

**Disability Studies: An Introduction**  
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**Lecture 13**

**Blindness**

Hello, good afternoon again. Welcome back to our course on Disability Studies: An Introduction. Today's lecture, part one and part two, is called blindness. And part one, I have titled it as "Blindness: A curious shutter on the camera. You may ask me, why talk about camera? Well, camera is modern invention, in 18 and 19 century - *camera obscura*. and ever since we started understanding to develop camera, more we started understanding the eye. Tamils folks may recall this, the Kannadasan's song,

*paravai kandan, vimanam paditam*

Meaning, he saw the bird and then invented the aeroplane. The reverse may be true. Now, you invent the aeroplane and discover more about the bird; more you get into technology, more you understand *Prakriti*. So in some sense blindness has been with us ever since humanity came, but it has also become a modern invention. well it may be interesting for a blind man to talk about blindness, but instead of it being funny or interesting, it can be also a chance and an opportunity and cease it with my hands to present this lecture for you.

How we understand blindness then? You can, one, understand it is a lived reality. An two, as metaphorical condition or metaphorical signifier, if you like. Let me remember these two strands as we go along. I said blindness is a modern invention as we see it now. Let me unpack that a little bit and rewind fast to 18th-century developments in

modern Ophthalmology, Optics and Philosophy. Well, Ophthalmology or the science to treat the conditions of the eye has always been there in some crude form, but modern Ophthalmology has its origin in the 18th century. How? Well, in England, soldiers, roughly around 1805 or about that time, were coming back from Napoleonic War in Egypt, and it seems they contracted a condition and it was called Egyptian Ophthalmia. There was lots of public discussion about it with regards to health and hygiene and other issues were becoming prominent. And as a response to that came the world-famous Moorfields Eye Hospital in 1805. For our purposes, roughly around the same time, i.e. a year or about after Moorfields Eye Hospital was established, the famous Egmore Eye Hospital also was established. Look at this parallel!

So in some sense a serious attempt at studying eyes in the form of modern ophthalmology came around that period and it also had its colonial legacy. Tropical medicines and Madras eye, for example, was studied systematically through Egmore Eye Hospital in Chennai. This kind of a developments and categorising eye conditions became very popular and hence the definition and scope and perspectives about visual acuity, i.e. how much I can see, how much I cannot see, what is the percentage, and in what angles, was also developing in tandem. And mind you, this is the time when Newtonian physics was slowly getting into public view. Newton, Sir Issac Newton, not only discovered mathematical calculations about gravity, but also he was a pioneer in the field of optics, a scientific study of light. Thanks to the colonial expansion of Britain and Maritime supremacy all around the globe, a study of instrumentation about optics was also becoming very popular at this time. so Ophthalmoscopy, i.e. studying eyes, its interiors, Snellen chart (you might be familiar with the notorious chart out there and the Doctor asks you to look at the chart and tell me now about what is about that line or this line, the letter E at the top, and if you're able to perceive this letter as opposed to that later, then the doctor writes on the chart (now it is computerised Snellen chart is still the fundamental about studying the visual acuity). along with Newton, optics, Ophthalmoscopy with machines, charts, study of lenses and grinding of lenses for the acuity of the vision were developing, and it went on for 200 years.

What does that mean for blindness? Why am I saying all these things? Well, this is the story - along with the study of development of optics and the specialised development of modern ophthalmology, now, curious definitions about blindness began emerging. In some sense, these are borderlines of blindness; somebody can see 10%, 90%, 80%, 50%, and zero percent. So definitions like 'totally blind', 'partially blind', 'fully sighted', and some other spectrum. All kinds of things were emerging and a blindness became, therefore, a tenuous medical category. Well, in this long 200 years until early 20th century, ophthalmology recognised that the blindness, interestingly, is a tenuous category and various things can happen to various segments of people. For example, some people can see a blend of colours. Some can have eruption of paramecium like shapes. Some people may have Photophobia, meaning they're scared of light. There are endless films in Tamil and other languages about making fun of people who can't see in the evening, but can see very well in the daytime. But the fact is, the medical world of ophthalmology acknowledges that less than 10% of blind people are unable to see anything at all, and the rest of them have visual acuity of some kind. Therefore, in clinical medicine, blindness is seen as a tenuous category and there is no fixed position on that. That said, we have to think about socially created eye conditions that may lead to loss of vision.

All you have to do is look around us, i.e. people doing hard jobs. For example, the people working on welding machines, they may be wearing very heavy spectacles, heavy lens to protect their eyes, but nevertheless are they keep losing vision. Think about our young women working in Diamond cutting factories, cement factories, or perhaps with dangerous fireworks. They all have their eyes being damaged progressively. So, when talking about the camera and the blindness now (the original title), it's only for the last 200 to 250 years, we have a fuller and meaningful clinical understanding of the eye with a comparison to camera. It seems in the world of ophthalmology, blindness is some kind of fuller or partial or minimal or a little or tiny, whatever you call, it's kind of shutter on the camera by not allowing light and so. And this kind of symbolism happened because of the ophthalmology, the blindness discourse, optics, and modern philosophy were growing up and evolving in tandem. That's the point.

But in the clinical world, there is one dream, there is one aspiration, or may be there is the fantasy, and that fantasy is eradication of blindness. Well, that has been always there. For example, Galen from the Greek world and Sushruta from India conducted a cataract surgery nearly 2 millennia ago. English surgeon, William Cheselden, was able to restore eyesight by a similar surgery in 1728. talk about it now, many of you may be enrolled in robotics, optics and as students of medicine, you may have a post-human fantasy, may be installing camera in the eye, activating the optical cortex in the brain and make connections somehow to make the blind see. well, such fantasies do exist, and these fantasies may come true in some proportion, but this metaphor, shutter and the camera has stuck. But initially, I said something about of ophthalmology and optics, but I also mentioned philosophy. Oh yes, blindness has quite to do with modern Western philosophy.

Let me come to Indian in a bit, in the next lecture, but let's now concentrate on western side of the matter. in 18th-century, there was a famous correspondence between one philosopher called William Molyneux and the world-famous John Locke. Molyneux from Scotland wrote a letter to Locke, you are talking always about knowledge and senses. our mind, basically, is a tabula rasa (meaning flat empty slate) when we are born, and as we grow, we acquire language, we acquire knowledge of the world and things around us. So the knowledge keep accumulating and we keep processing. this strand of thinking is called Empericism. And from John Locke, we have a huge tradition going until 21st century about empiricism, i.e. knowledge and experience. More we experience, more knowledge we get. More emotion we have in the world, more accumulation of knowledge. And then we process it, and all disciplines, without exception, in some sense, connect to this idea. But, Molyneux was curious and that curiosity has not died. Okay? let me come to the point now. William Molineux wrote to John Locke saying, Locke, here is a puzzle! there is a blind man, he is given a cube and a square (or some form of shape). How does he know that it is a cube or a sphere? He knows because he can touch it, he can hold and say because sphere is round and cube is long and so on. and by touching it, he will know that it is cube and a sphere.

What if he gains sight? Molineux was inspired by Cheselden achievement that I was talking about a minute ago, about giving back eyesight to somebody through surgery. Lot of films are filled with this idea. Okay? let me not digress and let me stick to Molineux. Now, he says, what if he gains sight? will he recognise this cube and sphere? Because he was touching that object, now he's saying it. maybe, visual perception has nothing to do with touch, and visual perception has its own way of seeing things in the world. That's why blind people cannot understand the ways of the sighted, Molineux claimed. According to Molineux, this blind man, who is now sighted, cannot recognise this cube and the sphere, because he has seen a new way of seeing the world that is through sight, and John Locke readily agrees. the ghost did not die! any amount of experiments on mind, brain and vision, still ask this question. There are many people who ask me, how you understand colours? It is not out of malice that they ask, they are curious! And, there are people who are asked me like Molineux. my dear and near ones say, you know, maybe if you gain sight, you will be able to see my face. Ofcourse, it is said with lots of affection. and when you see my face, your perception of me may become very different. after all Molineux's question seems to be still alive about what if the shutter of the camera opens up and a man is able to see or a woman is able to see, what happens to their world. since I have raised so many questions, let me answer them straight away.

A lots of factors come in. blind people, who've been born blind, may not care about colours, and their sense of colour is cultural. For example, a blue may indicate that it is broad, colour of the sky, something to do with the Navy, a matching colour for the shirt, and black may be associated with darkness, something that suits a trouser, and blackness and whiteness binary is where racism has come into existence, and many more. Further, for little blind child, things with pink and chocolate colour may matter more than blue for a blind adult, for example. but for those who have some vision, they can slip into colour world and slip out. and there is another principle here. Mind you, Molineux and Locke were totally wrong about distinct sensory modalities functioning in the distinct ways. no they don't! For example, visual perception, touch perception, smell and all, they work in tandem together, and that is called Synesthesia.

That means that a nice laddoo smell will remind me of my grandma, for example, because that brings colour and pageantry associated with my life with my grandma. and this is how human mind, memory and emotion work. and to say that blind people cannot have Synesthesia. And they cannot have cultural sense of colour is plain nonsense. 18th-century, again, apart from John Locke and all that, was famous for the invention of Braille famous French philosopher called Denis Diderot wrote the book, 'Letter on the Blind' and so on. Now, where do we go from here with regards to the shutter problem? Well, fast forwarding to the present, you can see blindness in two- three ways. One, as a lack of sensory capacity to see, Ophthalmology acknowledges it. But it does also acknowledge that various people have various visual acuity and therefore the sense of lack maybe different. but thanks to our 20th and 21st century interventions in assistive technology.

For example, I used Braille, I use speech software for using computer, an open source movement is getting along with people around the globe in Africa and Asia, commercially available screen readers, open sourced screen reader developments are happening. Because of Braille and other developments around the globe we have special education system, especially developed for blind people and so on. But now, the contemporary debates go something like this, whether to educate blind children in a specialist school or send them to the mainstream. Well, both are important, sometimes giving blind children access to Braille education, learning software and learning maths in a special way turn out to be very important. and at the same time, not seeing blindness as a distinct clinical category is very important, for that, mainstreaming is important. that is where we stand. We don't need to have a rigid Molineux kind of notion. Not anymore! but the goal is towards equal opportunity enabled by a consensus between or a working together between family, school and church, and that is how it is going to be possible. Thank you!