

Posthumanism: An Introduction
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Lecture 21
Lec 21 : Transcorporeal Trauma

Good morning. We return to companion species in this lesson, and we have, just to refresh your minds, looked at questions of belonging. We have made note of the fact that we cannot think of the human as a self-contained entity because we share vulnerability with other creatures and the fact that we assimilate and imbibe toxins and nourishment from other creatures, and that our ecosystem is a world-building which we undertake with other creatures. We shall continue this exploration in today's lesson, which is focused on companion and multispecies, part two, and in this case, the focus is transcorporeal trauma.

We have already mentioned in passing in the last session the point that a process or a practice such as toxic dumping affects humans and non-humans in different but similar ways. They are not identical ways, but similar ways. But we also know that these toxins affect the living and the non-living in the sense of how much damage they can induce or produce in, say, the soil or the water of a particular biome or ecosystem. We know that, for instance, the land in and around Chernobyl and the land in the Marshall Islands, where the United States conducted a very large number of nuclear tests in the late 1940s and early 1950s, remain contaminated with radiation and will remain so for several, several years perhaps longer than human existence on Earth.

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A subtheme in multispecies studies (ethnography, literature, art) is the toxicity shared by humans and nonhumans, living and nonliving.

A component of posthumanist studies' intersection with and interest in ecological matters and the Anthropocene, this subtheme focuses on the socio-economic processes and the material effects of these processes in the lives of humans, nonhumans and the ecosystem.

A related theme is of environmental justice for all species and lifeforms.

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Which means to say that toxins, pollutants, and contaminants do not just harm humans. They harm the non-humans, and they harm the non-living. They harm the non-living too. And this is an important factor to keep in mind when we speak about shared vulnerability.

So a sub-theme in multispecies studies, multispecies ethnography whether it's in literature, art, or philosophy is the toxicity that we share between humans and non-humans, but also between the living and the non-living. One significant component of post-human studies intersecting with environmentalism is the socio-economic process. And the material effects of this process on the lives of humans, non-humans, and the ecosystem. What is the effect of, say, agricultural practices, capitalism, or information communications technology? What is the effect, or what are the effects because there are more than one on

multiple aspects of the ecosystem. Human lives, non-human lives, living forms, non-living forms. So we can start with how, say, agriculture transformed the earth as in the soil by reorganizing microbes in the soil, which help plants grow. By reorganizing the power and function of creatures like earthworms. Then, of course, you have the early stages of agriculture, where humans used animals to plow the land.

Then, of course, the coming of mechanized systems of agriculture. Which transformed agricultural production forever. And what does it do? So in each case, the socio-economic and technological process is located within the lives of humans and non-humans, and the conditions of the living as well as the non-living. A related theme in these studies is environmental justice for all species and life forms.

So let's take Environmental justice first and ask yourself why we are doing this under posthumanism. Environmental injustice and social injustice are never separate. Where there is environmental injustice, you will see that its cause or its effect is very clearly material. As in,

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Environmental injustices and social injustices are entangled:

environmental justice insists upon the material interconnections between specific bodies and specific places, especially the peoples and areas that have been literally dumped upon. Environmental justice social movements and modes of analysis target the unequal distribution of environmental benefits and environmental harms, tracing how race and class (and sometimes gender and sexuality) profoundly influence material, often place-based inequities.

Stacy Alaimo



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Environmental justice movements and campaigns insist upon the material interconnections between specific bodies and specific places. This is Stacey Alamo's definition. Environmental justice movements and modes of analysis target the unequal distribution of environmental benefits and harms. Think about this. There are prohibitions now every year

from every United Nations organization about fossil fuels, that we should reduce our dependence on fossil fuels. No one is going to dispute that. Except that, in the case of countries in Africa, South America, and Asia, the solution to fossil fuels is a very expensive solution. The emphasis on, say, organic farming, buying locally, local produce as in local farm produce and farm products, these are excellent ideas. But how do they work in cases of smaller communities?

whose dependency on, say, the forest is total. So you look at suburban lives that depend on a certain kind of fossil fuel. You look at Adivasi or tribals who live in forests and who need to use the forest for their daily survival. And then you cannot go and tell them, ah, look, you know, you should not do this because it's dangerous for the environment. How do you resolve this?

As in, how do you conceive that the native systems of whether agriculture or celebratory rituals are damaging to the environment and they should be either allowed to continue or we should intervene. So, it would be a classic problem of man versus nature, or human versus nature. And we'll see a small instance of this in Amitabh V's Hungry Time, where there is a tiger trapped in a village and they're trying to kill it. And Piya, who comes in from the United States and abroad, says, oh my God, what am I saying? And she doesn't want to see.

And the gist here is that, do we give more value and worth to the tiger's life? Or do you give that kind of value to the human's life? This is a big issue in the environmentalist campaigns. Right?

What are we actually doing? Is it supposed to be done? The point I am trying to emphasize is when we speak about defending nature, They ignore the fact that defending nature might mean going against certain local practices, local ways of life, which have been there for generations and have not changed. An example here would be from Marla Kohn's book, *Silent Snow*, which is set in the Arctic.

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'[There are] high levels of PCBs and other chemicals in the breast milk of Nunavik mothers, chemicals they were passing to their babies'.

'PCBs [Polychlorinated biphenyls] are not water-soluble, they are lipid-soluble...sea mammals have an unusual propensity to produce fat...when they use up their fat reserves in winter, PCBs concentrate and migrate into their vital organs'.

'polar bears emerge from their dens with cubs no bigger than preschoolers but already loaded with chemicals...minute levels of contamination [that] seem to suppress the volumes and efficiency of animals' immune cells' '

Marla Cone, *Silent Snow*

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Marla Cole notes that the Inuit tribes, the Greenlanders, and those who live in Siberia have a very high level of chemical pollutants, toxins, in their bodies. And she doesn't know how they got there. Because there are no polluting industries in Siberia. There are no polluting industries where the Inuits live in Greenland and other parts. What are we going to say about that?

Where did the toxins come from? Manlapal discovers that the toxins are part of what the factories release in the United States. Okay, but the Inuits live very far away. They live very far away. The polluting chemicals from the factories are dumped into the ocean.

Ocean water flows. Ocean waters flow in every direction. Creatures like whales and seals consume this water and thereby ingest the toxins dissolved in it. Who eats the whales? Who eats the seals?

It's evident that seals and whales consume toxic water, and tribes that eat seals and whales contract the infection. Right? So what exactly are we looking at here? The

carcinogens that cause damage in humans also harm other species. Sandra Steingraber's book *Living Downstream* notes this fact.

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Aquarium studies in the laboratory show that the “same carcinogens known to cause cancer in humans and rodents also cause cancer in fish and mollusks—and they are often metabolized in the same way ...I have developed an idea for a pilgrimage that involves people with cancer traveling to various bodies of water known to be inhabited by animals with cancer—from Cobscook Bay in Maine to the mouth of the Duwamish River in the Puget Sound. It involves an assembly on the banks and shores of these waters and a collective consideration of our intertwined lives...

In Italy, dogs are more likely to have lymphoma if they live northeast of Naples, where illegal waste disposal is a rampant practice. (People living in this community, known as “the triangle of death,” also have elevated cancer mortality.) Military dogs in Vietnam exposed to the herbicide Agent Orange suffered from high rates of testicular cancer. Scottish terriers in Indiana have higher rates of bladder cancer if their owners use lawn chemicals. Scotties are particularly prone to bladder cancer and so serve as a sensitive sentinel for bladder carcinogens in the environment, according to veterinarians who are tracking cancer incidence in this breed
Sandra Steingraber, *Living Downstream*

“The term non-biodegradable is often applied to plastics, meaning they defy digestion by living organisms. Now research has shown that certain microorganisms very slowly biodegrade plastics in certain conditions... I had questioned Ebbesmeyer’s belief that plastic things break down in the gyre simply from UV exposure. After this trip, we wind up agreeing that a number of scenarios are playing out. Some of the gyre plastics probably began degrading on land, with an assist from pulverizing shoreline waves. But I have another theory. Given the bite marks on many of these plastics, I’m convinced a goodly number of these fragments were nibbled off larger plastic objects by hungry fish and passed as excreta’.
Charles Moore, *Plastic Ocean*

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The quotes from Sandra Steingraber's *Living Downstream* are on your slides, which you can review. She notes that the same carcinogens known to cause cancer in some humans also cause cancer in rodents, fish, and mollusks. What is the point here? The point is that other animals can also contract this illness.

And you think, oh, that chemical is carcinogenic, so we should not eat it. Yes, but it goes from our world, our world with the coats, into the water. Other creatures assimilate and absorb this chemical-induced water. And what is the result? The humans follow with some kind of disease, as do the animals.

The animal meat which these people consume provides the root for the bacteria, for the pathogen to enter the human system. So it's not a direct flow, but there is a certain way of pollution and collective constitution of our intertwined lives, as Sandra Stenderberg would say. The example I quoted before of the *Hungry Tides*, P.I. is very upset. Very upset.

In the village, the women ask Pia, so you are valuing tigers more than us? Because we are poor? Is that the reason? I mean, are our lives less worthy than those of the animals? And the last sections of *The Hungry Tide* are precisely about this.

What is the worth of human life? And the question that follows this: What is the worth of human life in comparison with animal lives? In comparison with animal lives. So, should we give it more value when there are animals affected or affected by medical conditions

arising from what humans have done? If you were to think about this, we have several other examples.

I have given you an example from St. Gabor. We have looked at the example from Mar-a-Lago and, of course, other parts of India. Charles Moore is credited with having discovered the Great Pacific Garbage Patch. And he has an essay called The Plastic Moon.

The term 'non-biodegradable,' and I'm reading out Charles Moore's quote here, which is also available on the screen. The term 'non-biodegradable'... is often applied to plastics, meaning they defy digestion by living organisms. Now, research has shown that certain microorganisms very slowly biodegrade plastics. There are microorganisms that do that.

They chew plastic. The discovery Marwakon made in the silent snow is frightening because it also means something else. There is no safe place on Earth. Wherever you are, because water and air travel, you are likely to ingest some chemical intoxicants. Chemical cleaning materials, for example, that are dumped here reach elsewhere.

The materials that are discharged as effluents from factories dumped here reach elsewhere. In all these cases, we are looking at those who are nowhere, let's not say people, let's say life forms. We are looking at life forms that are in no way connected to polluting industries or polluting locations. None of those. They are very far away, but the materials, the toxins, reach them.

Catherine Coleman Flowers, in her memoir on Alabama State in her text called Waste, notes that There are other problems here. And this is a study that shows sewage is outside their houses in Alabama. This is a very serious situation because it causes all sorts of illnesses. There is sewage.

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You can't understand how rural Alabama wound up with raw sewage in people's yards without first learning about how African Americans were brought here as slaves to work the soil.

it's not unusual for residents of poor and marginalized communities to be forced to pay for infrastructure that doesn't work.

In Lowndes County, Alabama, a decision was made to 'build a landfill that would accept garbage from outer counties...a classic example of treating a poor county as a dumping ground'

Catherine Coleman Flowers, *Waste*

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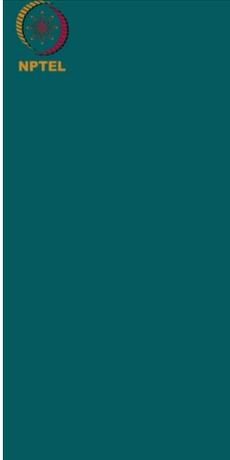
But the point Coleman Flowers makes is not about the sewage. The point she makes is about race. And she, as in Flowers, notes that Alabama becomes a dumping ground for chemicals because it is a black-majority area. And the Black majority are descendants of slaves.

Think about this. Think about the fact that dumping, the absence of sanitation, and the lack of hygiene are in a place with a history of slavery. This means and this is the important part a decision was made to build a landfill that would acquire and accept garbage from other nations as well. And it becomes a place converted into a dumping ground. Would any other region have been treated like this?

Would any other city, any other county, have been treated like this? What are we talking about here? We're talking about the very clear, very tangible connection between social injustice and environmental injustice. Once there was slavery, once there was exploitation of Black people in history, in the historical period of the New World up to the 19th century, They can still be treated like that even now.

So once you treated them for slavery, now you treat them as a dumping ground for whatever chemicals you want to dispose of. The point is also that animal bodies mediate between toxins and other animals. But animal bodies are like conduits. Right? Remember, a few minutes ago I spoke about the beluga whales and the seals that the Inuit eat.

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Animal bodies mediate between toxic matter sites and other animals, like the beluga whales living in distant regions, fish in the ocean...

The assimilation and circulation of toxic matter in resilient ways, the interaction of this matter with non-living processes such as UV exposure *and* living forms such as fish ensures that human *and* nonhuman bodies, are toxified in different but similar ways.

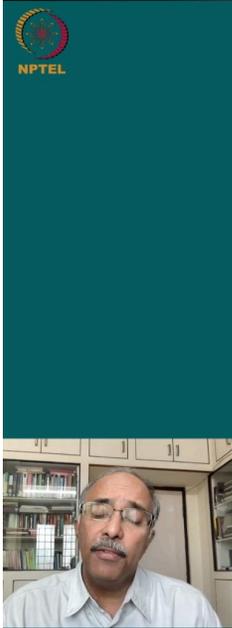
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The whales and the seals are creatures that absorb the toxins from the water. Then they are caught, and they give birth. This is one kind of problem. And for no fault of theirs, the whales have transmitted the condition, the chemical, the toxic contaminant into the bodies of humans.

So, we do recognize that the assimilation and circulation of toxic matter is guaranteed. Right? You can see here from Mar-a-Lago in three quotations that the world is imposing a very different kind of pollution. The north, as she puts it, has been transformed, and I'm quoting, and you can read it from the slide up there: 'The circumpolar north has been transformed into an immense learning laboratory.'

The lives of people are also just ruined. The point here I want to reiterate is that human and non-human bodies are shaped by the toxins they have ingested since childhood. Toxic bodies are placed in social, economic, and cultural contexts so that environmental injustice and harm stem from, or emerge from, social injustice and harm. So, like in the case of Alabama County in Flowers' book, *Waste*, there's a history of slavery, and now there's a history of toxification, which means there is a history of social injustice and now there is a contemporary condition of toxic environmental injustice.

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'Today, the outside world is imposing a more subtle, insidious, and intractable scourge on the Arctic'

'The circumpolar north has been transformed into an immense living laboratory where scientists are gradually unravelling the fate of contaminants on earth and their effect on all its inhabitants, from pole to pole'

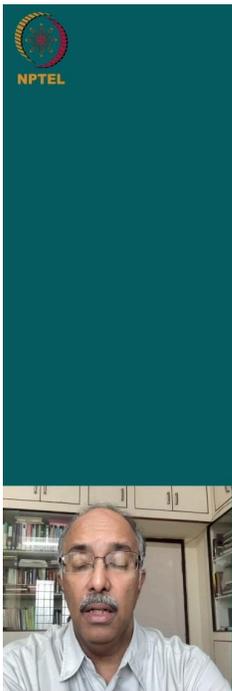
'[The land] 'untouched by contemporary ills, so innocent, so primitive, so natural, [is] the home to the most contaminated people on the planet ...I had stumbled on what is perhaps the greatest environmental injustice on Earth'

Marla Cone, *Silent Snow*

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You cannot separate social inequality and economic policy from environmental justice. People like Stephen Lerner, therefore, have theorized something called sacrifice zones, defined as areas that are contaminated because there's some mining going on, there's a... Some of you, let me work this out with an example so that you perhaps understand. After the Bhopal tragedy, you know that the area around Union Carbide was the worst affected, right? People simply died.

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Sacrifice zones':

- areas dangerously contaminated as a result of the mining and processing of uranium into nuclear weapons... [to] be expanded to include a broader array of fenceline communities or hot spots of chemical pollution where residents live immediately adjacent to heavily polluting industries or military bases.

Stephen Lerner

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In Chernobyl, they were debating where the exclusion line could be drawn. The Chernobyl... containment zone is ostensibly to limit the damage of the pollution spreading. But some will die inside. Those who have lived in the vicinity for years God knows what kind of conditions they have assimilated and what kind of genetic and somatic changes have occurred in them.

Sacrifice zones are areas dangerously contaminated as a result of the naming and processing of uranium into nuclear weapons. As Stephen Lerner would say, You have to include a broader array of fence line communities or hot spots of chemical pollution. So Chernobyl is one kind. Yes.

But we do know there are others. Gopal is another case in point. First you will learn that the term sacrifice zone determines the fact that low income and minority populations... So, there is heavy industry, or there is nuclear testing, or there is even a dairy industry or something else. There is unequal exposure that goes on here because, say, people who work in the factories themselves, people who live outside the factories, and people who are distant from the factories.

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For Lerner, the term 'dramatizes the fact that low-income and minority populations, living adjacent to heavy industry and military bases, are required to make disproportionate health and economic sacrifices that more affluent people can avoid'. This 'pattern of unequal exposures constitutes a form of environmental racism'.

Such racisms include dumping, extractivist mining in the Global South, introduction of invasive species, forced monocultural agriculture.

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Do the people who live distant from the factories consume the sacrifice zone? No. Never. So, what kind of sacrifice? Who sacrificed?

But the larger point that Stephen Lerner makes is: Do they know what they are doing? Do they know that they are going to be sacrificed? Are there no security provisions for them? The answer is, so far, no. So, multi-species trauma is actually the trauma of more than one life form, of more than one creature.

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Transcorporeal trauma is multispecies trauma, where species sharing vulnerabilities are exposed to toxins resulting in different yet similar consequences.

The sacrifice zones are multispecies, and now cover the planet.

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This is what I am referring to as trans-corporeal trauma. Trans-corporeal trauma is multi-species, and species sharing vulnerabilities are exposed to toxins, resulting in differential yet similar consequences. All sacrifice zones are multi-species, and as I have argued elsewhere, It is not like the people just outside the factory are affected by what's going on in the factory. As you may recall, in the several quotations from Marla Kohn's book on the Arctic North, there are people who live 8,000 miles away.

There is no factory. There is no polluting source. And yet their bodies contain extremely high levels of toxins. How did that happen? The ocean took them.

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The ocean transmits it via other waves, via other seas, to these people. So, there's no point in saying, 'Well, I am not in that area, and I will therefore be safe.' Multispecies vulnerability, trans-species vulnerability shows that all of us are vulnerable, but not in the same way, not in the exact same way. There are sacrifice zones in the immediate vicinity of factories, but we now need to acknowledge that sacrifice zones are multi-species. Perhaps the sacrifice zone is the planet itself.

Thank you.