

Posthumanism: An Introduction
Professor Pramod K. Nayar
Department of English
The University of Hyderabad
Lecture 12
Lec 12 : Posthuman Bodies: Cyborgs 1

Hello everybody. This is Vaman Nair of the Department of English at the University of Hyderabad, and we continue our exploration of post-humanism. In this module, we will be looking at what is arguably the most popular we could even say cultish representation of the post-human, and that would be the cyborg. The cyborg is actually a term that combines two terms, as some of you might know: a cybernetic organism. And the cult or culture of the cyborg emerges with the Terminator and Robocop films, which show humans meshed with, or merged with, technology.

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The *Terminator* and *Robocop* films initiated the popular mythology of the cyborg, or cybernetic organism, in the 1980s.

The merger of human bodies with machines to produce a hybrid is the cornerstone of popular posthumanism.

However, the origins of this myth are from the medieval ages, with the images of automatons, 'machine-man' and the emphasis on the mind as machine, the human body as machine, the cosmos as machine, etc, all of which arise in the European Enlightenment (Cohen, Muri).

Prefigurations of the cyborg in terms of biohybrids and species crossing humans are available across cultures: angels, zombies, shapeshifters, chimerae, etc.

'The conception of the cyborg is the moment of the human being as a machine, defined, powered, governed, steered, and motivated by the same forces as machines'
Allison Muri

'[A] cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction'
Donna Haraway

Posthuman Bodies : Cyborgs I

A human being who is part flesh and blood, part machine, part computer. And this is something that emerged in the 1980s. Although there are precedents for robotic creatures and humanoids that are part human, part machine in earlier texts as well, dating back to the 17th and 18th centuries the automata, as they used to be called. And of course, in the 20th century, in the fiction of Philip K. Dick, the Terminator and Robocop films actually generated the myth of the cyborg, the popular myth of the cyborg. The merger of human bodies with machines varies in different kinds and to different degrees. In some, they are

just physically merged; in some cases, the brains have also been modified with the arrival and insertion of, say, computer chips and pharmacological interventions of certain kinds and things like that. So there's a range of cyborg bodies, but

This merger of the human body with the machine, which produces a certain hybrid, might be defined as the cornerstone of popular post-humanism. It is the most popular, most visible form of post-humanism. What we can think of as popular post-humanism, what we can think of as the culture of the post-human. But, as I said, we have a history of such human-machine hybrids. And there are people who have traced this history back to the European medieval ages with the image of the automaton, with the theme of the so-called 'machine man,' with the emphasis on the mind as a machine or the human body as a machine all of which arose somewhere towards the end of the 17th century and the beginning of the 18th.

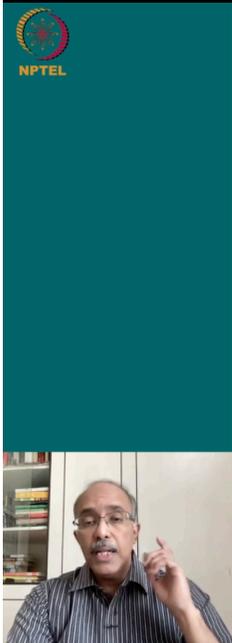
So the European Enlightenment, with its emphasis on science and technology, with its emphasis on scientific and rational explanations of the world and its processes, is responsible for the initial mythology to call it that. Might perhaps not be the best term, but never mind. It does for now. So this is where the mythology of the human-machine hybrid emerges.

And in the 20th century, of course, it has gone on to much greater degrees of various kinds. So, prefigurations of the cyborg, in terms of such biological hybrids and species, are available also in several cultures across languages, regions, and civilizations. Angels, for example, are some of those strange chimerical creatures. Partially human how much of it is human, how much of it is not human is a moot point. Think also of cultures and traditions and myths, legends where you have shapeshifters: humans that become animals, animals that take human form, monsters that appear in human form, humans that transform themselves into other things. Then we have zombies.

So we have a wide culture of human-animal hybrids, human-machine hybrids in several cultures around the world. Now, I'm not saying that all of them are going to fit your definition of the posthuman. But what I want to emphasize is that these are biological hybrids or biohybrids, and they are in between species, and they constitute what you can think of as the prefigurations of the cyborg. The cyborg is an odd, anomalous creature. The cyborg is a border creature.

It is somewhere between the human and the machine. It's neither human nor machine. And it's both human and machine. Which means to say, the cyborg blurs the categories. It blurs the species boundaries.

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The cyborg (or biohybrid) is a border creature, between the human and the machine, neither human nor machine, both human and machine. The cyborg breaks these categorical and even species boundaries.

The cyborg is an instance of adaptation, where the human material body adapts to and with a machine.

Chimeras – animal hybrids – are also posthuman in the sense they blur species borders.

The cyborg is an alternative way of thinking through the human and nonhuman subject.



Posthuman Bodies : Cyborgs I

How much of it is human? Can't say. How much of it is a machine? We cannot say. But let's also not forget that

And this anticipates some of the things we will be discussing in terms of the enhancement of the human. Let's not forget that there are humans who are cyborgs in other ways. People with pacemakers, for instance. People who are hooked up to, say, dialysis machines, who have artificial implants of various kinds. People who have implants and prostheses in their bodies.

They are also cyborgs. So it's a question of How much of the human remains? How much of the human has interfaced with the machine? So the cyborg is an in-between creature.

It breaks categories. You can also think of the cyborg as an example of adaptation. Where the human material body adopts and adapts to and with a machine. It merges with the machine. Think of several virtual constructions in films, whether it's Lucy or AI or Transcendence, where you have a robot that looks like a human.

But in many cases, as we know, the human enmeshes the machine, becomes a part of the machine, or incorporates the machine. So, in this case, like I said, it blurs boundaries because you see the human adapting to the machine, merging with it, so that the boundary between the human and the machine breaks down. Then there are also chimeras. Chimeras is a term from biology, specifically zoology, referring to animal hybrids. They are post-human in the sense that they blur species borders.

The cyborg It's a different way of thinking about the human and the non-human. Remember, we have traditionally focused in post-humanist schools of thought on decentering the human, that the human is not the center of the world. Well, the

post-human of the kind that the cyborg or the chimera is, is really at the heart of this because there is no longer a human centering the world.

It's a human-machine hybrid that centers the world. So, post-humanism focuses on decentering the human and is based on the assumption that a well-bounded, autonomous, integrated body is over. There's no such human body possible. All bodies are multiple and All bodies are fluid and networked.

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Posthumanism focuses on the transformation of the body based on the assumption that the age of the integrated, bounded body and identity is over. All bodies are multiples, fluid, networked and capable of morphing into, or connecting with, some other body/ies (including animal and machine bodies).

We live in the age of extensive cyborgisation:

- our bodies closely intertwined with technology, from medical and prosthetic ones to the devices of the digital world,
- with transplantation, genetic engineering and other biotechnologies the borders between species have blurred,
- our bodies and identities rendered into data stored somewhere else (also known as the mathematization of the body)

Posthuman Bodies : Cyborgs I

They can connect with or morph into other bodies. They can morph into other animal bodies. They can morph into other machine bodies. They can merge with them. Remember, we have spoken about cognition and consciousness studies where theorists have articulated the view that

Even our consciousness arises from being embodied and embedded in a context. Suppose that context is the machine. Can we now really say that our identity is restricted to, for example, what you are seeing of me on your screen? Or would you see my identity as this human flesh-and-blood person plus their virtual avatar? Plus their digital footprint or digital identity.

It's more than possible for us to say that there is a human person made of flesh, blood, and bones. And then there is an avatar. Because we have merged both of those. But for all practical purposes, I appear before you like this. With a particular face, with a set of gestures.

Hand waving or fiddling with my glasses. Or touching my nose or my cheek. Yeah. That's there. Somebody will say, 'Oh, another guy with balding hair and grey hair will always be moving about in a spasmodic fashion.'

Alright. Fair enough. But you don't associate me with just this. You associate me with what appears before you and the numerous digital versions of me that are there. For example, if you have watched a video of me, you have looked at a digital footprint of mine.

You mix the two. I am this, but also that. I am this with those. So, the post-human is a mixture, a congeries, as some of us have argued. And that involves the human flesh-and-blood schema, which is our corporeal self, connecting with some other body, which could be an animal body or a machine body.

We live in the age of cyborgization. In cyborgization, our bodies are extremely closely networked with technology. This technology could be medical, prosthetic, or devices of the digital world. Cyborgization also involves, in some cases, transplantation, genetic engineering, and other biotechnologies where species boundaries have blurred. You know that we have a massive transplantation program all over the world, right?

So you can get organs from other humans, but you can also get organs from other animals. Suppose some part of you has been replaced by an animal part. Skin or whatever it might be. Are you still entirely human? Or are you a little bit human and a little bit of whatever animal you have implanted in you?

Where do you draw the boundary? Like, for example, if you have a pacemaker, how much of you is you, and how much of you is the pacemaker? As in, what percentage if you want to talk numbers remains of you as a human, flesh-and-blood human, and how much of it is actually the pacemaker working? Extend the transplantation analogy, as some novelists have done. If you get somebody else's heart...

We believe that the heart is the seat of emotions. So if you have somebody's heart in your body, whose emotions are you feeling? Yours? Or the person who gave you the heart? That person's emotions.

If the heart is the seat of emotions, and your heart is not your own, whose emotions are you experiencing? Jean-Luc Nancy writes about his experience of receiving a donated heart. And he has a lovely essay on what it means to have a heart transplant. Again, some of these questions do come up.

So, transplantation. Then, of course, our bodies are cyborgized because our bodies and identities have been converted into data and stored elsewhere. A process known as the mathematization of the body. So, we have our bodies. We have our flesh-and-blood bodies.

But we also have the same flesh-and-blood bodies rendered into numbers, into data somewhere. This could be your biometric data. This could be your Amazon shopping data. Either you are a certain consumer of a certain kind. It could be any number of

digital data points that record your heart rate, your oxygen levels, your sugar, and insulin levels in the health data bank.

It could be your dietary requirements stored in your nutritionist's office. It could be your income tax data stored with the income tax office. It could be the government. It could be a private organization. It could be anything.

This is often referred to as a mathematization of the human, where you are rendered into data to be stored somewhere. This is also part of what I refer to as cyborgization. And it's important to recognize that cyborgization is where we are all transformed into a set of numbers or a code. This is where things get interesting. The human body itself has been seen as the manifestation or the realization of a code.

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The body as code

The human body began to be seen as an articulation of a code (the DNA). The chemical codes within molecular biology, the numbered chromosomes of genetics and the mapping of the entire genome sequence. Life is reduced to a molecule.

The biological body is 'biomedia' (Thacker 2004) which has two aspects:

- the body is the data stored in the computers and databases: a dematerialization;
- the data can generate a body: a rematerialization.

This means, biologicals become a set of numbers, and datasets enable the assembling of an identity for any purpose.

All bodies are trackable as data, from AADHAR cards to biometric identification at airports, security checks and passport offices.

Posthuman Bodies : Cyborgs I

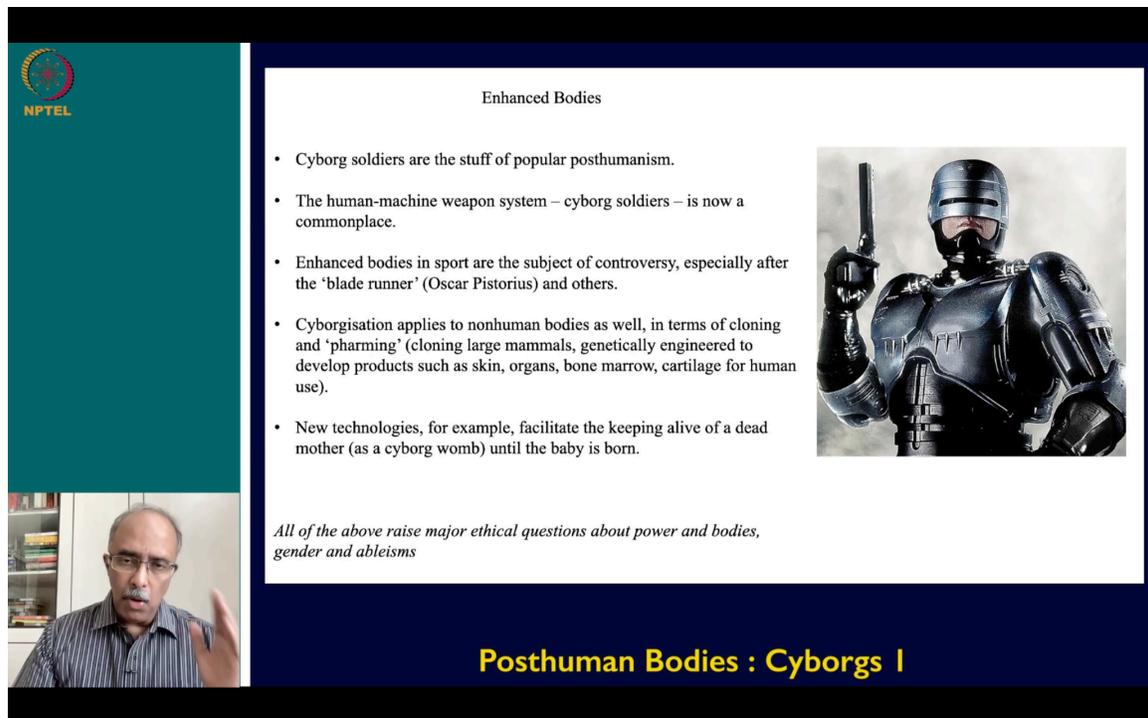
And that would be the code of life, the DNA, right? DNA is the code of life. The book of life, as it is sometimes called. And the body, the human person, the human person's identity is the making into flesh of code. The code appears to be, manifests as, is embodied as flesh and blood, which makes it a certain kind of a

material organism. Which means to say, the chemical codes within molecular biology, the chromosomes, the genome sequence, are all codes that make the human body what it is. The biological body, as Eugene Packer would call it in an early book from 2004, is biomedia. Which is to say, The body is the data stored in computers and databases.

I refer to it as mathematization. But it actually means that the human flesh and blood body is dematerialized into numbers. The human flesh and blood organism is transformed into a set of codes, a set of numbers, a data set. And that's often referred to as a

dematerialization because the body is material and the code is not. This point has been much debated because there are people who argue that data is also material.

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The slide features the NPTEL logo in the top left corner. The main content is titled "Enhanced Bodies" and includes a list of five bullet points. To the right of the text is a photograph of a cyborg soldier from the movie RoboCop. Below the list is a line of italicized text. At the bottom of the slide, the title "Posthuman Bodies : Cyborgs I" is displayed in yellow text.

Enhanced Bodies

- Cyborg soldiers are the stuff of popular posthumanism.
- The human-machine weapon system – cyborg soldiers – is now a commonplace.
- Enhanced bodies in sport are the subject of controversy, especially after the 'blade runner' (Oscar Pistorius) and others.
- Cyborgisation applies to nonhuman bodies as well, in terms of cloning and 'pharming' (cloning large mammals, genetically engineered to develop products such as skin, organs, bone marrow, cartilage for human use).
- New technologies, for example, facilitate the keeping alive of a dead mother (as a cyborg womb) until the baby is born.

All of the above raise major ethical questions about power and bodies, gender and ableisms

Posthuman Bodies : Cyborgs I

But I do not want to go into the contradictions and the anomalies within post-humanist theory. Let's keep it straight and simple now. So the body has been rendered material into a dematerialized data set. So the body emerges from code, from numbers, and is rendered dematerialized.

So there is a two-axis argument here in the case of biomedica. The body is the data stored in computers. The body generates a body. The data generates a body. So you have a dematerialization and a rematerialization, re with an R, that occurs.

So when we speak about identity, we are referring to both processes. The transformation of a material body into data and the embodiment of data into a body, which would be the DNA code becoming flesh and blood. All bodies are now available as permeable data. All bodies. This could be your Aadhaar, like I said.

It could be your DigiYatra app. It could be your health apps. There are plenty of those. Your Fitbits and whatnot. Where the body is available to you in the form of a scan, a printout, or a little image.

Oh, your oxygen level is this much. Your sugar level is this much. You've burned so many calories. Data. This is what people refer to as the datafication process.

Datafication of human life. Now, there are other things to talk about. And this has to do with enhanced bodies. We'll have other things to say about enhancements later. Cyborg

soldiers and you will remember the Universal Soldier series of films, Robocop, Terminator

These are human-machine weapon systems. They are cyborg soldiers. Enhanced bodies in a cyborg soldier make them immune to pain, immune to tiredness. They work more efficiently. They kill more efficiently, of course.

Their body itself becomes a machine. The body is a machine. Then there are post-human sporting bodies like Oscar Pistorius, famously called Blade Runner. Right? So, bodies in sport.

Cybernization applies to the non-human as well. Think in terms of the project to clone creatures, made famous by Steven Spielberg's big blockbuster film Jurassic Park. Think of genetic engineering to develop products such as skin, blood, bone marrow, and cartilage—human body parts that can now be synthesized in a lab, from synthetic blood to bone and cartilage, and things like that. Then there is, of course, the kind of technology that can facilitate conception IVF technologies but also, in extreme cases, a mother's body has been kept alive as a cyborg womb until the baby has been born.

These are, of course, things that raise ethical questions. Yes. Yes. Should we do this? Should mankind play God?

Should we create clones? Etc. Plenty of those. And we will have reasons to look at some of them as well. But enough to say for now that there are

technologies that do these things. They construct post-human soldiers, post-human sporting bodies, and cyborg rooms. Then, of course, we have the net-wrapped body. We have already discussed this in detail. We have had a detailed discussion on consciousness as an emergent condition.

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The Networked Body

In the posthuman, consciousness, will, agency and subjectivity are emergent conditions;

the autonomy of the human that marks, supposedly, its subjectivity is the consequence of relations and dynamics that cut across organic and non-organic actors, machines and humans.

The body today exists in conjunction with *technics*, with the networked environment, such as the GPS, for example, through which we plug into the city, its infrastructure, access points, public spaces, etc

'No longer is human will seen as the source from which emanates the mastery necessary to dominate and control the environment. Rather, the distributed cognition of the emergent human subject correlates with ... the distributed cognitive system as a whole, in which "thinking" is done by both human and nonhuman actors' .
Katherine Hayles

The body is now an interface, a node through which information flows and the info-flows themselves are instantiated through and as the body.

Posthuman Bodies : Cyborgs I

The point here is that the body exists in conjunction with techniques, with the network environment, and with GPS, for example. And note that when you arrive in a new city, you no longer need to ask for directions. Your GPS tells you. It converts your language into the local language and vice versa.

It tells you bus timings, train routes, hotel reservations, entertainment complexes what you have. You are never alone in a new place. Your GPS goes with you. Google Maps tells you the way. The translator tells you where to go.

You are with that machine. That makes it possible for you to plug into the city. Even though you are arriving in a new city, you are not new there. Nor is the city new to you. You plug into the city's networks because the transmission of information from the city to your system means you are already localized.

You are already a native. So this is the body as a networked system. Then, of course, transplantation, about which we have spoken before. Think about the fact that if you have artificial organs transplanted into you, it's difficult to think of where our borders lie. When parts of you come from elsewhere, what is your notion of the self?

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Transplantation, Clones and Posthumans

Organ transplants alter our sense of self, in terms of embodied self-hood, self-reflection (about the state of the body and the new organs inside) and social identity.

The borders and integrity of the body which has received organs from elsewhere are blurred and uncertain.

Clones disturb our sense of species self because, while they are derived from humans - i.e., they *replicate* humans - we find it difficult to perceive them as human. Whether such beings, derived from us, from our DNA, are to be treated as persons in the full sense of the word is a major debate today in medical ethics, philosophy and politics.

Clones as versions of humans are akin to us but not us, they are posthumans in the sense that they are created from us but are not seen as human progeny (a theme inaugurated in Mary Shelley's Frankenstein).

Posthuman Bodies : Cyborgs I

Some part of you has come from another person. You have a kidney transplant or a heart transplant, and whatnot. Where is your sense of self then? When you ask, 'Who am I?' The answer is, 'I am me plus something.'

Plus somebody's heart. Plus somebody's this, somebody's that. So transplantation induces a sense of and expands itself. The self is not restricted to the human form, to the human mind, or to the human consciousness.

And it builds on the fact that we have always co-evolved with other things, and now we co-evolve because other things are inside us. Think also of organisms and beings like clones. Clones are derived from humans, right? They replicate us. But then why do we find it difficult to see them as humans?

Now, whether they should be treated as persons or not, whether they should be ethically designed to serve us or not is a different debate. We will have reasons to go into that as well when we look at some of these problematic areas. So, humans are versions of us. Humans are human versions. They are akin to us, but they are not us.

They are akin, but not kin. In all these cases, we begin to ask: Where is the body of the human? Where is my self? Is it located in the body? Is it beyond my body?

Is it restricted to my body? Or is it more than that? I'll conclude with this quotation from Jean-Luc Nancy, whom I mentioned before, on his heart transplant and what happens afterward. He says, 'The general feeling of no longer being dissociable from a network of measurements, observations, and chemical, institutional, symbolic connections which do not allow us to be ignored or can be those of which ordinary life is always woven.' 'I am indissociable from a polymorphous dissociation.'

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‘The general feeling of no longer being dissociable from a network of measurements, observations, and of chemical, institutional, and symbolic connections, which do not allow themselves to be ignored, as can be those of which ordinary life is always woven. On the contrary these connections deliberately keep life constantly alert to their presence and surveillance. I become indissociable from a polymorphous dissociation’

Jean-Luc Nancy on his heart transplant and life afterwards



Posthuman Bodies : Cyborgs I

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The cyborg forces us to ask:

What does it mean to be human when the body is made of organic and inorganic parts, either within it as implants or linked to them outside the body?

Posthuman Bodies : Cyborgs I

I am part of something much bigger, a much larger network. So, if you look at the range we have covered from cyborgs to transplants to clones, cyborg bodies come in many varieties.

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There is the human-machine hybrid. There is the human-animal hybrid. There is the transplanted human. And then, of course, there is the clone. We'll be back with more on cyborg bodies soon. Thank you.