Text Texuality and Digital Media Professor Arjun Ghosh Department of Humanities and Social Sciences Indian Institute of Technology Delhi Lecture No 38

So we have now come to the end of our course and though all the topics that were intended to be covered have been covered. I would like to sum up today partly by recalling what has already been discussed and also trying to indicate and possibly speculate on what lies in store in the future. As we have seen that the method for this particular course was that we used history in order to understand the present and probably have a grasp of the future.

So what we try to achieve through this course is to look at the past. We looked at how communication technologies over time and history have evolved and try to link it to specific kinds of social organization, political organization that human beings engage in. The relationships that human society forms, with the progress, with the movement of various communication technologies.

We of course began with the oral and with the forms of oral composition and then we realized that in oral composition, the predominant form was that of poetry and poetry was not a linear form, but it was formulaic or it is formulaic still because parts of poetry is remnant of the oral form, poetry writing as a form, remnant of the oral era. So, but poetry is held together through rhyme as well as through various kinds of compositional formula which helped bards and poets to remember, to memorise specific, passages and there is a lot of repetition, right.

But once we move to writing with the invention of writing with alphabet, the human investment in memory reduced quite a bit and slowly because of the very form of writing, because of the media, the particular surfaces on which writing did take place, it lent a certain kind of linearity. And this linearity is not merely a linearity of syntax, but also in the format in which knowledge was stored. So we write from left to right or some cultures from right to left, some from top to bottom, some cultures also right from centre to the periphery, right. So that kind of linearity.

And we have seen how, what the effects of the linearity were on growth of reason on analytical methods of understanding and this gets solidified with the coming of print. Before the coming of writing or print, faith was an important precursor of a dominant way in which human beings made sense of the world. But with the coming of linearity, rationality, reason becomes a determinant factor, we have also seen how with the coming of writing and especially with the coming of print, it is possible to incorporate charts and diagrams into knowledge records something that was not possible in orality.

It also becomes possible to have a greater exchange of ideas. The availability of multiple sources for the same kind of knowledge allows people to not only cross verify various ideas or various representation, but also leads to a certain growth or historic progression in a knowledge. It is not that in the oral era that did not happen, but certainly with writing and print it becomes the mainstay it gets accentuated.

So, now with the coming of print there is a new era that evolves. We have looked at the linkage between print and various other facets of modernity and the coming of modernity with capitalism and democracy. Print is a mechanical form of reproduction and this is followed by other mechanical forms of reproduction like photography or film, which initially were mechanically reproduced audio records, the first gramophone records, and other kinds of audio records, even the audio cassette. These were linear in form right from one to one, followed by the other kind of piece, right.

Now with the coming of digital that changes, with the coming of digital we have moved from analog to digital. So there is a certain layer through which things are noted within the recording medium, not in specific in direct format. But also in the form of bits and bytes. So basically at the backend everything gets reduced to a binary code. So there is a certain layering, a certain layer of a code, which is there. And this has implications on how human beings communicate and how various media makes. In the era of print, we could see in the era of mechanical reproduction, we could see that, which is possible to bring diagrams, pictures into print.

But the two processes were different, putting the two things together. Also in movies, it is possible to incorporate text within the movies screen. It is very limited extent, you could not play around with the text as you would be able to play around with the images in a certain fixed form. But with the digital we find that various elements as certain web page can have video as well as images, as well as audio, animation, various kinds can be incorporated at the same point of time. And the fact that it can be dynamically edited, it is not a fixed form. Whereas in print we have seen how the fact that once printed, a particular version of text remains unchanged across wherever that text is distributed, something that gives rise to linguistic nationalism at the end. So with the digital that of course changes, everybody sees

different text on their screens. So what are the implications of all these certain kinds of changes? Let us get into certain kind of speculations.

So if you return to Walter Benjamin, Walter Benjamin, opines in the piece that we had looked at, he locates the study on the cinema and says that cinema is great because it encourages criticism. It allows you to do a certain kind of montage of putting various scenes together. But that criticism, he says is blunted due to the cult of the star, right.

Now, if we can take on that idea from Benjamin, and infer it onto our digital era. We can say that the digital is great because it is easily distributed and it makes possible decent production. But that possibility, that lies within the digital get subverted by centralise control and through the copyright regime, through the intellectual property regime.

So, if I can go into it a little bit deeper, there is a great amount of study today on the future of democracy in the digital era. We have seen how print and the act of pamphleteering, mobilising opinion is something that is accentuated through the coming of print, it accentuates the public sphere, the culture of debates and discussion which leads to parliamentary democracy, representative democracy.

And so, if we look at the internet, you find that the very beginnings of the internet began as a distributed system. The early internet was something that developed within the United States in the post-Holocaust era, where the threat of Holocaust or the nuclear bomb destroying specific sources of intelligence leads to a linking of various computer networks across geographies so that the knowledge remains distributed. And initially, because this kind of research was happening within the academic domain, the network that first got linked were the universities, the university networks. And therefore, there was a lot of experimentation that was on and there was very little control.

And this gave rise to the Internet. But as the Internet has grown, we have seen that the Internet has become more centralised and a certain kind of surveillance technologies have taken over the Internet. And what we see today is a certain kind of mass communication. The word mass communication is understood in the form of newspapers or films or television from the era of mechanical reproduction. What we have today is a targeted mass communication, it is mass but it is targeted, each individual gets to see something different, you do not get to see what I see, I do not get to know what you see and this leads to a very different kind of mass appeal.

Because if you look at the newspaper, or newspaper stories or advertisement or political canvassing, it is something that is available for everybody to see. Particular kind of picture, particular kind of message that is there is open to everybody. And therefore it is open to criticism, it is open to correction, it is open to challenge. But in the case of the digital media, the way campaigning happens, the way advertisement are customized, even your news feed on specific applications or browser based as well, mobile apps. They are specific to each person. So nobody else sees what you really see in that exact combination. So it becomes very, very difficult to critique or to refute and that leads to a breakdown of the very basis of democracy which is that of debate.

So we have seen now that there is rise of fake news, people pass of various kinds of news, people start believing certain kinds of news. What has also happened is that today due to the penetration of mobile telephony and mobile Internet, a lot of people have, who have not ever engaged with print at a deeper level, they now have access to the Internet and therefore they do not know how to deal with the messages that they get on Internet. Then this leads to this mass circulation of viral secretion of fake news, leading to some catastrophic events, which all of us know about in the recent past, it also leads to massive amounts of trolling, where people attack others, sometimes in unsavoury manners and that leads to a certain kind of online harassment. So, if we are linking trained rationality the linear format with the rise of democracy what is it? What kind of political system will the digital media bring about?

Because what we have already seen through what we have studied about copyright. We have seen that the digital media, if it was a distributed non-centralised media, it is possible that it actually leads to a certain kind of direct democracy, a kind of democratic referendum where you do not need representative democracy any more, on every question, every citizen has a right to give an opinion that is possible. But within a centralised controlled Internet that does not seem to be possible.

And we have seen how the various media, digital media platforms are actually controlled by algorithms at the backend. And these algorithms, the programming being closed source, being proprietorial, being controlled by specific large corporations, lead to a lack of critique, lead to a lack of intervention. And these corporations work very closely with the government because they need the legal support, the support of the state and therefore that linkage between these corporations which own these algorithms, which keep these algorithms away

from public scrutiny and that of the State, which wants control, wants to control political power. This can become a very serious threat to democracy.

Other than that, we also looked at the issue of human cognition and the fact that the nonsyntagmatic form, the non-linear form is, it can perhaps lead to a dissipation, not only of human attention, but also of rationality and this is linked to the previous point that I discussed about the rise of fake news and the believability of culpability of people or towards fake news. What are the implications of this lack of human attention for future knowledge acquisition? We have seen how the coming of the alphabet, with the coming of writing, knowledge gets more democratised, right. If you are literate, then you can have an access to text.

But what is this reduction of attention span going to do to the institution of knowledge. What kind of knowledge distribution will take place in the future? Which way we are headed is a very important question. It is not merely a question of text, there are various other things in the universe, in the world which are changing because of this change of medium. One very important question that various researchers are grappling with is the future of work. Now, we have seen with the coming of capitalism, there is a certain kind of surplus and in fact with every new mode of production, the way the surplus is generated and distributed undergoes a change.

We have seen in the digital era, there are a lot of usage of machine learning and artificial intelligence which is leading to certain kind of business processes which do not need human intervention anymore. There are many things that can be done purely by machines, by very intelligent kind of computer. Of course, computer is not intelligent, it is ultimately programmed by human beings. But it can function very sophisticated tasks and this can lead to certain kinds of, not only on one the hand job losses. What the real face of the job losses is that the profits generated, the revenue generated by a certain production process gets concentrated in fewer hands. So the skew in terms of wealth sharing across the world is going to become more and more intense, it will become more and more skewed.

And therefore what are the implications of that kind of destitution of large sections of populations, the rising unemployment, and other things on social well-being, on the prospect of Civil War and social unrest is something that researchers are grappling with today. And we see that and I would like to link that question to the question of democracy.

Finally, I would like to leave you with the idea that, from the point of view of literature or the larger humanities, something that is very important is that the texts are there. The text that are there are produced electronically or stored in a digital form, we know that there is a certain layer that there is the certainly of the code and the layer of the UI, the user interface.

Whereas, the user interface is something that the human eye can read the code is machinereadable. And that being so we have the possibility of now using various kinds of machine tools, various kinds of the programming tools through which we can, we can access the data that is there behind the text. And use very large algorithms to actually read through those texts and you can look at certain kinds of patterns.

So, today it is possible to actually ask the question immediately of hundreds and thousands of books at a time, right. Something that was not possible earlier, if you had to analyse a certain text you had to read it closely. So therefore, literary methods is something that is associated with close reading, looking at the specific nuances.

But today we have mechanisms that are developing within the field of digital humanities to actually use code to read through and open, pry open, patterns within a certain text or through hundreds of texts, multiple texts at a time. And this is called the distance reading method and the distance reading method can throw up some newer truths before our eyes, something that is hidden from the human eye hitherto, because the human eye is capable of only really doing close reading. But with the help of machines, with the help of the computer we can actually pry open newer forms of reading literally texts. So the possibilities that open up for research, for further learning and knowledge creation are immense in the digital media. But what is important for us for each point of time is to keep our feet on the ground and understand the evolution of various forms of communication, we should not lose sight of the fact that there was a point of time, when there wasn't a digital media, in fact there were no mechanical forms of media, when human beings communicated using their bodies, their voice, their hands and chests. So the performative to the digital is the trajectory that this particular course has tried to take. I hope you have enjoyed the course. I hope you have learned a little bit and hopefully in the future we will discuss this further. Thank you.

KEYWORDS:

Digital, Media, Communication, Social Media, Text, Linearity, Orality, Machine Learning, Artificial Intelligence, Algorithms, Print, Film, Advertisements, Walter Benjamin, Democracy, Censorship, Fake News, Trolling, Government, Movements