Course Name: The Novel and Change

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Lecture 18

Frankenstein - Part 7

So, hello and welcome to this NPTEL course titled The Novel and Change. We are looking at Mary Shelley's novel Frankenstein. We're beginning to wind up our reading of the novel and what we're doing with this particular text is that we're studying the text and the context together. In other words, you're looking at certain essays, including the introduction for this particular volume and looking at how this text or the content of the text in terms of plot, actions, characters can be interestingly situated in terms of the cultural, social, scientific debates happening around the time in which Mary Shelley is writing. And one of the things that we keep talking about in this study is how the novel Frankenstein finds really interesting and renewed resonance in the technoscientific culture we live in today, particularly in relation to, let's say, advances in biotechnology, bioscience, biogenetics, and also artificial intelligence algorithms, right? So all these different contemporary scientific debates and the the interplay of euphoria and paranoia that we see happening around these debates really make us remind and remember Frankenstein as a really interesting literary text which seemed to anticipate these different tensions around culture and science at different points of time. Now, the essay we will look at today, this should be on your screen, is titled Undisturbed by Reality, Victor Frankenstein's Technoscientific Dream of Reason.

And this is by Alfred Nordman. Now, we have already talked about how there is this dream and aspiration or even hubris, you might use the word, on the part of Victor Frankenstein to create this order of science, create this order of technology which will transcend, which will be sublime and which will transcend the normal order of creation and procreation and

reproduction. And part of the dream is also, a large part of the dream, is actually quite masculinist in quality, because essentially what he wants to do is to do away with the role of woman, the agency of woman, because he comes up with this idea, this experiment, whereby he can create a progeny, he can create a creature, an organism, without any intervention of the woman. And that can be entirely done in an experimental lab. And of course, the entire novel is about how the experiment goes terribly and colossally wrong. And what are the social and moral replications of that entire, you know, the confusion that comes with the misadventure of science that Victor Frankenstein is responsible for. And to that end, The novel also talks about this very complex relationship between science and ethics or technology and accountability. Again these are the debates that we can find a renewed relevance of in the world we live in today. Now this essay which talks about the whole idea of reality and unreality and how sort of the whole idea of reality is interrupted by Victor Frankenstein's hubris or aspiration to create this perfect paradigm of procreation is something that we need to be carefully studying in the context of the novel.

So, again, when we look at the whole idea of animation, animated by an almost supernatural enthusiasm. So again, the relationship between nature and super nature, the relationship between technology and the uncanny, these are very problematic, porous relationships. You don't quite know where one ends and the other begins. And there are references to alchemy, there are references to different kinds of pseudo scientific, you know, orders of knowledge. And how there's a certain sense of transitioning that's happening in the novel in terms of how Victor Frankenstein seems to transition from one order of science to another order of science. And this diachronic diagram of science, the whole idea of looking at science as some kind of an apparatus which can be used as well as misused is something that we must pay very close attention to. in the context of this novel. So we will see how this plays out. And also the other thing is this is a morality tale in some way. There is a very strong cautionary quality the novel has. And this is what this essay begins with, the quotation from page 35 of the novel where Victor Frankenstein is saying, Learn from me. How dangerous is the acquirement of knowledge? So a flip side, the dark side of knowledge and the whole idea of being the overreacher for knowledge. We talked about how there is a certain amount of certain Faustian quality in Frankenstein

in terms of how he transgresses the permitted parameters of knowledge, the sanctioned structures of knowledge and in the process he ends up creating something which is transgressive in quality. but rather than creating a positive transgression, he ends up creating monstrous transgressions. So the whole idea of monstrosity in the novel, the physical embodiment of monstrosity may also be seen as some kind of externalization of Victor Frankenstein's inner transgressive qualities in terms of his intellect, in terms of his mind, in terms of his brain, and how that gets manifested in a very grotesque form through the idea of the physiognomic monstrosity of the creature.

So, Victor Frankenstein's warning is one reason why his story continues to fascinate and why books like the present volume are written. And there are several spin-offs of Frankenstein, as you all know. There have been many multiple movie adaptations, different kinds of novels written with losing the same structure, same theme, where the scientist wants to create a superstructure of science which goes terribly wrong. So the very fact that it has such a lasting legacy in cultural popular imagination is a testament to its greatness, literary as well as cultural greatness and significance. The terrible replications of the ambition to become like Prometheus and animate the lifeless claim hold a stark lesson for today. So, the Promethean subtext, the mythical subtext of Prometheus, we talked about how it's already there, the whole idea of the mythical figure the subversive figure who steals fire from the heavens, goes against the wish of God and for that is eternally damned, eternally punished. Which is why, as you know, you remember, the subtitle of the novel is Modern Prometheus. So it's contemporizing the transgressive, subversive quality of Prometheus. This lesson, however, is not quite what it is often made out to be. Early on in the book, Victor, the modern Prometheus of Mary Shelley's subtitle, lets on that his inclination is not so modern after all, but is indebted to pre-modern mystical authors such as the alchemist Cornelius Agrippa. So, Agrippa, the whole idea of alchemy around Agrippa is a very interesting subtext. In the novel, there are multiple references to Agrippa. And of course, Albertus Magnus. So these are the scientists, these are the pre-modern scientists that Victor Frankenstein is hugely influenced by and ultimately moves on from there. But that imagination of converting something into something more sublime, something more transcendental that finds this, you know, voices, finds these anticipatory

mechanisms, even in alchemy, which is why references to Cornelius Agrippa, and Albertus Magnus are so important in the context, the dichronic context of the novel. And this is a quotation that Victor Frankenstein goes on to give. I should certainly have thrown Agrippa aside, and with my imagination warmed as it was, should probably have applied myself to the more rational theory of chemistry, which has resulted, from modern discoveries. It is even possible that a train of my ideas would never have received the fatal impulse that led to my ruin. It may appear very strange that a disciple of Albertus Magnus should arise in the 18th century, but our family and Magnus, of course, is a 13th century physicist, think of. So the idea of Magnus coming back in the 18th century is itself very, very strange.

That's something that Victor Frankenstein is acknowledging. But our family was not scientific. I had not attended any of the lectures given at the schools of Geneva. My dreams were therefore undisturbed by reality, and I entered with the greatest diligence into the search of the philosopher's stone and the elixir of life. So in a very interesting way, this passage shows the disconnect that Victor Frankenstein has with contemporary science. So, because his family was not very scientifically oriented, he wasn't really up to speed in terms of what was happening in contemporary science. So he was very much still drawing on the pre-modern scientific templates, including one of Agrippa, including one of Magnus. So alchemy plays a very important role. The whole idea of the elixir, which can convert stone into gold and the whole idea of transcending material reality, mundane material reality into some form of sublimity. So all these forms of imagination were heavily influencing him in his pursuit of knowledge. And one of the reasons why this is happening, as Victor is acknowledging over here, is because of his disconnect from his contemporary debates of science, the contemporary debates in materialist science, which obviously had no place for alchemy by that time. For Mary's readers in 1818, Victor's aspirations did not fit in this enlightened and scientific age. So in a very interesting way, he's a misfit, because he's drawing on theories which were already, you know, seen as very, very ancient, very medieval, and very obsolete in many ways. So those had no value and no relevance in his contemporary scientific templates.

And they were out of sync. with rational theory and the modern discoveries of chemistry. So the creature is not a product of modern science. And yet we fancy Victor as a mad scientist in a laboratory filled with fumes and sparks from modern apparatus. So in a very interesting way, the cyborg or the robot or whatever you want to call this organism is created not by modern science, but by some pre-modern scientific templates and theories, including one of alchemy, including one of, you know, which is founded by people like Albertus Magnus and, you know, Cornelius Agrippa, which theorists and scientists who were already debunked by the time Victor Frankenstein appears, you know, by the time Mary Shelley is writing her novel. It's an obvious question that is, how is it that this pre-modern mystical alchemist appears so contemporary today? The answer is as easy as it is provocative. Perhaps today's Franken foods and Franken materials are not the products of modern science either, but a return to alchemical dreams of reason, right. So there is this ancient dream, ancient alchemical dream where, you know, you can turn something into something better, something more sublime, something more, you know, transcendental. Because if you look at the metaphor of turning stone to gold, what is actually happening at a semiotic level is you are transforming something mundane into something magical and that is obviously non-rational in quality. But yet this irrationality is exactly what informs Victor Frankenstein's you know desperate desire to create a sublime creature, the sublime structure of you know organic living and breathing and procreation, which wants to break away in a very transgressive way from the rational morality, the rational sequence of science that he is finding himself situated in that sense is undisturbed by reality because the reality of its time will not permit or will not acknowledge alchemy as anything scientific or even possible in a pragmatic way. So undisturbed by reality, they are animated by almost supernatural enthusiasms. If you look at the vocabulary over here, animated by supernatural enthusiasms, something outside of science, something uncanny, something which is not really within the purview of pragmatic science, which is why the whole idea of undisturbed by reality becomes so metaphorically significant. Mary's novel suggests not only that magic and alchemy preceded science, but also that science can infuse and revive their pre-scientific ambitions. So magic, alchemy, which were seen as things or functions or situated outside of science, were suddenly becoming important because they seem to carry the promise of infusing and reviving some very, very ancient pre-scientific ambitions.

You know creating life out of nothing, creating more sophisticated material out of a mundane material, and so on and so forth. Victor's teacher, M. Waldman, points him in that direction when he portrays modern science as a rite of passage that will allow Victor to reclaim the alchemist's desire to bestow animation upon lifeless matter. In and of itself, the world of science is a disenchanted world with causal knowledge about the arrangements of facts. But before and beyond the enlightened and scientific age lies a rather more magical world, enchanted and animated, but almost unlimited power. So, this whole idea of unlimited really connects it, interestingly, with the whole transgressive aesthetics and Victor Frankenstein's scientific imagination, where he's not really... bound by or connected or roped in by the rational templates of science. Rather, he is inhabiting a landscape which is completely untethered, unlimited and limitless. And the limitlessness of Viktor Frankenstein's ambition is in a very interesting way pre-scientific or pre-modern in quality, because it's not really corrupted by rationality, it's not really corrupted by Enlightenment logic. And this is M. Waldman, who is Victor's teacher, advising him about the differences between older scientific methods and contemporary scientific methods. The ancient teachers of the science, said he, promised impossibilities and performed nothing.

The modern masters promised very little. They know that metals cannot be transmuted and that the elixir of life is a chimera. But these philosophers, whose hands seem only made to dabble in dirt and their eyes to pour over the microscope or crucible, have indeed performed miracles. They penetrate into the recesses of nature and she, how she works in her hiding places. So again, if you look at the vocabulary over here, it's very masculinist. Nature is feminized and essentialized and exoticized. And the entire male logic, male intellect is instrumentalized, almost weaponized, one may say. in order to navigate nature's hiding places and you know finding out or demystifying nature in a way which also indicates a sense of taming nature, right. So, the whole vocabulary is very masculinist and indeed one may say there is a degree of violence about this as well and very voyeuristic you know, in a sense that, you know, it's peeping into nature and finding out how she walks in the hiding places, quasi-erotic, quasi-voyeuristic, and also very, very masculinist. They ascend into the heavens and they have discovered how the blood circulates and the nature of the air we

breathe. They have acquired new and almost unlimited powers. They can command the thunders of heaven, mimic the earthquakes, and even mock the invisible world with its own shadows, right? So this is Waldman advocating in favor of modern science, saying that, well, these are people, modern scientists, who are not really influenced by alchemy, not really influenced by this ambition or desire or aspiration to transmute metal into gold, and yet they have achieved so much because they follow a rational template of logic and mathematics and chemistry. So what we see over here is a very interesting comparison and contrast between different orders of science, alchemy being the earlier order, the elixir of life, the whole idea of the magic stone, and that is compared with the newer order, which is more rationality-oriented, more chemicals and more mathematical operations. But obviously we can see how one is seen as superior to the other. The more contemporary order of science is infinitely more superior compared to the earlier order. Now, this description is an apt one, not only of those attempts that are most readily identified, but with Victor's ambitions to genetically engineer plants and animals, to technologically enhance human nature, to create artificial life and to banish disease from the human frame, and render man invulnerable to any but violent death.

So the whole idea of sublimating man into something powerful and supreme. So you find that that ambition of Victor finds its modern contemporary resonance even in the 21st century. But also, of the far more mundane achievements of today's synthetic chemistry, nanotechnology, and material science, with ordinary plastics first in line to mock the world with its own shadows. So plastic can be seen as one of the early examples of a simulating materiality, that you create something out of plastic and simulate anything. There's a sense of shapelessness about plastic, which is also a bit of a meta shape. You can make anything in plastic. So that becomes a very, very interesting mimicry of reality. So, what this essay alludes to are references, you know, are examples of synthetic technology, nanotechnology and material science, especially plastic material science, which in a way can be seen as mimicking the original narratives of materiality and creation. And that since Victor Frankenstein's novel seems to anticipate this mimicry, this simulation, this play between reality and hyper-reality. Now, interestingly, we have some critical theory vocabulary coming in right now, a reference to Roland Barthes, the post-structuralist, structuralist slash

post-structuralist. In 1957, Roller Barth discusses plastics not as an application of polymer science, but as a magical operation, par excellence, the transmutation of matter. So, plastic can be seen as a modern version of alchemy. I mean, it can transmute any matter into anything else. And how so? This is because the quick-change artistry of plastic is absolute.

It can become buckets as well as jewels. Hence the perpetual amazement. And this amazement is a pleasurable one. Since the scope of the transformations gives man the measure of his power, the age-old function of nature is modified. It is no longer the idea, the pure substance, to be regained or imitated. an artificial matter, more bountiful than all the natural deposits, is about to replace her and to determine the very inventions of forms. So, plastic can be seen as a metamaterial which can inform and mimic all other materials. So, in that sense, plastic is a bit like alchemy. It can become anything. That whole idea of the all-becoming potential of plastic is something which is highlighted over here. So, what does plastic signify in this context? And, you know, you can sort of dial back to Mary Shelley's Frankenstein with this metaphor, this metaphorical semantic significance, semantic as well as symbolic significance. So, plastic signifies the malleability, indeed the plasticity of the material world. So, the infinite play of plasticity in the material world. With sufficient ingenuity, anything can become anything else. The wealth of natural forms is mocked by the unbounded inventiveness of designers. And the words of nanotechnologist Gerd Binning, or Binning, we are witnessing, we are witnesses and shapers of a second generation, a second creation. So this becomes something of a second creation, plus it becomes the elixir in a certain sense, the meta-substance, the meta-material through which anything else can be created.

So the second order of creation may be achieved. Through plastic. So this is a quotation from Benig. We have to become familiar with the idea that there is nothing inferior about dead matter. All the wonders of the world are contained, for example, in a stone. And as all the laws of nature and thus all the possibilities that can emerge from them are reflected in it. If plastic, according to Roland Barthes, is in a sense the stuff of alchemy, so are the ongoing attempts to transform dead matter into smart materials. The whole idea of smart materiality arising out of dead matter, the whole idea of recyclability. So all this becomes

important, especially if you bring in the context of plasticity and creation and, you know, transcendence, which Mary Shelley's novel dramatized. So the ongoing attempts to transform dead matter into smart materials and to declare the dirt repellent coatings make for self-cleaning surfaces and to teach refrigerators to report back to us about milk going bad and eggs running low. So the whole idea of smart fridges, smart refrigerators, things which can report back about the quality of food. Now these attempts to animate things, almost to make things speak, almost make things articulate. So if you think about food, it's dead matter, it's inanimate. But if you have a system of refrigeration, which is very, very real today, where the refrigerator will indicate, as the food will indicate to you or speak to you in a sense of conveying its own freshness or staleness. So these attempts to animate things to give them intelligence or to make them come to life are undisturbed by reality in that they do not accept things as they are in virtue of the first original creation. They instead make things subject to a second creation, presumably of our own making. So, the whole idea of smart technology, you find that the whole idea of articulating or communicating or connecting to the human subject indeed makes a very interesting reading because it is some kind of a second creation which is departing as well as continuing from the original creation, right. where the gap between or the difference between animate and inanimate began to blur away. So in that sense Frankenstein may be seen as a very interestingly post-humanist novel because the ambition that Victor Frankenstein has is to create a transhuman order. something transcendental, something sublime, something superior, but in the process it fails.

And the failure of Frankenstein is exactly what makes and the novel a very, very postmodernist text where the difference in rationality and irrationality between organic and inorganic begin to blur away. So, realities of little worth. Now we come to the sort of value of reality. So how do you ascribe value? What is the relativistic framework that is used to ascribe and attribute values to real materials? Mary's tale is not one of modern science. On the contrary, it tells the limits of science and dreams, the dream of techno-science, a dream that gains power in the plastic world of Frankenmaterials. Science is that theoretical knowledge produced by those who seek to describe or represent the world and are aided to this quest by technology. So, the whole idea of science may be seen as a pursuit of

knowledge, pursuit of truth. And technology is a hardware of science in a certain sense. If science is a software at an epistemic knowledge level, technology is a hardware through which that aspiration is achieved, the material apparatus. So the person who pursues the sciences is homo depicta, someone who represents, the representer. Technoscience is technological knowledge produced by those who seek to control how things work together and are aided by theory in this effort. The person who pursues technoscience is homo Faber, the make-up, right? So we have the man, the make-up, man, the depictor, man, the representer. They all come together in very interesting ways, especially when it comes to technoscience, because we talk about technoscience as an amalgam, an assemblage.

between technology and the abstraction of science and this this interplay and assemblage and entanglement what you will between abstraction and entanglement abstraction of materiality is exactly what makes frankenstein a very very important novel because we have seen already how the creature that Victor Frankenstein creates, the organism he creates is also very cognitively advanced. But at the same time, there is a huge amount of physicality about the creature, which makes him repellent to the ordinary man. So the repulsive nature that he arouses, the repulsive feeling that he arouses in the eyes of the ordinary man is also because of his grotesqueness, which is also a form of excess, whether it is rational excess or intellectual excess or physical excess. Science seeks to understand the world to the extent and in the ways that humans can comprehend it.

So, science is basically the epistemic apparatus through which we navigate knowledge, the knowledge apparatus through which we navigate reality around us. Because the human mind is limited, science is essentially modest. The transmutation of matter and the making of gold from base metals are not in its agenda. So it limits itself to pragmatic pursuits. Scientists are not interested in creating the philosopher's stone to transform lead into gold or the elixir of life. It was very different, says a crestfallen victor, when the masters of the science sought immortality and power. Such views, although futile, were grand. But now the scene has changed. The ambition of the inquirer seemed to limit itself to the annihilation of those visions on which my interest in science was chiefly founded. I was required to exchange chimeras of boundless grandeur for realities of little worth. Now, I stop at this

point now because What we see here is a form of unknowing, undoing as well as unknowing. So Victor has to unlearn and unknow a lot of things that he inherited, a lot of things that he was intellectually gravitating towards, right? And then he needs to re-situate himself in contemporary debates about science, which does away with alchemy, which does away with the whole idea of elixir and transportation and instead focus more on chemical reactions, focus more on the sequential chemical movements of atoms and energy and all the rest of it. Now that dichotomy between pre-modern science and modern science is interesting because that is a gap. that is inhabited by the quote-unquote monster, which is something which will continue in the next session. But what we see here is Victor Frankenstein's intellectual dilemma about situating himself in his debate around science is itself some kind of a fall to land on aporia, aporia being that moment which cannot be passed, that point which cannot be passed. So, in a very interesting symbolic way, the monstrosity in Frankenstein is also apparatic in quality. It cannot be given a name. It cannot be called anything ontological. It cannot be defined by any ontological limit. So a transgressive quality is also the apparatic quality in Frankenstein. And that's something which we'll read and continue in a subsequent session. Thank you for your attention.