Political Ideologies: Contexts, Ideas, and Practices
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Ecologism Main Concepts, with Examples

Hello everyone again, and welcome again to our ideologies NPTEL Course. This is on the subject of ideologies, and the year is 2019-20, as I'm sure you're all aware. We're about to do the second lecture in our seventh topic, our seventh topic is ecologism - and we're about to, we're continuing the, the topic. This is our second lecture on it.

Well, when we wound up last time, we saw that ecological commitments require that we reject anthropocentric theories - that is, theories which put humans at the centre of the universe either conceptually or practically or both. Instead, according to ecologists, we need an ecocentric perspective - because according to ecologism, the world, life, is an interconnected whole, and the various elements in the living world are also interdependent.

Now this replacement of anthropocentrism or human centred outlooks by ecocentrism runs through the main ideas of ecologism. So what are the main ideas, we'll do those now? There are four main ideas. I will list them first, and we'll take them turn by turn. Ecology, Holism, Sustainability, Self-Actualization, those are the four.

We'll start with ecology. This has developed as a branch of biology, and its basic principle is that all forms of life, whether the plants or animals, depend on systems of living and non-living things. That's not particularly revolutionary. It's not difficult to see. These systems are called ecosystems. So they would include living and non-living things, according to ecology. And examples would be a pond, a forest, a field, a river. But ecosystems are not closed systems; ponds and lakes are often fed by other sources, such as rivers or underground water courses, and they're, and they're also warmed by the sun. Otherwise they'd be permanently iced through, right through. We do sometimes see that.

Now according to ecology, ecosystems have an inherent tendency towards equilibrium, or homoeostasis. That's a Greek word derived from *homo* meaning the same, *heos* meaning

dawn, perhaps also ‘early’, *stasis* meaning the condition of being static. That’s what homoeostasis means, it’s the condition of stasis, of being stationary, in the same condition.

But when systems are left to themselves, according to ecology they’re self-correcting, or self-regulating. We’re probably familiar with the term ‘balance of nature’, and that seems to cover both ideas, that is, the tendency towards equilibrium and the inherent tendency to self-correction or self-regulation.

But such concepts raise other problems. For example, many natural processes take too long a time for us to be sure that they have a natural tendency towards equilibrium. And other large scale events, such as violence, storms or earthquakes, can make it impossible for us to tell whether or not any one ecosystem would have regulated itself over a period of time.

Secondly, ecosystems often interact with other systems in very complex ways. A poor monsoon can mean that rivers carry much less by way of nutrients into the sea than they otherwise would, and ocean life is therefore affected. And that has consequences for local ecosystems, such as particular species of food, I have I beg your pardon, particular species of fish may suffer because they’re getting fewer nutrients in from rivers, which carry nutrients into the oceans; fish may suffer - and that means the entire food chain of which particular species are a part also changes in its character, and so on. But ecology has become a very substantial and varied field of research, and it has contributed greatly to scientific knowledge.

We’ve already seen some of the, I’ve already mentioned the work on the European Zebra Mussel, which is, and has for some time been, causing problems in certain North American waterways and harbours. It’s been pumped out of ships’ ballast tanks, when ships have arrived from parts of Europe and have - as ships do - pumped, pumped out ballast tanks, replaced them with, with new water. But the European Zebra Mussel has therefore found, found a home in which it can survive, and is causing problems for other life forms and ecosystems in the United States. That’s not an unfamiliar issue in other parts of the world. We’ve encountered, I’m sure we’re aware of, aware of invasive plant species which have been introduced sometimes by accident or unintentionally.

But that’s ecology or the idea that we must see the world as interconnected ecosystems, and these are not closed systems, but generally speaking, ecology takes the view that these are self-regulating and have a natural tendency to equilibrium or homoeostasis.

What about holism? Now holism involves a rejection of exploitative attitudes towards the natural world. That is, a rejection of attitudes which see nature as no more than an economic resource for human use, or perhaps another kind of resource solely for human use. Holistic thinkers also reject those philosophic or scientific approaches which regard the whole of nature as a machine. And if we regard the whole of nature as a machine, we think the workings of this machine can be identified and then controlled to serve our human purposes.

Now holistic thinkers particularly see those kinds of ideas or instrumental views as arising in the work of the French philosopher René Descartes, 1596 to 1650, and also [to] Isaac Newton 1642 to 1727. And holistic thinkers see Descartes and Newton as being responsible for this kind of instrumental view of nature, even though Newton spent much of his time in the study of divinity. But holistic thinkers focus on particular areas of their, of the thinking of Newton and Descartes.

Among the particular areas of Descartes work which holists criticize would be his separation of the mind and body - a distinction we, we call Cartesian today, mind-body separation. Similarly, holists criticize Descartes system of two-dimensional mapping, even though we can, in our systems of representation extend that to three dimensional mapping - and in other systems, extend those to n-dimensional mappings.

Similarly, Descartes spent a lot of time analyzing what it meant to, what it meant to reason logically. He has actually written a book called *Rules for the Direction of the Mind*. And holists would regard Descartes' thinking as having had a very damaging series of consequences because of its tendency to abstraction and to instrumentally, and to the instrumental representation of the world.

Newton for his part is rejected by holistic thinkers for his ideas of straight line motion, of frictionless surfaces, and for seeking mathematical explanations, or explanations using analytical mathematics, of all mechanics. Now [that] those are the kinds of problems that arise, those are the kinds of issues that arise in Newton's or Descartes work which holistic thinkers reject.

But we must remember that holism certainly does not require us to reject all science or anything like that. For example, many areas of medicine have for a long time recognized the importance of diet, occupation and social context, and customs and habits as well, as essential elements in treatment and longer-term healthcare. We're no doubt familiar with doctors who have told us to

avoid certain kinds of foods, to avoid damaging our health by, by ingesting toxic or dangerous foods, however attractive these are, sugar, fats, excessive salts, alcohol certainly, and the consumption of various other often illegal drugs, and so on, the things that doctors caution us against. They also caution us about making sure we take enough exercise, we get enough sleep, and so on. There's nothing new about that recognition, and holistic thinkers certainly wouldn't reject those.

Now in addition, holistic thinkers can point to developments within the physical sciences themselves which amount to, which pose, significant challenges to Cartesian and Newtonian representations of the world. What might holistic thinkers have in mind? One example would be the demonstration in relativistic physics, that acceleration and retardation affect the speed of time when that is measured in the respective frames of reference of the observer and the observed.

And that's not today or radically upsetting or undermining thing to say, those who follow physics and perhaps the mathematics of Einstein will be familiar with that. And the effects have been recognized with, if I'm not mistaken, the fact that that timepieces, clocks and watches, aboard spaceships have returned to earth, showing a time several minutes slower than earth time, precisely because of the acceleration and retardation involved in, in sending vehicles into space and then decelerating or retarding them on their way back into the atmosphere or for landing on various planets.

So holistic ecologists certainly don't reject all science, but they've often gone much further, and many have argued that religion such as Hinduism, Taoism, and Zen Buddhism regard all things, whether living or not, as part of a single divine creation. Some green thinkers actually don't distinguish between the animate and the inanimate.

Now that's not unknown among various populations. If I'm not mistaken, the Sámi of Northern Sweden and possibly parts of Finland, consider that everything has a soul. And they remain silent when they walk out into woods and ice-fields, and so on. Every item, everything on the planet has a soul and therefore, our own conduct, if we are Sámi or observing Sámi ethics, requires that we remain silent and not disturb the world, whether inanimate or animate.

So some green thinkers even see all things as being alive. James Lovelock is perhaps the best known proponent of such a theory, himself a former, if I'm not mistaken, physicist. Now

Lovelock, calls this the Gaia hypothesis. He derives the name from *Gaia* or *Gaia*, the Greek word for the earth. Our word ‘geology’ also has the same source.

Now Lovelock, oh yes, he is a biophysicist, a former biophysicist, and he holds that the earth itself is an intelligent living system. It will respond to changes humans cause to it, and will even punish us, if we cause too much harm to it. Lovelock rightly points out, he recognizes, that this is not a new kind of theory in the sciences. For example, James Hutton, often regarded as the founder of modern geology, likened the earth to a superorganism. The theory may not be as far-fetched as it might seem to be at first sight either. For example, the sun has warmed up by over 25% since life is thought to have begun on earth, but the composition of the earth's atmosphere has hardly changed at all.

Therefore, there is a case for saying that human activity has affected the atmosphere more than solar warming has done. An implication also arises that the earth has responded to the greater intensity of solar heat, [reacting to it] reaching it by regulating its own response.

So, that is the further implication of Lovelock’s thinking and would possibly count as evidence for the theory that the whole earth itself, the earth itself, is an intelligent living system. Well this then has consequences for our conduct upon it, and our next main idea in, in ecologism is that of sustainability. And it’s here, in the matter of sustainability, that ecologism goes beyond analysis and criticism. It offers prospective solutions or ways of proceeding.

Now these start by rejecting the idea of infinitely increasing consumption and affluence. Instead, sustainability theorists remind us, starkly sometimes, that we are rapidly destroying many of the resources or, as some call it, the natural capital, which we’re exploiting to support our current ways of life, including economic production. This has been called the tragedy of the commons, meaning that unlimited access to resources which seem to be available to all has a devastating collective impact on those resources.

We’ve already noted the effects of pollution. Another serious problem has been the destruction of forests for logging, or, as in the documented case of Brazil, the destruction of forests for the creation of grassland, so that cattle can be reared for commercial meat exports, mainly to the United States, Russia, and China.

In Brazil, close monitoring by environmental activists has led to better enforcement of legal controls and to some replanting of forests, which had been cut down; I draw that from Greenpeace. It is likely that the current Brazilian government is reversing the policy and certainly you'll be aware of media coverage on protests against the recently renewed policy of cutting down Brazilian rainforests for logging and for the planting of crops for, for oil, for biofuels.

So you'll be aware of those controversies. Brazil is only one example of course; similar things are being said about other parts of the world such as Indonesia, where logging has been severely, I repeat publicly and openly, criticized for crops which enable palm oil to be extracted, which is widely used in, in processed foodstuffs.

But every country has got issues of this kind to face. In the United Kingdom, for example, there have been severe controversies about the, over the replacement of deciduous forests by pine forests for commercial uses. And these kinds of controversies arise all over the world. If I'm not mistaken, large areas of the United States had been deforested over the last 200 years or so, for, for food grains.

Now sustainability therefore requires that we use only renewable and replaceable materials and resources, and that we actively replace and renew whatever we use. This could mean abandoning the use of fossil fuels altogether, because we cannot replace them. If I'm not mistaken, it takes very long periods of time, perhaps tens of millions or hundreds of millions of years ,to create fossil fuels, that is oil derived from carboniferous growth, which gets crushed as it gets sedimented and buried beneath rock. Now I'm not a geologist - but, we simply cannot replace them in a recognizable timescale. We can't replace fossil fuels.

So, we can see here, there are similarities between holism and sustainability. Sustainability, like holism, amounts to the rejection of an entire economic tradition. Why? According to mainstream economic thinking, individuals are motivated to maximize their own utility, their own advantage, particularly in financial or other commercial terms. Now according to sustainability theory, we can survive only if we recognize that were part of a very complex biosphere, and that means ensuring that our actions do not upset or destroy the balance of the biosphere. That means we need a completely different philosophy of economics. In fact, proposals for alternatives have been made for almost a century now, not only by scientists; the physicist Frederick Soddy, who discovered isotopes, argued from 1922 onwards that there are physical limits to growth, as well

as ethical limits in that beyond a point GDP growth would not be worth whatever it displaced, presumably meaning people as well as environmental assets and features.

I draw that from, from the environmental economist Lindley. Now of course the concept of GDP data is more recent than that. It is a derivative of work done if I am not mistaken in the 1950s by Simon Kuznets in the United States, the economist Simon Kuznets.

But, Soddy's point is very recognizable. In effect, economic growth would not be worth whatever it is, it displaced - beyond a point economic growth, would not be worth whatever it displaced, and that would include people as well as environmental damage and damage to environmental features and so on.

Another economist, J. C. Kumarappa, held that exchange must include human values. Herman Daly saw the economy as, I quote, 'a wholly-owned subsidiary of the environment', end of quotation. In other words, the economy is just a subset within the whole environment. Bluntly, Kumarappa says, well, Herman Daly says, the economy is just a wholly-owned subsidiary of the environment, putting it in economic terms or commercial terms, if you like.

We need to limit, therefore we need to limit throughput because of its high external costs. This is an economist talking in economic terms, we need to limit throughput because of its high external costs, and we need to employ more people, more people, presumably instead of replacing them with machines. Daly also advocated an incomes policy. I draw that too from Lindley's work.

What might this mean? If we've done anything in economics, we'll be aware of the idea of externalities, whereby you and I might engage in a commercial transaction, you might buy something from me, I might buy something from you, we exchange money for, for the transaction. And whatever waste material or whatever other costs or damage are caused by the manufacture of goods, or by our transaction, are simply external to the transaction between yourself and myself.

We're familiar with the idea of externalities. But - Daly raised caveats, significant warnings about, so to speak, maximizing throughput or productivity perhaps, because of the external costs. If we maximize throughput, then the external costs become too high. They take various different forms as we shall see. Daly also considers that we need to employ more people, presumably instead of replacing them with machines. And he advocated an incomes policy.

Another economist, Nicholas Georgescu-Roegen, or Georgescu-Roegen if you prefer, opposed weapons production or war production. He called his approach bioeconomics, and he argued in favor of organic agriculture, together with the use of solar energy or nuclear fusion energy, and there are people very committed to nuclear fusion. I happen to be a former colleague of the, of the physicist Martin Fleischmann, who seemed at one point to have come close to achieving nuclear fusion. And nuclear fusion groups are still working often with great interest from major governments around the world.

Now, they haven't got there yet, but Georgescu-Roegen advocated solar energy or nuclear fusion energy. We're perfectly familiar with the use of solar energy today, nothing unusual about that. There's another economist, Joan Martinez Alier, who holds that economic sustainability requires social justice. There are parallels here of course, with, with Soddy's thinking, with Daly's thinking, and with, more recently, the thinking of Amartya Sen. Economic sustainability requires, presumably can't be achieved without, social justice.

An engineer, Mathis Wackernagel and William Rees, a professor of public policy, have devised the term 'ecological footprint', and this has gained, gained increasingly wide use. We're familiar with the term 'environmental footprint'. The term in, in its earlier form was 'ecological footprint'. And we're perfectly familiar with that term, it's been talked about quite a lot, particularly in relation to the growth of civil aviation and our continuing dependence on and use of fossil fuels. I draw those that analysis from the work of Lindley, from 2015, and Lindley may well have done more work since.

Now in the matter of sustainability, perhaps the most famous figure is E. F. Schumacher. And in 1973, he published a book, *Small Is Beautiful*, a highly influential book. He argues, Schumacher argues that production needs to be reorganized. Yes, we need to create goods and services, but we need to do so in ways which create social bonds, which encourage cooperation, and overcome egocentrism. This does have an anarchist element, and it runs completely counter to mainstream economics, because it recognizes a spiritual dimension in economic activity.

In other words, economic activity is also social activity, and that means our participation, our collaborative participation; according to Schumacher, we must organize economic activity so that it also creates and encourages social bonds, which for their part encourage cooperation and overcome egocentrism or selfishness.

Well this certainly does have an anarchist element, it recognizes a spiritual dimension or if you like mental or emotional dimension in economic activity. It has also been called Buddhist Economics. I draw that term from Lindley and from Andrew Heywood.

Today some of the things that Soddy and Kumarappa said may seem almost prescient, they may seem like foreknowledge of things. Did they see what was going to happen? But mainstream economic theory is almost all classical or neoliberal. It seems not to have responded on any great scale to the challenges environmental economics poses. This is probably because the latter rejects or shows the problems in one of the central conceptions in classical economics.

What is that central conception? It is the idea that we're all rational calculators of our self-interest and apparently nothing else. We are primarily, and perhaps solely, rational calculators of our self-interest. That's the view of humanity taken by mainstream economics, by classical economic theory, if you like mainstream economic theory. Then, if Schumacher is right, it would not be enough to continue producing more and more, but to do that more slowly.

It's not enough to continue as we are, but to, to throttle back, to say well, I'm consuming a bit less, I am producing a bit less than I did last week or we as an economy are producing and consuming less than we did last year or whatever. Instead, we would need to accept that the current idea of economic growth is both misconceived and deadly dangerous - because it ignores or cannot accommodate the idea of what we shall do when our finite resources run out. What would we do if oil ran out? That's being seriously addressed in various circles. But quite a lot of the thinking is not being made public, and neither are the findings, possibly for reasons of commercial self interest.

Now - Schumacher is making a really significant point; we simply cannot continue using the planet's resources on our present scale. He offers the alternative, an alternative, which would involve our returning to much smaller communities. It would mean reviving craft skills, it would mean consuming less. And above all, above all, it would mean restoring and replenishing all the resources we consume. Sections of certain green parties, for example in Germany, hold to this view in designing their policies.

So that completes the four main ideas in ecologism; we find them in all forms of ecologism, even if approaches to them vary. But that then leads to the, to the possibility that we would have

to devise a way of conducting ourselves ethically, or ethical systems and ethical conceptions, which enable us to live in sustainable ways with and as part of the whole of the natural environment, the whole of our environment, I should add. And that's given rise to various accounts of environmental ethics.

Here, this is our next subtopic. We've done the four main ideas, we're going to look at environmental ethics now. Now, a range of moral theories is involved here. These underlie ecologists challenges to the dominant economic theories. The main theme here is that we have to think about the effect our actions will have on the biosphere, not only today, but in the future.

It means thinking of generations yet unborn and of doing all we can to ensure that animal and plant species will survive into the future. I've seen a United Nations poster, about 20 years ago, in fact, exactly 20 years ago, I saw a poster produced by the United Nations which said, I think it was the United Nations which said, we do not own the earth, we have only borrowed it from our children. It is a very powerful message. And that is the kind of thing that lies behind, that informs and shapes, environmental ethics.

Basically, it's the approach that we have to think not only of the biosphere today, but of the biosphere in the future, about the likely effect of our conduct on the biosphere for future generations and that would include animal and plant species. This has been called environmental ethics. It is a form of deep ecology. It would require very substantial changes in just about our entire way and ways of life on the planet, on this planet. It would involve rejecting the idea that we can carry on doing what we do, but do it in greener ways.

So environmental ethics encompasses all of life on the planet, over a very long and perhaps indefinable period. This is also a form of biocentric equality, because it means that we humans are neither superior to other species nor privileged in any way. Arne Næss, who devise the term 'deep ecology' and the term 'shallow ecology', Arne Næss says, all living beings have, I quote, an equal right to live and blossom.d

In practice, this would mean, for example, abandoning monocropping, in which we grow single or dominant crops, sometimes over very large areas, because these endanger and sometimes destroy biodiversity. Similarly, we would have to stop introducing non-native species of plants and animals into particular environments, both in view of the evidence we already have, and because we cannot predict the outcome when we introduce such species.

We're familiar with examples. Eucalyptus, an Australian import into India, does have significant effects on, on the soil around it and therefore on plant life and therefore, presumably, on animal life. It is I, understand acidic and very thirsty for water. It may be well adapted for Australian, its particular conditions in Australia. But its, the damage it causes in parts of India where it is been introduced are noted.

Similar things of course happen with introduced species of animals. And this has been remarked, I mean, Australia gives a very obvious example, with the introduction of rabbits as, as European settlers moved to Australia and colonized it four centuries ago or so; rabbits became such a pest and was so destructive to Australian native species that diseases, in particular a disease called myxomatosis, had to be introduced into the population to control it. Rabbit-proof fencing is, I understand, widely used in Australia to protect crops and plants and even domestic gardens. Well there are plenty of examples like that and we will be, we run into them, all the time.

But environmental ethics goes together with different forms of our sense of the human species and our position in the biosphere. One approach is called self-actualization. This involves rejecting the dominant economic and political models - well, because these, according to self actualization theory, the dominant economic and political models involve conceptions of human nature which are dangerously unbalanced and very destructive, particularly, as we humans seem to have what looks like an unlimited capacity for technical knowledge or know how. But we have almost no answers to questions of why we do the things we do and why we live the lives we lead. We'll see this with our examples with, later on in the next lecture.

Well, self-actualization theory has led many ecologists to propose wide-ranging ideas of how best we must live in relation to one another and to the natural environment. For some ecologists, elements in Buddhism and other Eastern philosophies are the source of the idea that humans are part of a wider reality, that is, part of a single whole made up of all other humans and all other living things, perhaps even the entire universe.

That may sound vast or far-fetched, but such thinking could have significant effects on what we do. For example, scientific research may have to investigate wider effects on animals and inanimate things - including inanimate things too - and we would have to consider the likely environmental effects of new policies or technologies before rushing them into production or service.

The value of the idea of self-actualization may well lie in its critique of almost all our current ideologies and economic systems, that is, the critique put forward both on account of the environmental damage our existing systems cause and our existing ideologies, and on account of the ways those economic systems and ideologies restrict and even crush other ideas of what it is to be human.

So self-actualization is a very far-reaching conceptual challenge. Well, those are the main ideas and main major theories within ecologism. First of all, we've seen that the main ideas run through all forms of ecologism. And we have seen that further issues also arise, such as those of sustainability, environmental ethics and self-actualization. Well how do these enter into the political world or our sense of the political world? That will be the topic of our second [third] lecture, and we shall start that next time.