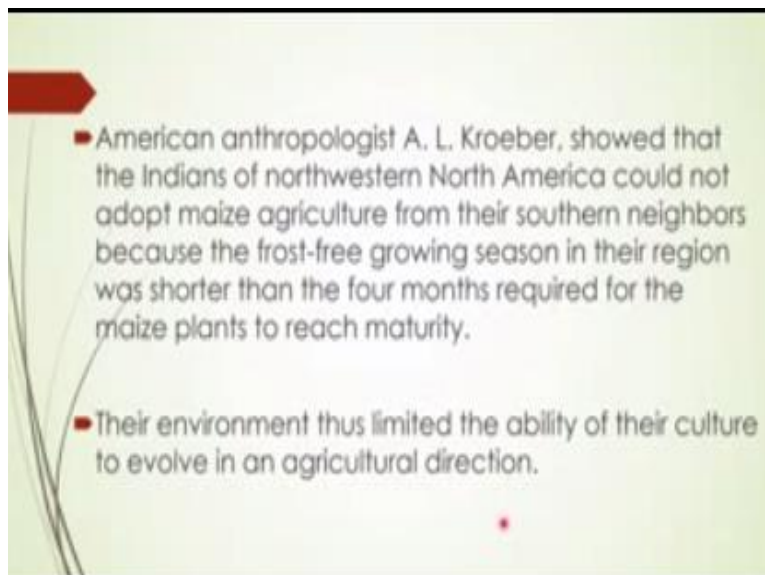
Now for examples if we look at some of the people who are inhabit an island can in essence the seafarers but residents of like Inner Mongolia could not be or may be inhabitants of temperate regions might practice agriculture but those living our Arctic lattice which could not, now there is this possibility the idea of possibly using innocence tends to look at this now from the works of the American.

And soft and supple Aziz Al Kroeber he showed that for instance the Indians of not waste not wish to North America could not add up the because the practices of meat from their southern neighbors because the frost-free growing season in their region was shorter and four months or

maybe a different way therefore in essence there is a possibility that a certain Edgar Cecrops does not really fit well and therefore it is not being practices.

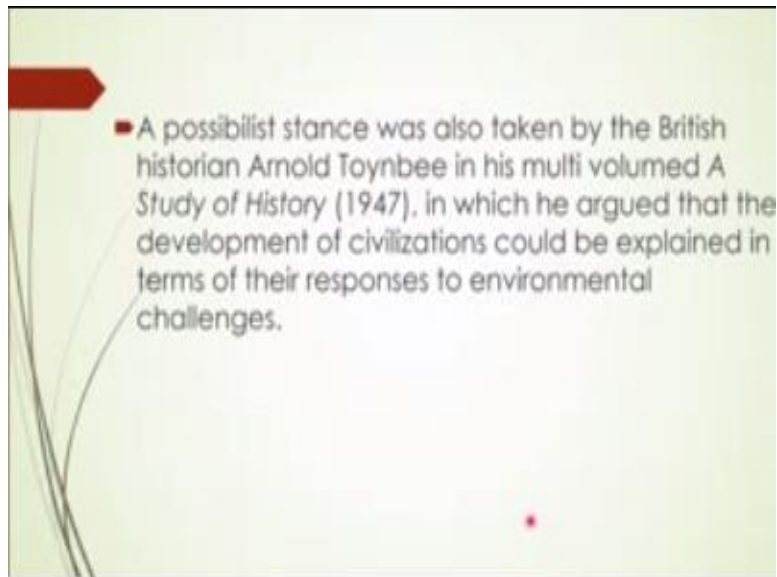
Now therefore the environment in essence has thus limited the ability of their culture to evolves in and agriculture direction now to cite more examples there are certain communities who inhabit a hill cherry and now in a hilly terrain it is difficult to practices now await rice cultivation or a terrace cultivation because of the stiffness or because of the geographical theory and, now by saying so.

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The environment to some extent has in essence limit the ability of a community to evolve from one particular practices to another practices.

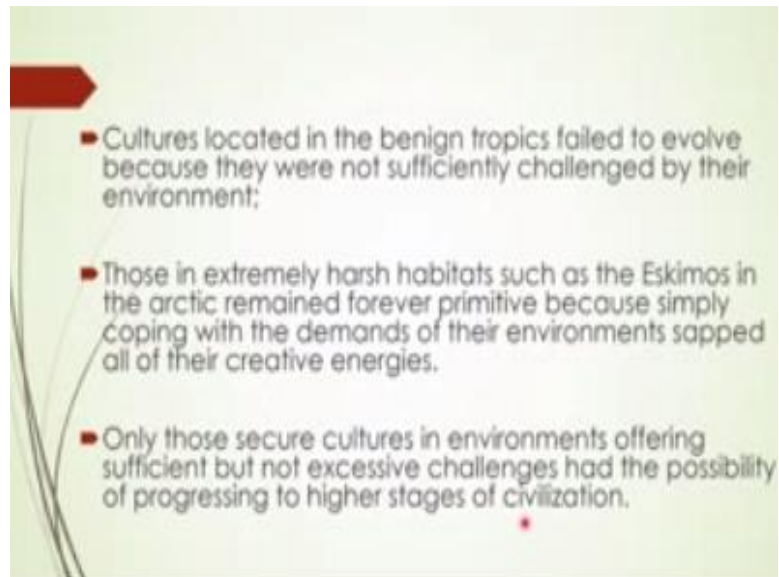
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Now therefore it has to be seen that environmental possibility in essence has also a rolled to make a broader understanding of human ecology now perhaps the faults of possibly stems was taken by Amold Toynbee a British historian in his extensive work of a study of history and in his work he primarily argued that the development of civilizations could be explained in terms of their responses to environmental challenges.

Now this perhaps the works of Amold Toynbee is the pioneer in terms of he taking the possibly steps now in that cultures has to be innocent located in a benign tropics.

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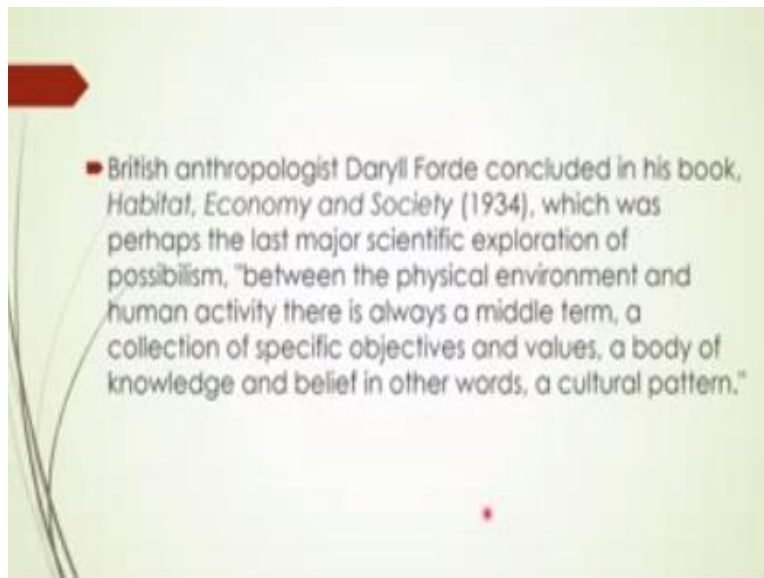
Which fail to evolve because they were not sufficiently challenged by their environment now secondly as we have explained about the certain example about the Eskimos in the n12 determinism now since the Eskimos have habited the extremely harsh and one of the conditions they tends to be engaged or far away from civilizations and they are considered to be primitive because of the coping demands or the kind of adaptations which is being created by the environment.

Now those kind of culture which in essence the environment of sufficient but not excessive challenges have the possibility of progressing to higher states of civilization, now in essence there is a condition that if an environment to some extent has in a way influences the human community to in away be more positive to changes therefore as I said an example of the works of Dempsey Scott wherein he talks about the hills and evading. Now if you look at the kind of civilizations which is normally being witness the valley dwellers or innocence the plain areas are much more developed in compared to the hill areas.

Therefore those environments who inhabited the valley areas are more receptive to changes and therefore civilization is more has much more positive in wrote in the context of the valley in

compare to the hills now therefore there is a higher possibility of that kind of civilization which in essence it is preference or if not they are able to adapt in a more positive manner. Now if you look at the works of the British anthropologist that is there is sport now in his book or habited economy and society which was published in 1934 he tries to look at the scientific explorations of positing that is between the physical environment and human activity now in that he argued that there is always a middle term that is a collection of specific objectives and values that is a body of knowledge and belief in other words a cultural pattern.

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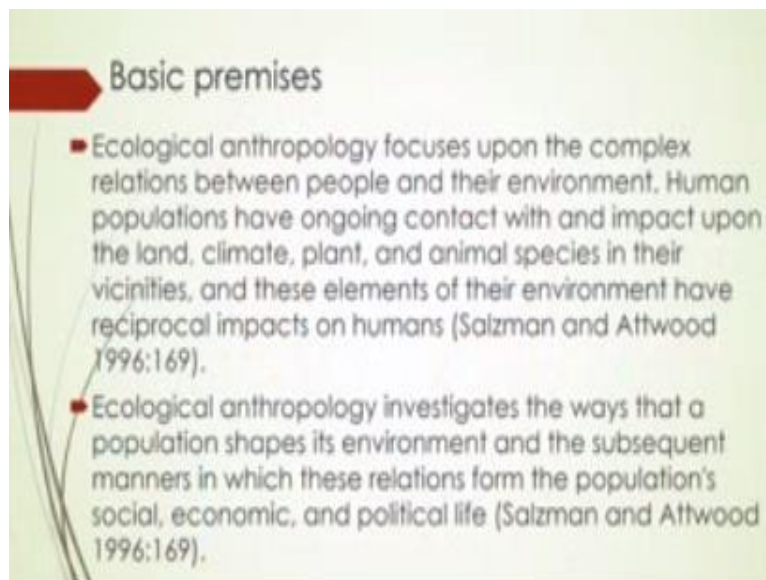
Now what is this cultural pattern in trying to look at the kind of the graphical terrain if not the economic conditions or the economic production of and relationship between societies if you try to look in this the linkages between the three there is a possibility of looking at the importance of looking at the cultural pattern well after giving a brief overview and the theoretical premises of how to situate human ecology and how human ecology emerges and the kind of theoretical approaches in which the anthropologists and historians tries to come up with different ideas.

Now after discussing that now we will try to now look at what ecological and ecological anthropology is it was primarily these course tends to take an ecological anthropology stand and

tries to understand the kind of problems which are normally being witness. Now first and foremost we'll try to look at the basic premises of what ecological anthropology is it tends to in essence focus upon the complex relations between people and their environment and as we know the human population in essence have an evolving if not an ongoing relationship with and also in return it has an impact upon the sort of the graphical area that is the climate and plants and animals and different kind of species in their surroundings for instance and all these elements in essence have a reciprocal relationship not impact on the humans.

Now therefore there is a continuous interrelationship between the humans and various other ecosystems, now therefore this is perhaps the basic premises.

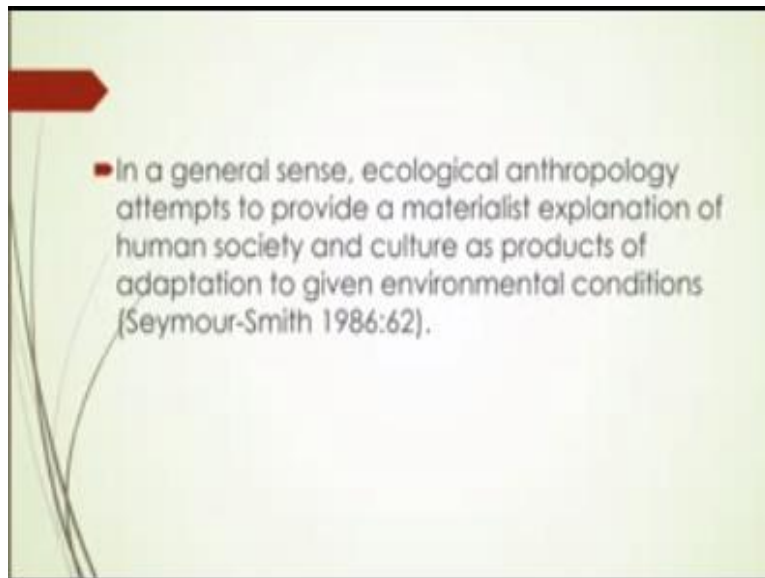
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And secondly ecological and properly also attempts to understand the way how humans tends to perceive if not understand its environment and the subsequent manner in bits these relations from the kind of human populations relationship with the social economic and political life, now as we have discussed in the human ecology it further tries to broaden because in the Anthropology it tends to situate the kind of impact it has on the human culture in a more intense and in a more in-depth manner. Now in a general understanding ecological and probably also attempts to provide

sort of a materialist explanations of human society and culture as a product of adaptation to a given environmental conditions.

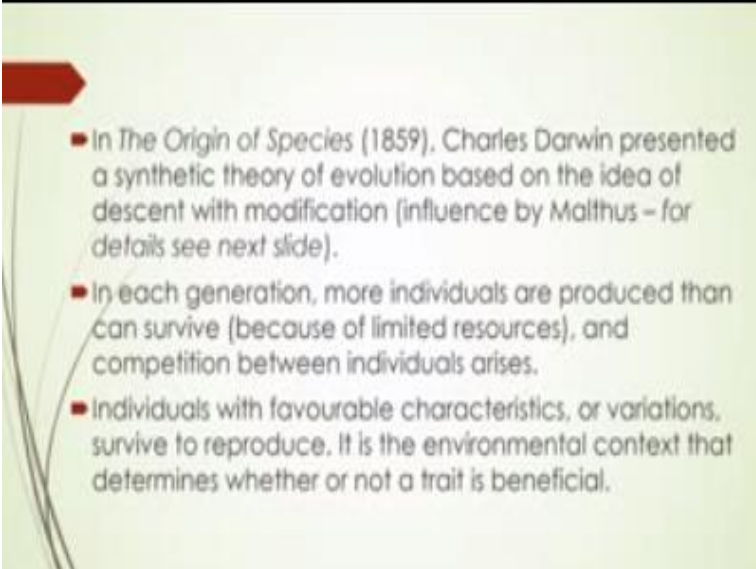
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Now many of the sort of ceremonies rituals for that matter the kind of relationship which evolves among humans or humans and nature it tends to the ecological and complete ends and pompous all these relationship which exists between not just within the human society but humans and nature or other human and environment now it tends to locate and understand a sort of an explanation to this kind of relationship.



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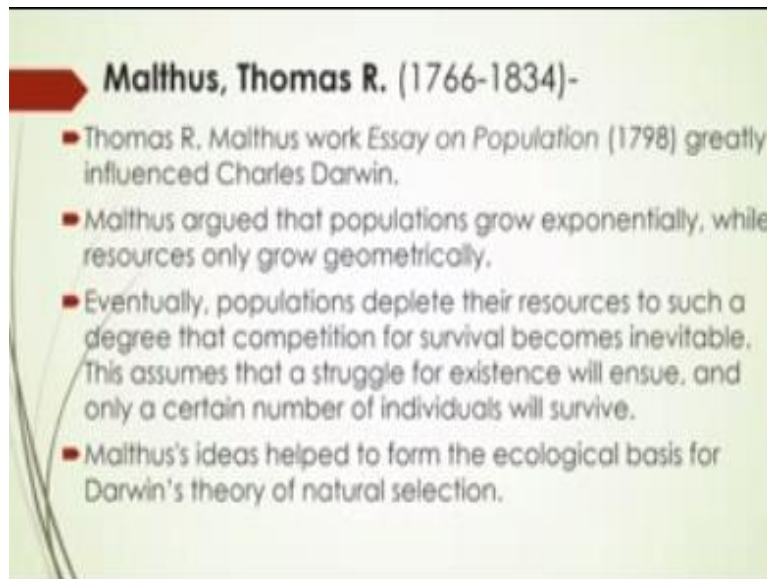
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- In *The Origin of Species* (1859), Charles Darwin presented a synthetic theory of evolution based on the idea of descent with modification (influence by Malthus – for details see next slide).
  - In each generation, more individuals are produced than can survive (because of limited resources), and competition between individuals arises.
  - Individuals with favourable characteristics, or variations, survive to reproduce. It is the environmental context that determines whether or not a trait is beneficial.

Now first and foremost let us begin by looking at the works of Charles Darwin now just doing in his work the *Origin of Species* were back in 1859 he tries to give us an explanation a synthetic theory of evolution of human society which is based on the idea of decent and modifications which is influenced rather by mulches which I will try to explain in the next slide. Now what modules as we all know was the first who tends to relate the environment or human society by specifically talking about populations and he in essence was the pioneer in terms of sort of bringing the idea of this population killed now their maininnocence by drawing the work going from the works of molecules tends to give a synthetic theory.

Now what he says is in every successive generations the individuals produce a much more modern what they can in essence survive that is because of limited resources and competition between individual arrivals now how are these beings influences what actually has influences an individual to compete among themselves, now the capitalist might give different explanations or rather the Marxist understanding of this economy's modes of production will give a different reflection on this but then as human evolves in essence it tends to give there it arises the individuals to have engage in more of a competition in terms of sort of accumulation of wealth or production of more wealth now for instance individuals who are in a much more better position

or sort of a favorable characteristic or variations in essence is able to survive to reproduce now it is this and one the context that determines whether or not a trait is beneficial. Now depending on the kind of environment and individual sin habit it can have either a negative if not a positive implications.

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Now with Malthus as we have to slightly talk about Malthus strongly discuss about how if the population is to grow exponentially and if there can be an imbalance between a population and the resources which means there will be sort of an imbalance between the demand and supply that is the demand is the human and the supply is the resources that is if the resources will the resources be able adequate to the rising population of human society this is something which Malthus in essence has propagated in his work on assay of population which was published way back in 1798.

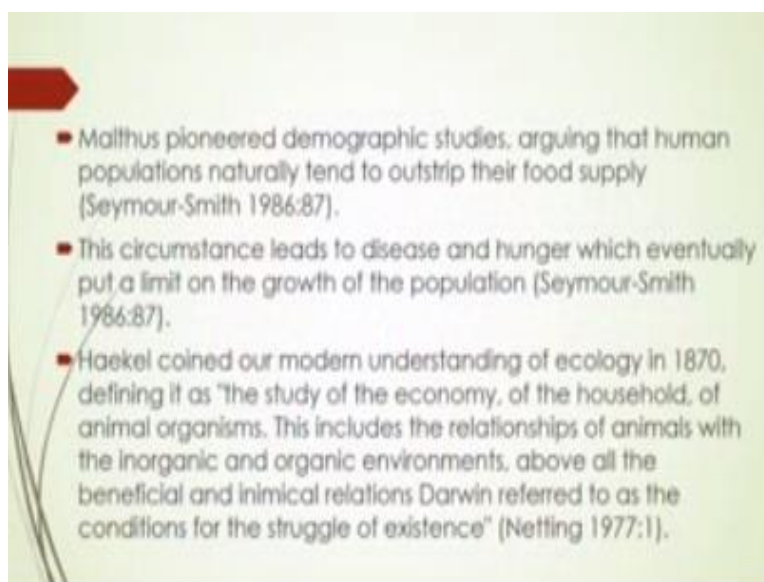
Now in this work what Mull to strongly argue is if the population in essence increased exponentially now the population depletes their resources to such a degree that competition for survival becomes inevitable that is only those who are capable or if not able or strong will survive because there will be Swift competitions over to the availability of limited resources this

as this theory assumes that a struggle for existence will ensure an only a certain number of individuals will survive.

Now this idea of survive or survival again is posited differently by gesturing by borrowing from Malthus theory on race here on population that is just as and strongly talk about survival of the fittest and in his idea of survival of the fittest the also strongly propagated that it is not the strongest and the fittest who is going to survive but rather those who are able to adapt we will survive that is the mark my words that is adaptation innocence is the key to survival against.

Now Malthus ideas innocence influences to form an ecological basis for Durbin's theory of natural selection now how is this Malthus ideas instrumental in setting these ecological bases because the natural resources in essence has an emphasis if north and influences on the human understanding of their environment, now as he strongly posited it he see on population Malthus happens to pioneer in the field of demographic studies and in he argued that human population naturally tends to outstrip the food supply that is the increasing demand or the increase in populations in a sentence to outstrip the supply from that is the natural resources and these imbalances between demand and supply will eventually lead to business and hunger.

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- Malthus pioneered demographic studies, arguing that human populations naturally tend to outstrip their food supply (Seymour-Smith 1986:87).
  - This circumstance leads to disease and hunger which eventually put a limit on the growth of the population (Seymour-Smith 1986:87).
  - Haekel coined our modern understanding of ecology in 1870, defining it as "the study of the economy, of the household, of animal organisms. This includes the relationships of animals with the inorganic and organic environments, above all the beneficial and inimical relations Darwin referred to as the conditions for the struggle of existence" (Netting 1977:1).

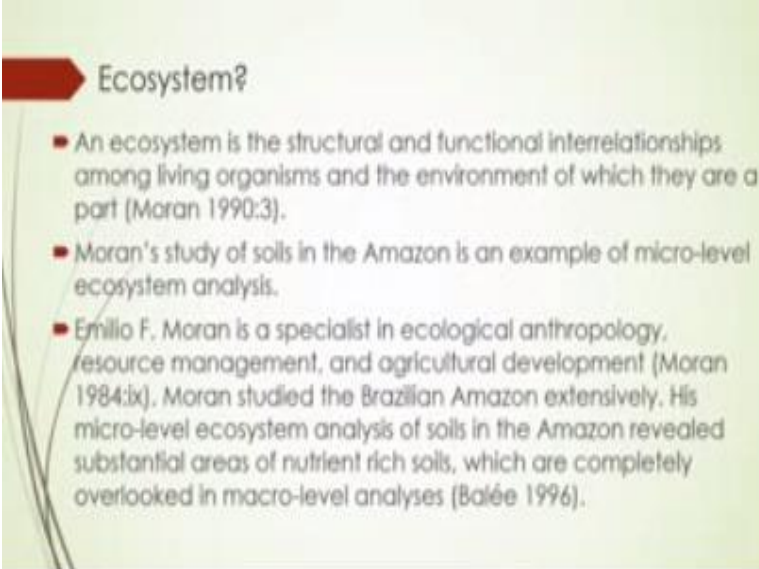
And which will put a limit to growth of the human population as a Seymour and Smith tends to observe now on this similar line vehicles point our modern understandings of ecology in way back in 1870 in which he defined as the study of the economy that is of the household of animal organisms and this in essence includes the relationship of animal speed the inorganic and organic environment and above all there is a beneficial and inimical relationship between what they will refer to as the conditions of struggle of existence.

Now what is these conditions of struggles of existence now as the human population will in essence exponentially grow they will be a struggled among the human species for existence now in a lighter wind Malthus in essence posits that the world which is has constantly checked the populations of human growth as you know are in a war people get killed and then therefore innocence war innocence is seen to be a positive measure in order to control the human population.

Now if you look around globally if not even in the Indian context now the exponential rise of population innocence is seems to be in a perceived to be in a in a alarming manner because we tend to say that if there's a more of a population it is impossible to sort of guess as to the needs of every bit of individuals now for instance if you take the case of let's say unemployment, now in Indian context perhaps it could be because of we have that populations overall population because there is this imbalances between the demand and supply because there is an increasing demand for jobs but the government is not in a way in a position to supply or cater to the rising demands of these jobs.

Now let us try to look at the give a recap of what ecosystem which in essence in essence I have discussed in the first two lectures.

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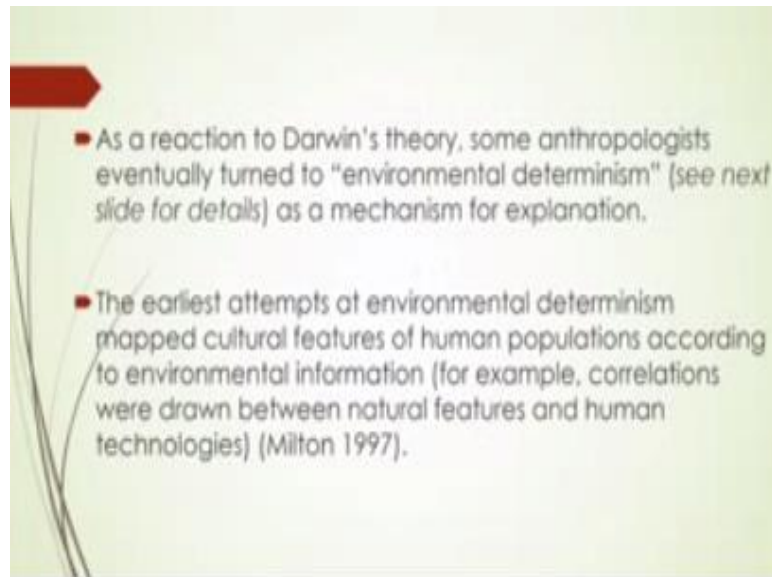
**Ecosystem?**

- An ecosystem is the structural and functional interrelationships among living organisms and the environment of which they are a part (Moran 1990:3).
- Moran's study of soils in the Amazon is an example of micro-level ecosystem analysis.
- Emilio F. Moran is a specialist in ecological anthropology, resource management, and agricultural development (Moran 1984:ix). Moran studied the Brazilian Amazon extensively. His micro-level ecosystem analysis of soils in the Amazon revealed substantial areas of nutrient rich soils, which are completely overlooked in macro-level analyses (Balée 1996).

Now an ecosystem has to be understood from a structural and functional interrelationship there is persistence among the living organisms and the environment of which they are part of it that is the structural and the functional interrelationship among waste living organisms that is what is the human but also other living beings. Now first and foremost Moran's study of soils in Amazon is an example of these micro levels eco system analyzes.

Now Moran's is again a specialist in the ecological anthropology and also in resource management agriculture development now it is the D in Brazil the Amazon is micro levels eco system analysis of soil revealed that substantial areas of nutrient-rich soils which are completely overlooked in the macro level analysis now which means Morin tries to put it that we need to focus to a micro level ecosystems analysis of soils if one has to look at the structural and functional relationship among living organisms we service the environment.

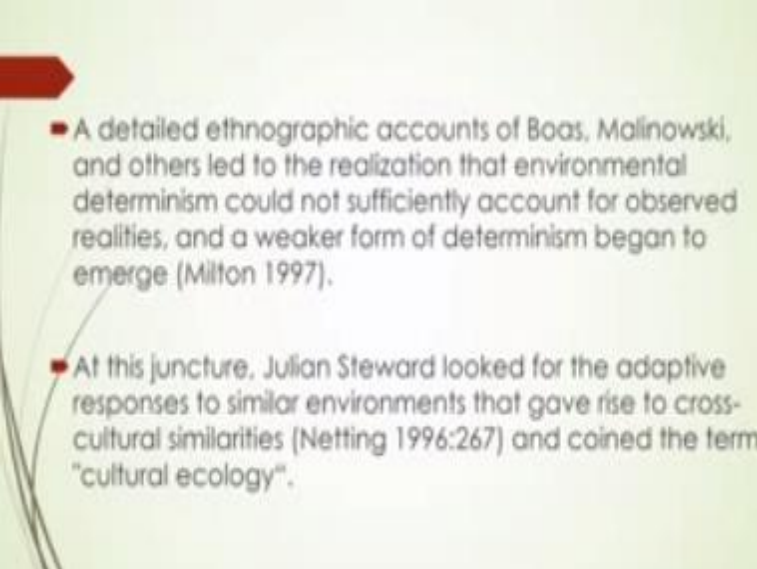
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Now again as are action to what their wills theory because of their main focuses on the alarming increase of population and he tends to perceive population as something which is not really fundamental if not equitable to their available resources. Now there are some anthropologists who in essence visit if not does not agree with what the idea of turbulent and they tend to come up with this idea of environmental determinisms as mechanism for explanation.

So in essence and one to determinism as we had discussed in the theoretical two miles of human ecology as something which is sort of a challenge but contradictory contradicting to Darwin's theory. Now one of the earliest attempts in the environment determinism was to map out the cultural features of human populations according to their environmental information for example the correlations were drawn between natural pieces and human technologies again human technologies is important here.

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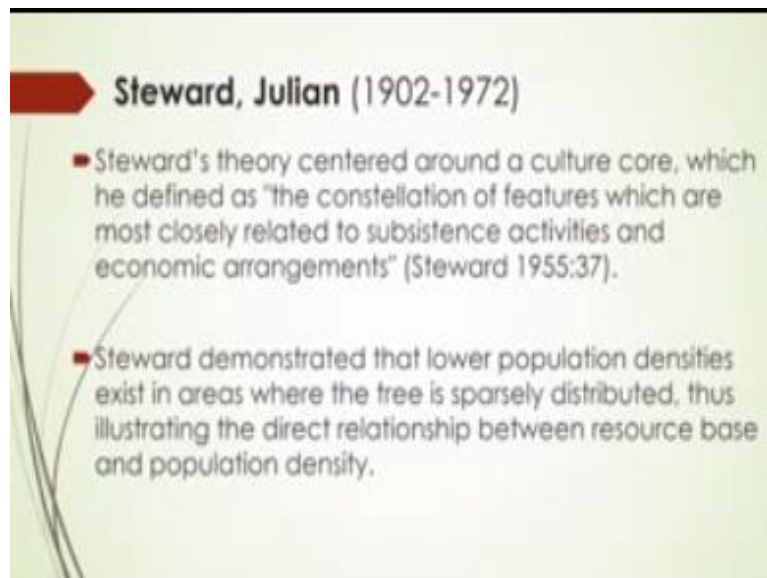
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- A detailed ethnographic accounts of Boas, Malinowski, and others led to the realization that environmental determinism could not sufficiently account for observed realities, and a weaker form of determinism began to emerge (Milton 1997).
  - At this juncture, Julian Steward looked for the adaptive responses to similar environments that gave rise to cross-cultural similarities (Netting 1996:267) and coined the term "cultural ecology".

Now Boas Malinowski was perhaps one of the pioneer and saw police who carried out a ethnographic account of the wars that is the worst community terms to sort of come up with the idea that the environmental determinism in essence could not sufficiently account for observed realities and rather there can be a weaker form of determinism which began to emerge now the works of Malinowski among the board in essence made us to realize that and once the determinism alone could not sufficiently give a little account or an observation or realities from that perspective.

Now at this particular point of time the works of Julian Steward attempts to you know give much more of an emphasis on the adaptive mechanism or adaptive responses to similar environments their innocence gave to the rise of cultural similarities and alternative to that he coined the term whole cultural ecology. Now the cultural ecology is in essence with evolve from this culture sort of and one to determine using because it has to be sinned in ecology has to beseemed in relationship between the human culture now the contribution of Julian Steward still what innocence in the in ecological anthropology is enormous.

And his work primarily centered on the culture for now in this in the works of that culture for him in essence give an emphasis on the constellations of features.

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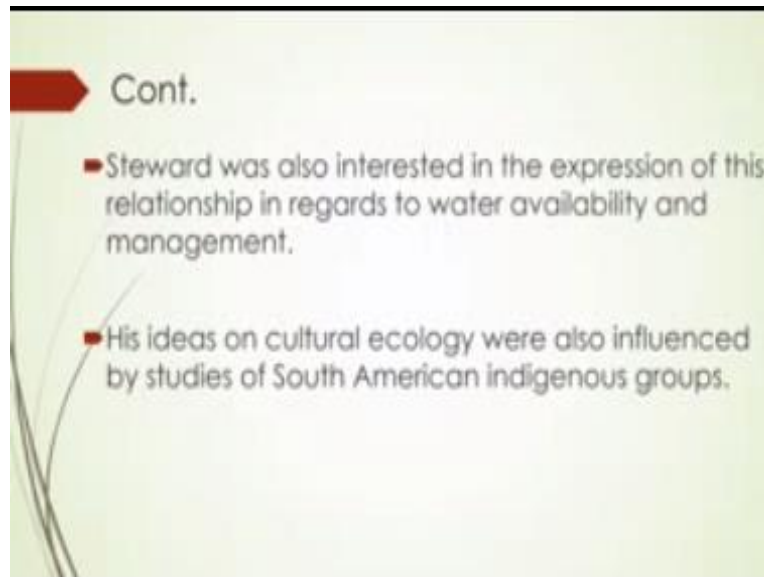


Which are most closely related to subsistence activities and economic arrangements, now in this culture for Steward Innocence tries to give a much more emphasis on the kind of subsistence activities of how a community stands to and give in certain kind of economic arrangement. Now in this in trying to understand this economic arrangement Steward demonstrated that in a lower than lower population densities it there is where the three is sparsely distributed thus it he illustrates or give an explanation that there is a direct relationship between resource based and population density.

Now in a way he tries to look at how a few population innocence Flores is if not prosper that is he tends to put it from the idea of these subsistence activities, now I will try to explain this further in a much more clear way in the upcoming lectures by citing certain case studies.



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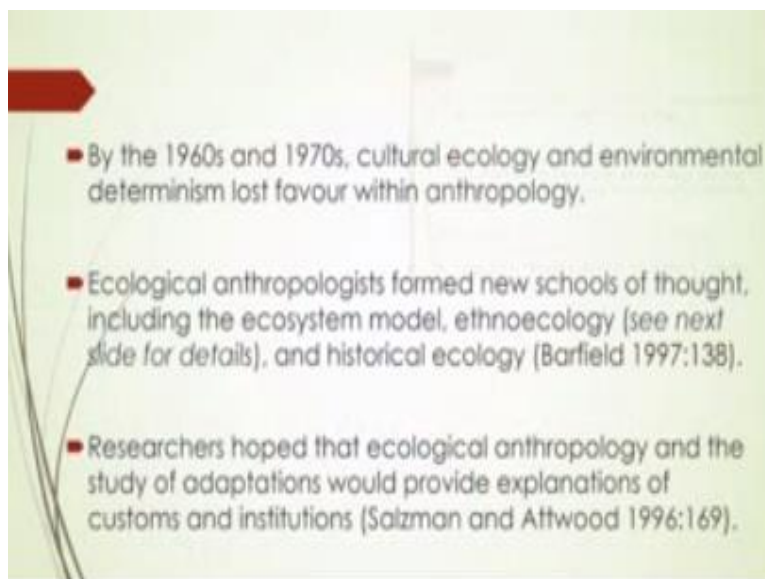
Now he would was also pretty much interested in the explanation of this patience eat between that is the regards to water availability and management that is sort of the resource management his ideas of this cultural ecology again was influenced by his studies which was focused on the South American and indigenous group now again the availability of this water or management of resource he tends to focus on the kind of knowledge system which the business communities have in the South America now this knowledge system has to be understood in the context of how the communities were able to sustainably you know utilize the resources or how well they manage if not use the resources.

Now yesterday he comes up with engaged in three particular in understanding or an investigation of cultural ecology, now the first is he tends to look at describing at understanding at the natural resources and the kind of technology which was used to extract and process them now why is technology important the context of extracting or rather exploiting the resources because technology innocence determines how well a community is able to engage in the sustainably using the resources or not and secondly he also outlined the social organizations of work for the subsistence and economic activities.

And thirdly he also tries to trace the influence of these two phenomenon on other aspects of culture now therefore our innocence skyward often fluctuate between the idea of this determinism and possibility and we can in a say in a way say that he was more interested in trying to engage in a comparative studies of using comparative methods in order to discover these the laws of cultural phenomena which was again espoused by Virfilled, now therefore how does one strives to engage or locate in the understanding the cultural ecology of a particular society now Steward what has pointed out these three important steps of engaging an investigation of a cultural ecology of a particular society.

Now way back in the sixties and nineteen sixties and seventies cultural ecology and an one to determine agent innocence tends to sort of declined or if not wane away in the within the disciplines of anthropology now equals anthropology's tends to engage in the forming a new school of thought which includes the ecosystem models and also sub-brand sub-discipline like at no ecology and historical ecology.

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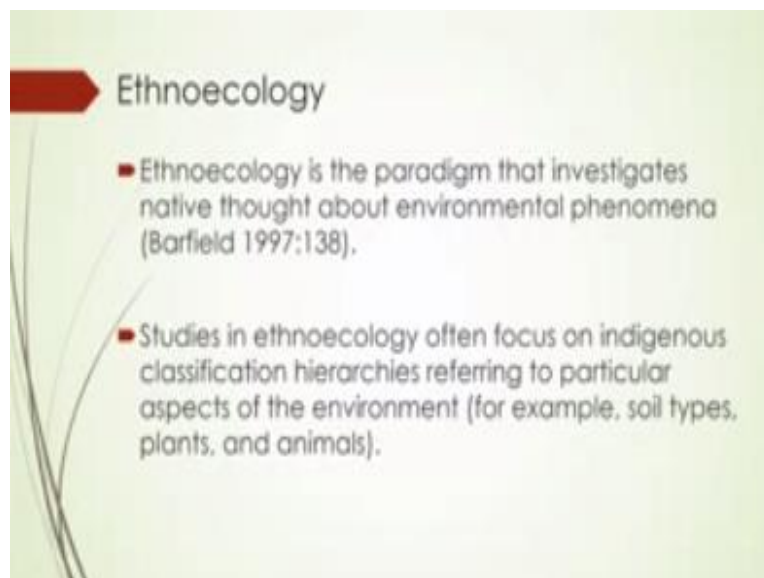
And with this sub-disciplines researchers in the field of ecological anthropology have a strong urge and hope that the study on adaptations would provide a particular explanation of customs

and institutions that is how a human institutions is influenced is not to be understood in the context of humans and environment, now in essence by incorporating all these subfields ecological anthropology belief that populations are not engaged with the total environment around them but rather with a habitat consisting of certain selected aspects of the local ecosystem now again this local eco system is given importance.

Now furthermore its populations in essence has its own mechanism of adaptations which in essence over a period of time is institutionalized in the culture of that particular group especially through the use of technology now these technologies again is developed and it has evolved over a period of time depending on the kind of adaptation which a human society has tends to cope with the environment and this adaptive mechanism is being instill traditional lies within that cultural group then partially partly it becomes sort of a part of their culture those practices in a sense one.

Now what then is ethno ecology at no equality can innocence tends to look at the paradigm and investigates.

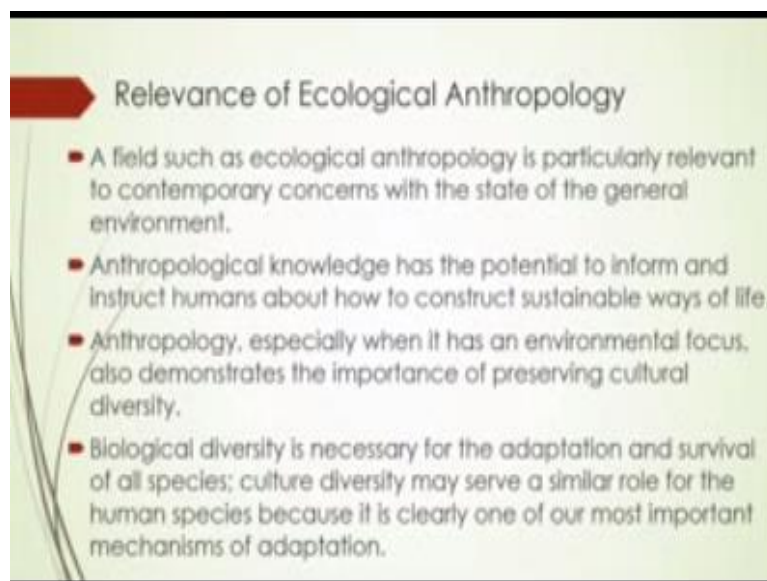
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Native thought about the environment or phenomena the phenomena in which it operates and of a particular native society how they operate in the particular environmental phenomena and in the it also looked at how a particularly focuses on the indigenous classifications of hierarchies referring to a particular aspects of environment now for instance the kind of soil types plants and animals which a particular communities and based upon now these are some fill show or into with at no ecology look at we can also partly mention about ethno medicines how a particular native societies have engaged upon the environment or it tries to look at sort of the medicinal plants their knowledge know-how of that community and then through that engagement how they are able to sort of use that knowledge for their own benefit.

Now those are some of the sort of sub fields of ecological anthropology now what is the relevance of ecological anthropology and why do we feel that within anthropology.

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Why is the need or the focus on ecological anthropology now afield such as ecological anthropology in essence is primary 11 to the contemporary concerns with the state of our general environment and the kind of knowledge within anthropology has sort of the advantage or potential to sort of provide and information regarding the human society about how to construct

a sustainable ways of life now again sustainability or sustainable development has in essence attempts to occupies a very important topic is machine in the recent times and perhaps ecological anthropology in essence is able to sort of investigate further how human populations tends to engage in a much more sustainable ways of life by trying to lock in and understand different forms of cultural groups indifferent settings or in different environment.

And in the ecological anthropology it also it has strongly focuses on the environmental perspective by demonstrating the importance of preserving cultural diversity, now cultural diversity can the sins or explain in the context of serving different cultural groups and trying to compare and look at how different cultural groups tends to behave is not operate differently indifferent environment.

Now again biology biological diversity is necessary for the adaptation and survival of all species and within this cultural diversity may serve a similar route for the human species because of it is clearly one of the most important mechanisms of adaptation. Now biological diversity has to be sinned or in relationship with cultural diversity, now this is partly the reason why this course or if not the importance or relevance of ecological anthropology is, thank you.

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