Text, Textuality and Digital Media
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Lecture 21
Raymond Williams: 'Television'

Today we are going to study an essay by Raymond Williams on the television. Though located in the moment in which we are in this lecture right now, right in the middle of the 20th century, you have come a long way since the days of the creation of the alphabet.

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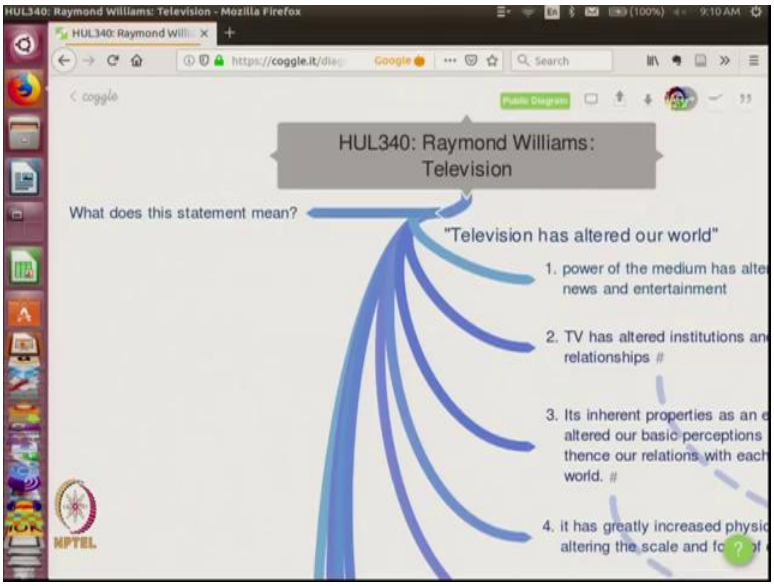

This essay not only deals with television, it also helps us come to grips with the idea about the relationship between technology in society, technology and culture. And Raymond Williams explores these issues through television. So television is the communication technology that really rules the world for the latter part of the 20th century along with print, the exponential growth of print and television, electronic media is what we call television, really grows tremendously. In fact, if we look at the world today in the first half of the 21st century, we find that the tussle really is between electronic medium and the digital medium.

Now, when we understand this essay, we do it from the point of view or we understand it form the point of view of the television as a communication medium. The implications of it are far greater because it helps us understand some of the crucial issues of this course that is the relationship between technology and culture, technology and politics, technology and society.

Williams begins the essay with a hypothesis, he says television has altered our world. And then he proceeds to examine what this statement means, and he discusses several points, several ways in which television has altered our world.

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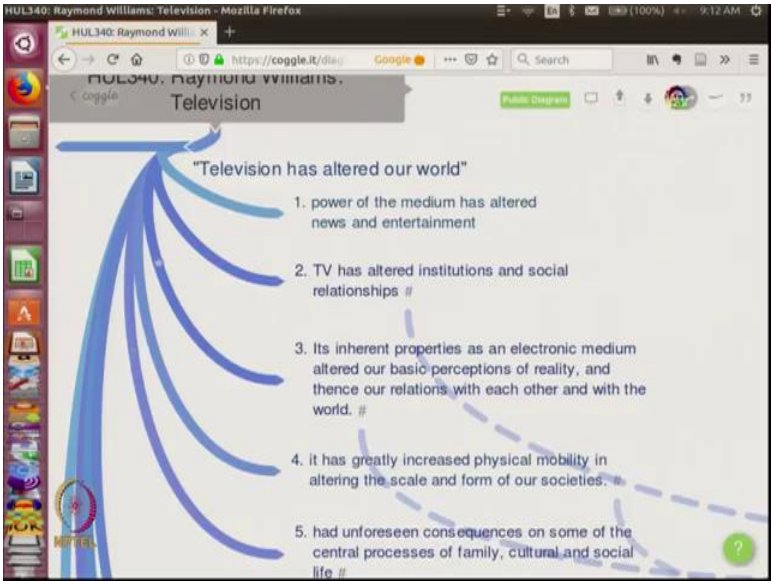

First point he says that the power of the medium has altered news and entertainment. The way people view news and entertainment has been altered by television. So clearly with print you had the notion, print seemed to be an immediate way of transmitting news, but television seems even more immediate that the turn over that television brings in, print usually would be able to deliver news in a 24 hour cycle.

Newspapers would be delivered in the in the morning that would be printed overnight, so any news up to, let us say 8 or 10 o'clock in the evening would be printed in the next day's newspapers and that seemed to be current enough, but with television that definition of that currentness changed tremendously, altered tremendously and in fact with the development of live television it was possible to actually follow a certain event simultaneously, live as it says, particularly sports. So the power of the medium has altered news and entertainment.

And the second point that he makes is that television has altered institutions and social relationships. The kind of institutions that governed the media earlier are now very different media. Television creates new kind of institutions, they are governed very differently from the

way print is governed, television requires a far more centralized system of transmission. We look at the transmission systems of electronic media.

And, if you also consider radio as an electronic medium then that too because we had seen earlier that the coming of print we already had mechanical reproduction brought in the printing press. The printing press required a large capital input and because it required a large capital input, there could be only a few people who could own printing presses and these would be the print capitalists.

So therefore, print always existed and identified itself with the capitalist mode of production. But with the television certainly, the role of equipment grew, it required far greater inputs of cameras, these were certainly before the development of the modern day contemporary digital cameras which are light and extremely mobile.

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But the early television cameras would be bulky, huge, they would also be mobile, but I mean their mobility would not be a personal mobility, there would be institutional mobility, they would require bigger vehicles to be moved.

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Normally in the early days of television, recording would take place within a television studio, live events could of course be set up with development but they would require a lot of preparation for live broadcast to take place and they would also have the transmission equipment which would be there. So, the television studio would typically be full of very very sophisticated equipment all around, not only recording, but also editing and transmission.

And therefore, these were necessarily even more centralized than print could be, even in the early days of print. Even in the early days of print though the number of printing presses across Europe or a particular region in Europe would be few and far between, still one would say that the early days of television, there were even fewer television studios which would be around.

With easing of recording equipment today there can be a whole lot more television studios that are around and that is attested by the mushrooming number of television news channels that we see on satellite television today. I think the greatest number of television channels are news channels in India today. So you have to understand Williams' point according to the television of his times which is the mid-20th century television.

So he says that because of this extremely heavy input of capital that is necessary, television builds far greater centralized mechanisms of production and centralized institutions which control television. He is going to explain this point even further.

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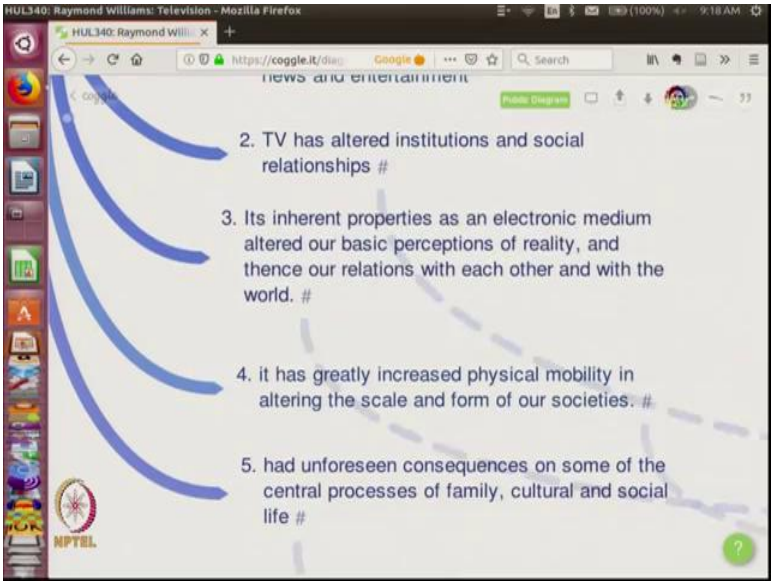

Then the third point that he makes is, he suggests that, it is taken that inherent properties as an electronic media television as an electronic media altered our basic perceptions about reality and thence our relationship with each other and with the world. The way we perceive our world alters significantly because what television does is that it is able to transmit footage from far across, far and wide and various locations seemed to be far more immediate.

Particular places which would always remain at a time lag to us could now be present, events from that location could be present events at the matter of moments. So the remoteness of particular locations and events were reduced; they became far more immediate. And therefore, relationships between different parts of a particular nation, parts of a particular country or different parts of the world actually changes.

We are moving towards a far greater globalized world with the coming of television. Footage from one place to another takes far lesser amount of time to actually get transferred. Even in the early days of television, we would still be looking at physical movement of footage, we still do not have electronic transmission, but with the coming of electronic transmission these distances reduced even further.

Television has greatly increased physical mobility in altering the scale and form of our societies. You are today able to understand the events of a particular location and therefore, some kind of planning could take place. If there has been severe weather in one part of the country, you are

immediately aware of it and that becomes part of the planning. And the ability to plan according to the events of a particular location, has changed the way people would actually plan out their activities.

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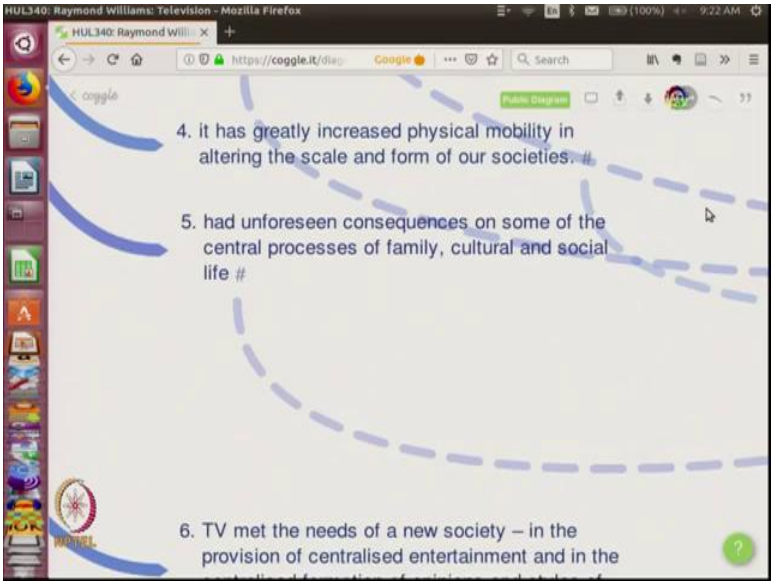

Another explanation of the opening hypothesis that television has altered our world. It had unforeseen consequences on some of the central processes of family, culture and social life. Now television becomes the talking machine in the family, the way the family gets organized, the choices get organized.

Remember, we would be still talking mostly of a single channel television. This will be the early days of television and therefore, there would be single channel television, those of you who were born after the 1990's would perhaps not have any recall of the days of Doordarshan, when there would be just one single channel on Indian television. And various kinds of programmes would be distributed across the hours, across time slots, through the time of the day.

Today we have 24 hour channels. You all watch a particular genre, if you are interested in action movies, you switch on a particular channel, if you are interested in western music videos you switch on a particular channel at any point of time in the day and you are able to watch that particular genre. Whereas in the days of early television, there would be single channel transmission and therefore, various genres would all be squeezed together in that single channel and would be distributed across various time slots.

So therefore, the television became almost a member of the family which had something to offer for everybody and there would be kind of a time share. And slowly there is a definition of what is prime time television, prime time television has a larger viewership because it is also the family hour, when the entire family watches television, it almost becomes a member of the dining table in many families. And this alters the social life of people, the way people interact.

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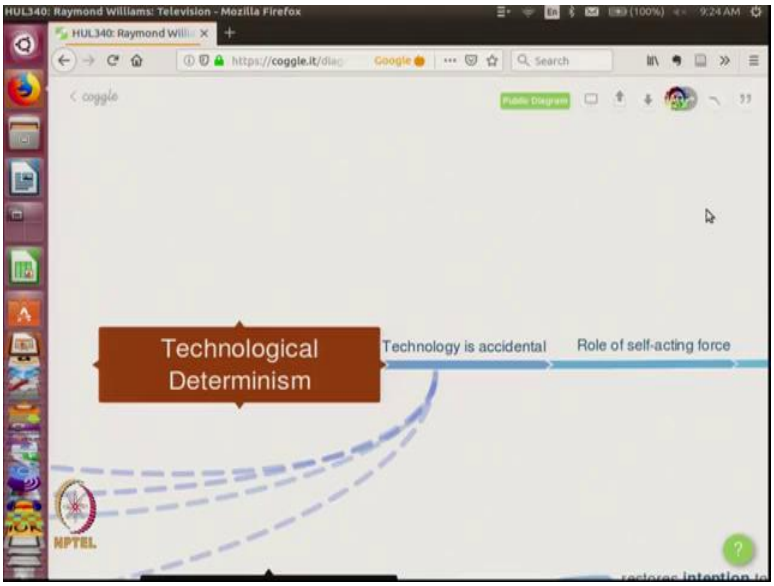

So, he then puts these points, there are more points, but he starts analyzing them. And he says that these points towards what he understands as technological determinism, emerges from positions of technological determinism. That technology is accidental, that once technology comes into force it sets certain things in motion, it changes certain, it alters certain social and even personal relationships.

And the invention of a new form comes at the centre of these set of changes, technology becomes the determinant of these changes. Had that technology not been developed, the world would have moved in a very different way.

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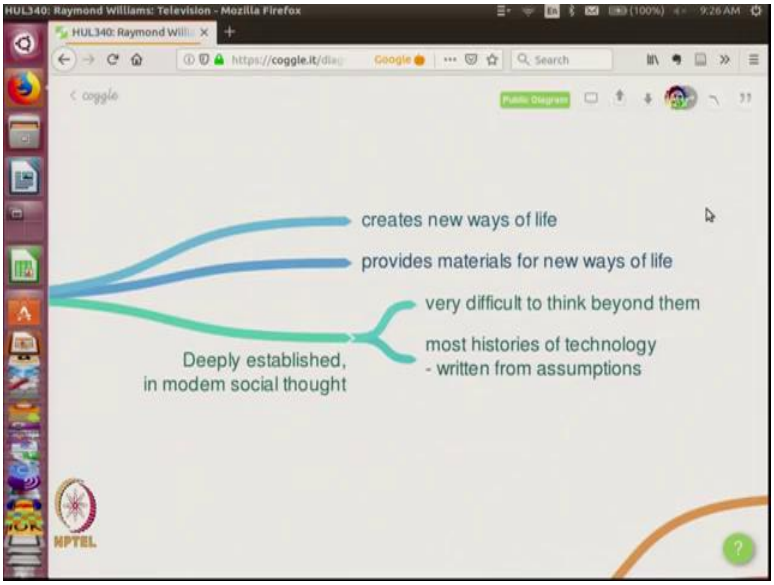

So it looks upon technology as a self-active force, as if technology can work on its own, the invention is an accident. And it unleashes a set of changes, it creates new ways of life, new ways of living life. It provides new materials for these new ways of life, it not only creates the new ways of life, it creates the new ways of life by providing materials for them.

Television gives rise to consumerism, this kind of a point of view would argue, there is a certain inevitability about it, that certain changes happen because of the invention or the creation of television or television networks. And this view point of technological determinism says, is deeply established and ingrained in modern social thought.

People find it very difficult to think beyond them, it remains, it is taken as a given that most histories of technology are written from these assumptions. They are written from these assumptions that a certain technology is developed and this brings about these certain changes, till such time that a new technology was developed which brought about these certain kind of changes, a kind of a cause and effect relationship is sought after.

However, he says that there could be an alternate way of looking at it and that if we were to look at some other explanations of this particular hypothesis that television has altered our world and he goes on, he has looked at first few points and then he goes on to look at a few more points about how television has altered our world.

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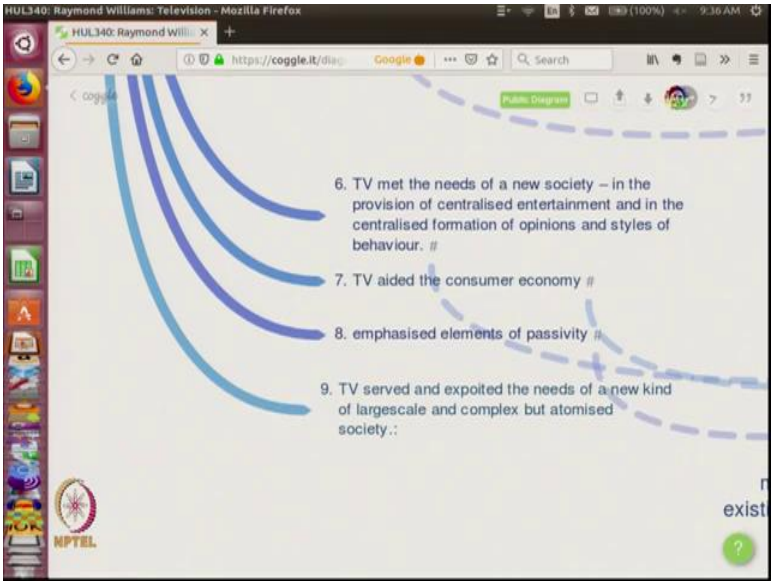

He says, that there could be a few other explanations of this particular hypothesis. Since TV met the new needs of society, the society needed a new medium of communication, the society had become complex enough and it now needed a new technology to be able to bridge the gap of that need of communication. People wanted to communicate already with distant places, people needed to know, growing businesses needed to know what is happening elsewhere within the country or within the world and they needed a fast mechanism of communication and television provided that.

A new society was coming into being and that society needed a centralized form of entertainment because before television the only live form entertainment would require audience presence. You had to go to a football match to be able to watch it, you had to go to a concert to be able to watch it, to be able to listen to music, radio had already made before the coming of television but we are really looking at the conceptual view point of the development of technology so even if we talk about listening to music, then radio reduced the need for listening to live music, it could make broadcasts possible. It could make recorded broadcasts possible, also, before that you certainly had recording mechanisms, but live music could not be heard through recording mechanisms.

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Through the round table, through the turn table sorry, you could not record, you could not transmit live music, you could certainly listen through recorded music using the gramophone record. But live music was brought in by radio, but you could not see the performa, so when it becomes important to watch the performance live, television comes into being. So television is able to create a provision for centralized entertainment.

And why is this happening? Because now people have lesser and lesser, one, on the one hand lesser and lesser time because time is getting more atomized. Possibility of travel gets reduced, possibility of consolidated leisure time becomes reduced number one, number two is aspirations of people start growing.

Increased wealth creation gives rise to new aspirations within various classes of people, these priorities of entertainment change and television meets those requirements.

Television also, he says, aided consumer economy. Now look at the alteration of the argument, we could say, we could interpret the same set of events by saying that television initiated a consumer economy or initiated brought in a consumer boon. But it is another way to say that television aided, helped a consumer economy that the consumer economy was already coming into being. Remember, print advertisements predate television advertisements. But television make those advertisements more powerful.

So television aides the consumer economy, television gives a more captive audience for the advertisements in between programs, but people are already glued to the television, they have to watch, whereas in print one could say that one could overlook the advertisement, but when you are watching a cricket match you virtually cannot avoid watching the advertisements. In a football match maybe, yes, but in modern day what they would do is they would put in certain scrolls, which would scroll through the screen and advertise at the same point of time.

So television provides a far greater captive audience for advertisements. So television helps consumer society, rather than initiates consumer society.

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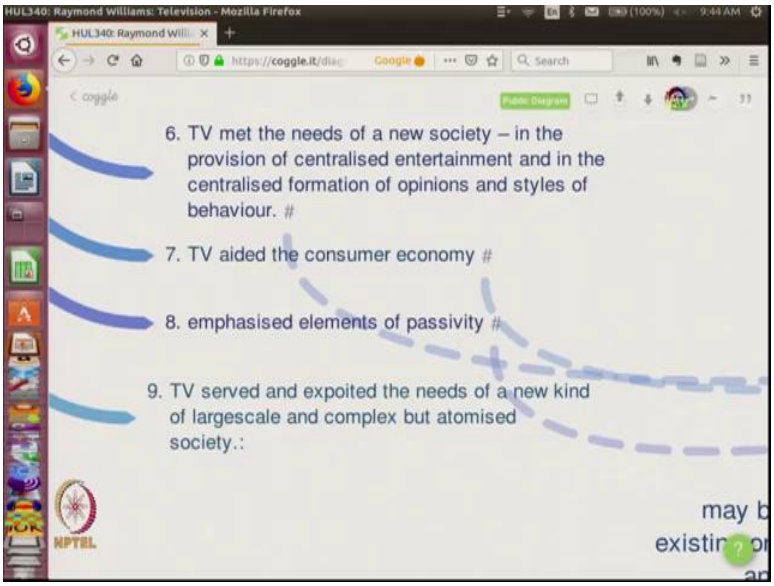

Television actually makes for a passive audience, it requires very little effort on the part of the viewer to actually receive whatever messages, whatever ideas that are being transmitted through this medium. The term couch potato is something that you associate with the television that you really do not need to do anything while watching television.

Now there are two ways of looking at it, one would say television creates that passive audience or television emphasizes the elements of passivity, that is the elements of passivity werealready growing, people did not have a critical engaged mind. Remember with the coming of films, we have seen how films actually make the possibility of a critical audience to come into being, but they are undermined through market mechanisms, through the creation of this cult of the star.

Television is built upon that cult and television results in greater sense of passivity, it is a smaller screen also.

So the possibility of analysis is far reduced within the television. And he says that television served and exploited the needs of a new kind of large scale and complex but atomized society, this is a point he is going to explain further, but he says that the way in which social relationships, social institutions were formed undergoes changes, they undergo a certain alteration and television serves that purpose. Television actually results in consolidation or meets the requirements of that kind of society. And he says that these arguments from these points, from 6 to 9, these 4 points, point towards the a very different view of society, that technology is a product of history, it moves towards a claim of historicising technology.

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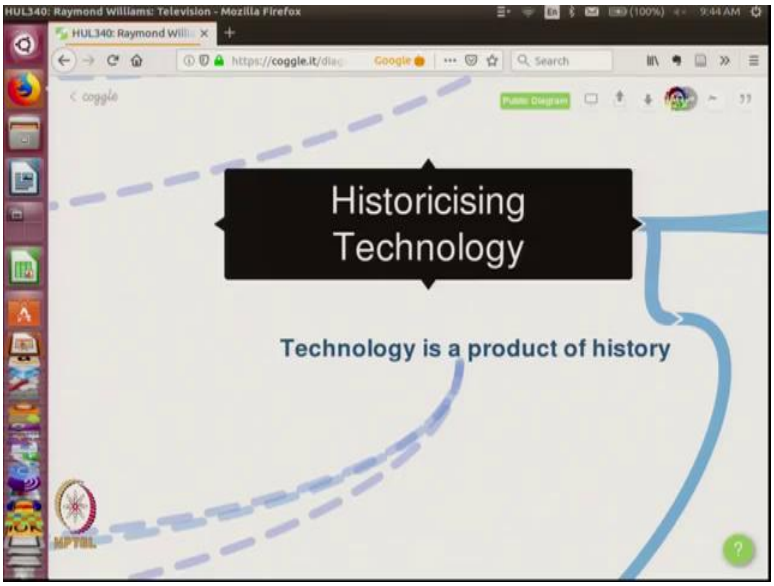

Looking upon technology within a certain moment locating technological development, within a certain moment in history. Now, I would like to go back to our discussion on the emergence of print. Yes, the coming of print did bring about revolutionary changes within European society and world society really, print played a very important force, print was a very important force in bringing about monumental changes in history.

Certainly print was not alone, print was part of many other important tectonic shifts which occurred in human history over the last millennia, but what we have also seen is that when the discovery of print happened at that point of time, it was not only Gutenberg who was responsible

for the discovery of print. There were many other actors, many other copyists who were looking for a technology to hasten to mechanize the process of print. And Gutenberg built upon those experiences and Gutenberg responded to the need that was around.

So the field was already created, the field in which this invention actually took place. So the discovery of print actually takes place in a moment of history when the world, when the society was already prepared or needed such a technology, in fact print could have been discovered maybe about fifty years before the time when it was discovered, or maybe a few decades before the time when it was discovered and it would still have had survived.

And we have also seen how specific inventions not only print but the compass and gun powder, these were technologies which had been present within human history, particularly when they handled the Chinese. For a whole lot earlier, before they actually were put to the particular use which we know them today for, but because the historical basis in which these changes would have flourished were not yet developed. The important point of capitalism as a social system was not yet coming into being, was not yet in the horizon, that these technologies did not take root and did not take shape, they took shape in that particular location, in that particular time and space where the society was already ready for it.

So this kind of a view actually locates the development of technology within a larger history of technology and a larger history of society and it looks upon technology as a product of history. I think the truth of the matter is really in between these two, that yes, we may be ready for a certain technology, but we do not yet have a particular invention, it may be possible.

Just to explain this point a little further, I remember having a conversation with a conservation architect. Now conservation, who are conservation architects? Conservation architects are those who work on historical monuments and they work to ensure that these monuments which are facing the deterioration, due to both natural and human causes, they retain a certain shape for future generations.

Conservation is very different from restoration, restoration seeks to return a certain monument or a certain architectural building, a certain architectural site to what it has been earlier. It may have been destroyed, you are trying to recreate it, recreate part of it, restoring it. But what

conservation does is to prevent further damage. Now, whichever way you look at it, these actually work towards preservation of historical monuments.

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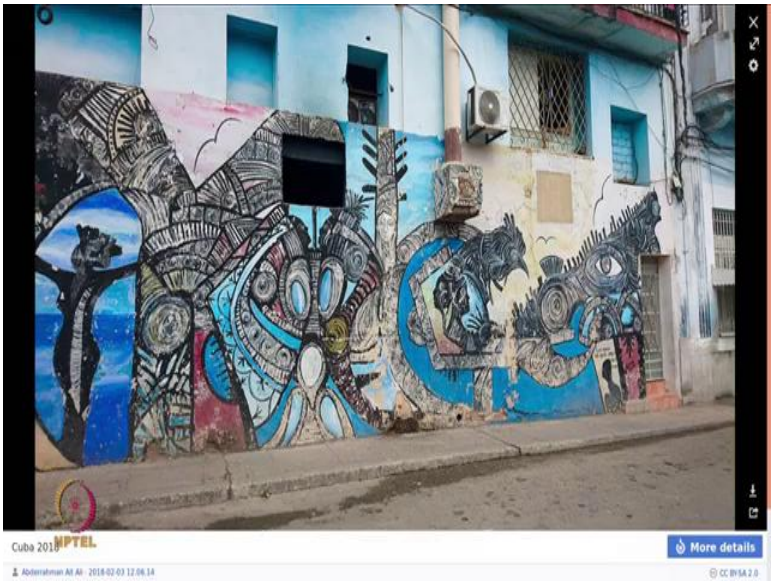

Now this particular conservation architect told us that if you are particularly within India this is a very common site you would have seen, that people do mark out, carve out their names and other kinds of messages on monuments, a despicable sort of practice that is there, but this plagues a lot of our historical monuments. Now, one way is to try to plaster over them and try to smooth-en them out, but that would also create further damages to these monuments because plastering over them would actually change the plaster that already existed.

It could harm that plaster by introducing modern chemicals into it or if they are smooth-en-ed out, if it is particularly marble or other particular material which is there, it will actually lose out on a certain layer of that particular monument. And because of that you might lose a lot of details, it might actually weaken the structure.

So this architect told me that modern day technology as it exists today may have a lot of undesirable side effects. And therefore, he would advise that we may abhor these inscriptions, these carvings which are there, these vandalisms but we will still keep them as they are because who knows 50 years down the line, 100 years down the line in the future, some might be able to develop a certain technology which actually is able to do justice, to be able to cover the defacement without altering, without damaging the monument itself.

Now here you are, is a particular case where certainly there is a need and history is prepared there is greater awareness of the need for preservation of cultural heritage, the governments are doing a whole lot more, international bodies are doing a whole lot more in drawing attention to the need for preservation of cultural heritage, of architectural heritage. So certainly history is ready for this kind of a technology, but the technology has not yet been developed, we still do not have that particular technology.

Within the field of literature, we would find that science fiction very often points out to certain kinds of desires of technology, technologies which are not already in place. How many times has it happened that one could actually think of certain technological developments that might fantasize about certain technological developments that might happen in the future? One can immediately think of Jules Verne's Around the World in Eighty Days, this desire of circumnavigation of the globe at a very fast rate, at a very swift pace was already there, but the technology was not there.

Today it is possible with the advances in air travel. To circumnavigate the globe at a much swifter rate. So science fiction very often is an indicator that there is already a social need for a certain technology which has not yet been developed. So standing with the stance of historicising technology, one does not undermine the importance of development of technology, one does not want to undermine the importance of the scientists who are behind the development of technology.

So that role is very important, but we must not lose sight of the fact that technological development take root at particular moments in history. And history plays a very important role in the way technology takes root.

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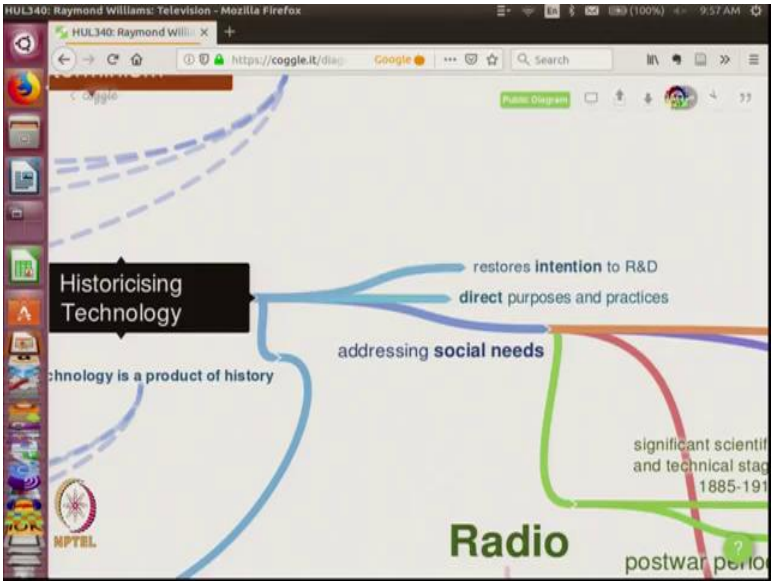

This kind of a view restores the intention to research in development, certainly companies and there is a lot of government funds in scientific institutions and in developing new technologies. Scientific funding in science and technology actually seeks to give direction towards development of new technologies; these are important historical factors in development of new technologies.

What is it that receives more funding? Military research, research in developing new weapons has very often received the greatest amount of funding in the modern era, far greater than, some important kind of health challenges that could be there in the form of cancer research for example.

Certainly one would think that there would be far greater investment in developing newer kind of technologies to prevent child mortality, but that is not the kind of direction. If we look at a kind of a comparative analysis of the amount of money that is devoted to development of science and technology towards research and development in various fields, it will show what the agenda of the world is. And history actually directs and purposes the practices of science to actually develop certain technologies.

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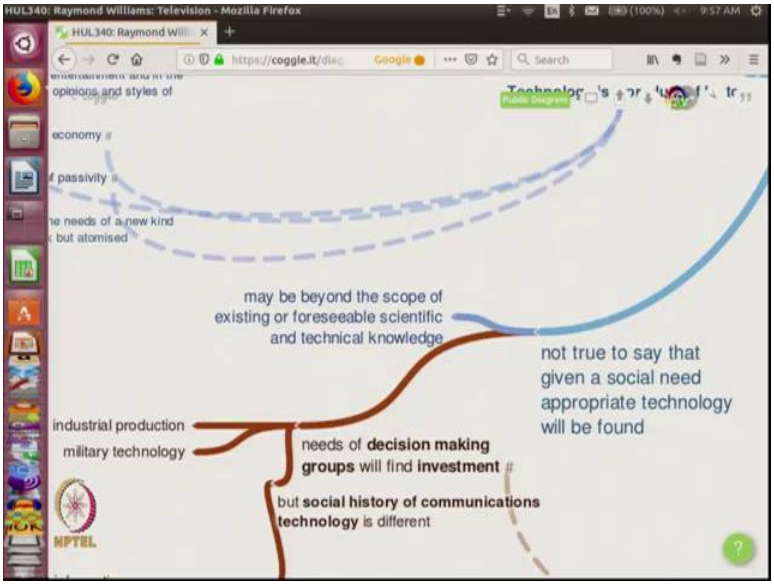

And he says that this maybe sometimes beyond the scope of existing or foreseeable scientific and technical knowledge. As I said that history may already be prepared for the development of certain technologies, but those technologies are yet not in place. And he also warns it is not true to say that given a social need an appropriate technology will be found, that may not be true, that may be beyond.

So it does not take away from the scientists would develops a technology, they are of great value but it is a way of emphasizing the role of history and social forces in development of technology. It highlights the importance of decision making groups who will make the money available, the investment available for development of technology. And this has been true of various kinds of technological developments as we can see, particularly military technology.

The development of the internet was a very important development which took place because of a need for development of military technology that is when there were information systems, storehouses of data, and the scientific and political community was becoming dependent on this storehouses of data.

There was a fear of nuclear war that if there is atomic explosion, particularly the fear within the United States, this was in the heyday of the Cold War, that if there is a nuclear disaster at a certain location which houses these data centers, then it would lead to a catastrophic effect, so there was a need for DE-centering the data and that started creating the first networks and since

these developments this research was happening primarily within the university scientific communities, these networks were initially developed within various universities.

Now once they started developing within the universities, they were in their very nae-scent state put to other uses, not only for the preservation and DE-centering of data, that is synchronizing the data between various servers across geography, but these networks were also put to use for communication purposes. The first rudimentary email technologies came into being. And these became more and more sophisticated, newer protocols and codes were developed which slowly gave rise to the modern day internet. And it went beyond the reach of the academic community and became a larger social project.

So we see how certain very important technology, much of the technologies of modern day air travel were formed through development through military needs. The development of the radar was a very important technological development during the Second World War or even nuclear power certainly. We know the linkage between military needs and civilian usage. So decision making certainly is on various funding of science and technology, is dependent on historical forces which points to the importance of historicising the development of technology.

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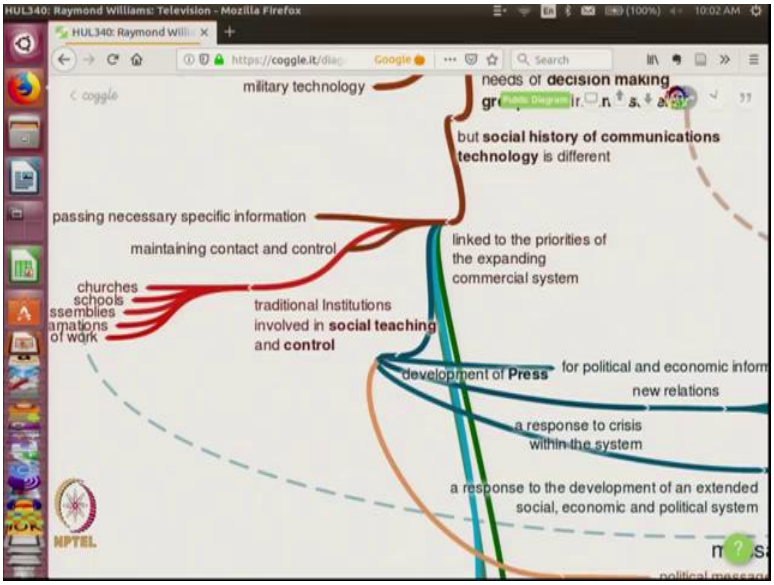

He says, but beyond the military technology there are other kinds of forces which can actually set the priorities for communication technology and he says that the expanding commercial system had set certain priorities, within this expanding commercial system it became important

to pass specific information swiftly and maintaining contact and control between various business centers, as businesses expand, various business centers, business communities need to get in touch with each other.

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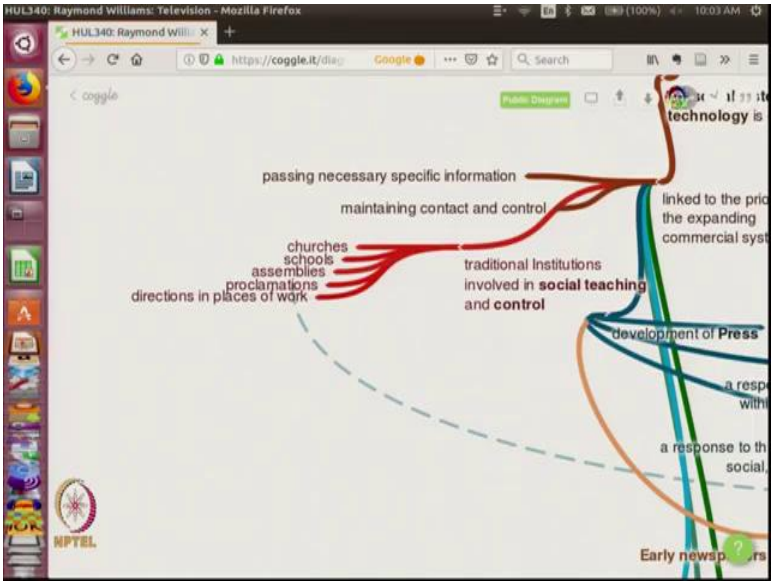

And these were primarily beyond the earlier institutions, traditional institutions. Traditionally the more powerful source of institutions, were the churches, the schools, assemblies. These were the spaces which were involved in decision making. But with an expanding commercial system, these centers changed, new kind of institutions come in to being.

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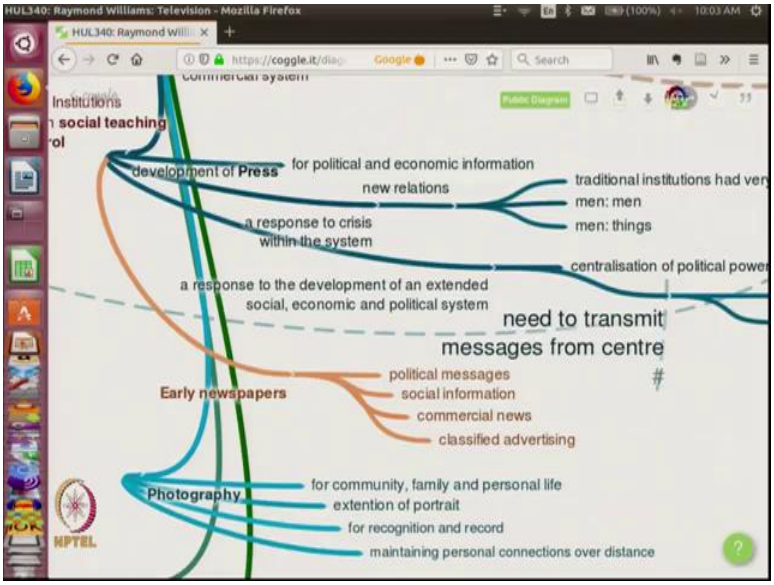

So you have the development of the press, the press becomes a very important institution, important modern institution for passing of political and economic information. The press creates new relationships where these traditional institutions, the schools, the churches, and the assemblies had very little role to play in the way the relationship between people and people and the relationship between people and things.

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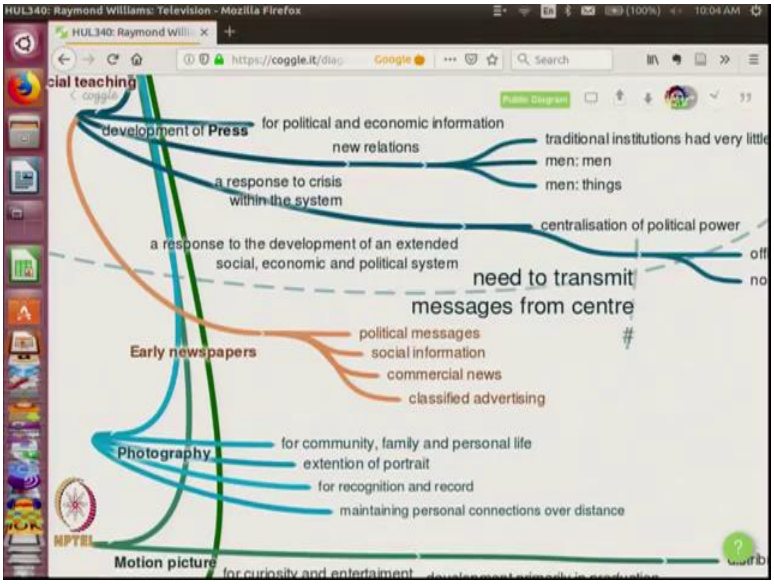

And the development of the press already leads to a certain degree of centralization of power. Centralization of the power because power sought to control the printing press, tried to ensure

that printing happens through certain very regulated presses because we saw what was the role of the press in political combat, in political clashes of ideas.

And this centralization of power could be official as well as non-official. The increasing commercial clout of certain business houses or certain business communities, the associations of various businesses or corporate organizations, they needed to control information, the rise of the stock market is a very important example. If you wanted to regulate the markets, you have to control the information, you need to give the signals that you want through the communication mechanism, through the press to the larger public.

So that certain kind of decisions are taken within the political authorities, the government is forced to take, the government is encouraged rather to take certain decisions based on a certain popular opinion. Therefore, a certain kind of centralized messaging system needs to develop. The press answers a little bit of that need, but television is far more advanced, far more efficient in being able to do that.

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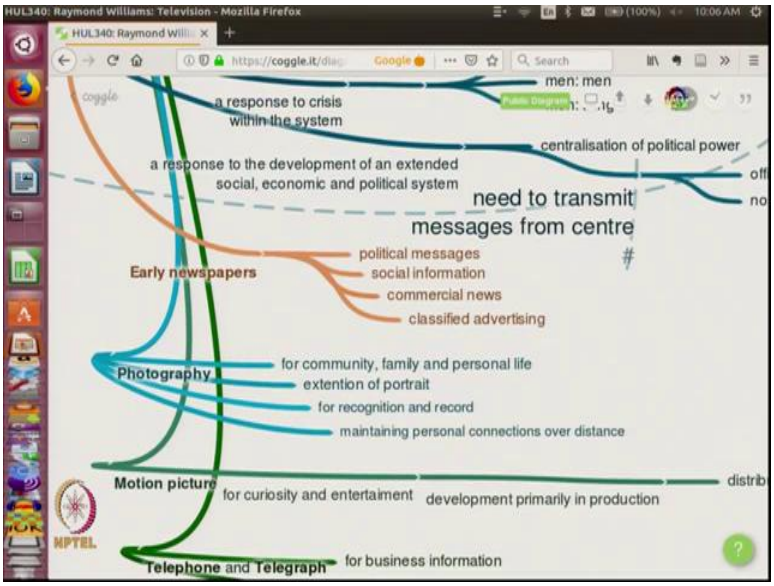

The early newspapers, they carried political messages, they carried social information, they carried commercial news, as well as carried classified advertisement. So these were the various content within the newspapers which led to the development of the press as an institution, they served a certain purpose, very different from the earlier traditional institutions, the school, and the churches and the assemblies that would be there, the monasteries.

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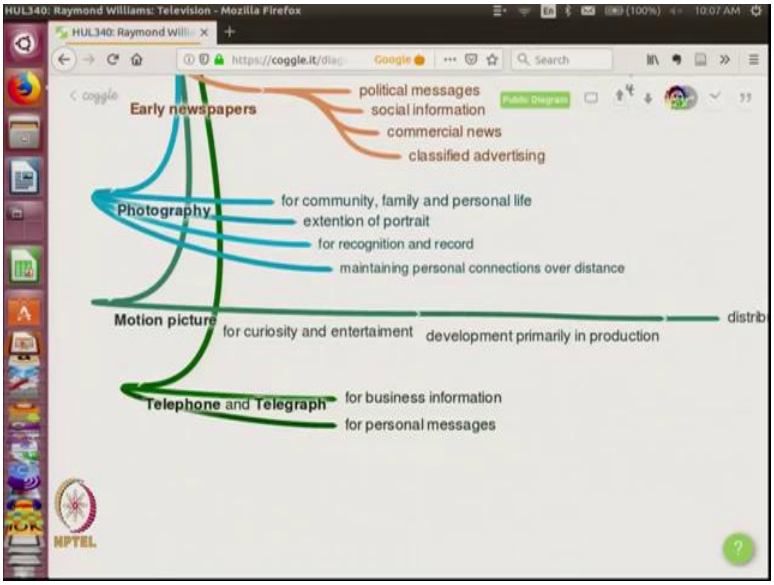

Then he talks about another communication medium which becomes an important institution which is photography. Now photography as a technology, brings about certain changes, it is an extension of the portrait and being an extension of the portrait it alters the way in which the family and personal life and community life is perceived. It is now possible for people to share experiences with others a great degree more rather than merely writing a letter or narrating the tales of travel or tales of a certain event, you could actually now carry the visuals of a particular event or a particular tour.

These were also meant for recognition and record so it could add to memory, it became a kind of a family archive and maintaining personal connections over a distance. Photography played a very important role. And very importantly photography played a very important role beyond the requirement of literacy. Literacy is not a requirement for photography. However, access to the technology remains an aid.

Similarly, the other kinds of technologies bring about small, little changes, and he is discussing all this before plunging into the discussion on television. So motion picture, the way it developed he says, is that it was a technology that was developed first and then the channels of distribution came later.

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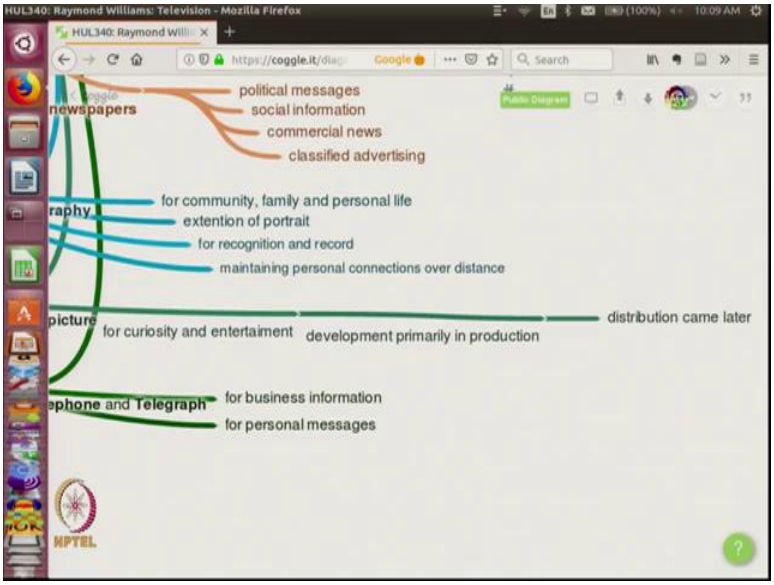

If you look at the development of the history of the motion picture or movies or films, find that the technological development occurs before the coming of distribution, very different from the way television actually develops. Similarly, telephone and telegraphs were also looking to revolutionize the communications for passage of business and personal messages, these were already the needs which are there within the society and it is within this that the need for the development of television grew.

There were certain historical context in which television gets developed, television or radio. The development of electric power, now before the development of electric power, television could not have developed.

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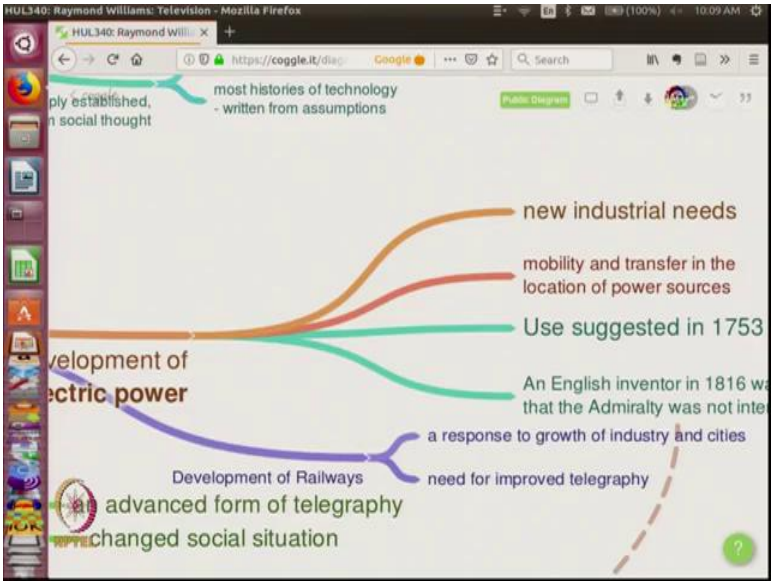

Now the development of electric power itself responded to certain historical needs, that the new industry needed more power, the industrial revolution had lived its run and now mere mechanization could not hasten production any further. The need for addressing the increased demands of people and the needs for generating more profits, if I produce, if my factory produces 10 times more, it increases its productivity by 10 times, then I will be able to earn, generate more profits by taking over 9 new geographical locations where I can distribute my goods, I can take over newer markets.

And that is enabled by electric power. These new industrial needs were already there in place, the world economy was growing tremendously or certainly what was happening was that the leading industries were taking over newer and newer markets and they needed to hasten the pace of production, so electric power gives that added boost to technological development.

What we today find a new kind of advancement from electric power that has come about and that is the development of artificial intelligence. Artificial intelligence is trying to not increase production, but increase productivity in the way in which it is trying to reduce wastage. So there is a move towards maximizing profit by reducing input cost and that is where artificial intelligence is playing a role in being able to predict this specific kind of demand, a kind of customized demand and production would take place accordingly.

So that prediction becomes the very important business goal today, which is why a lot of research and development is going into the development of artificial intelligence. A hundred or hundred and fifty years ago, that kind of emphasis in research and development would have taken place in the development of machines running on electric power. And the use of electric power was suggested in 1753, but there were no takers because there was not a need at that point of time.

Certain administrators said that there is no need, we do not want to invest in it, simply because there was not a social need that was felt, it is only when social need is felt that money gets pumped into it, either public money or even private money, corporate money.

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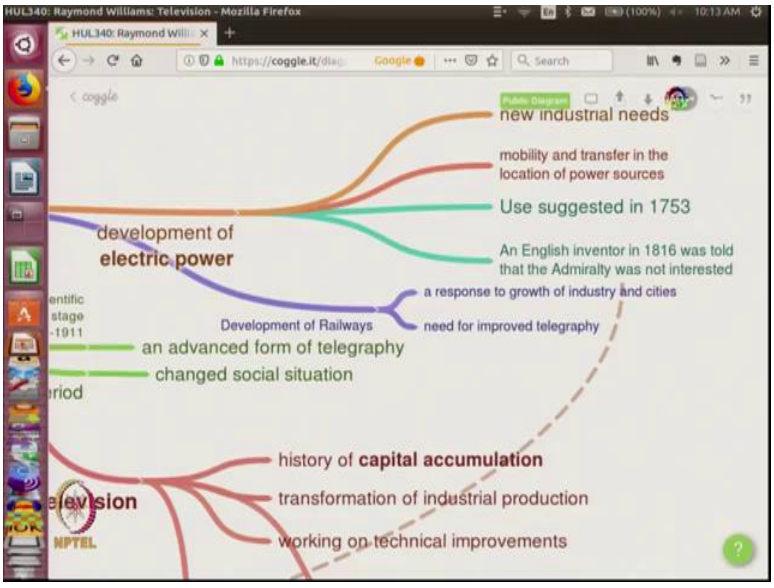

The development of railways is another very important development of technology which is a response to the growth of industry and cities. So he says that certain technologies get developed because of certain needs.

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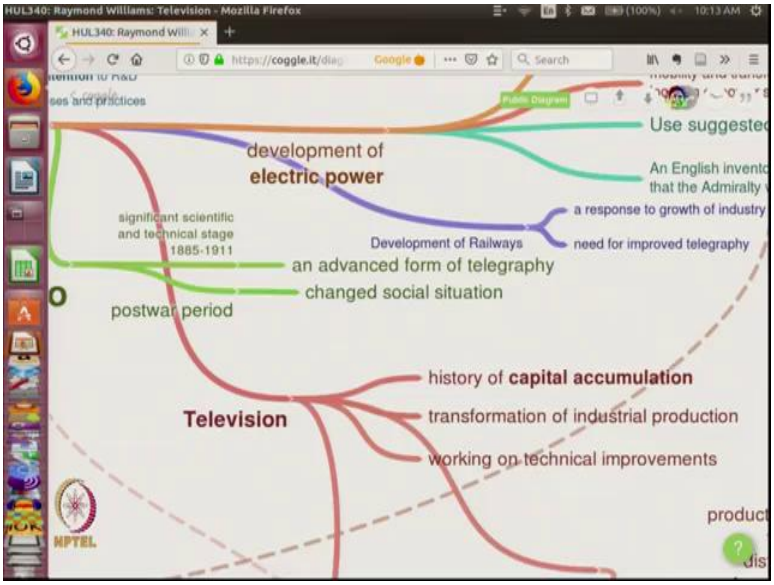

And he says that the period between 1885 and 1911 till the First World War was a very important stage in the development of science and technology. And the post war period actually changed that particular situation.

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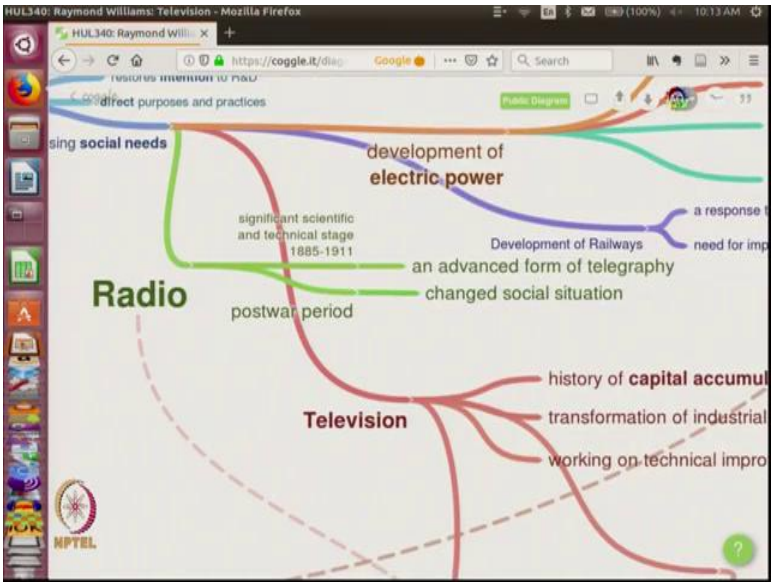

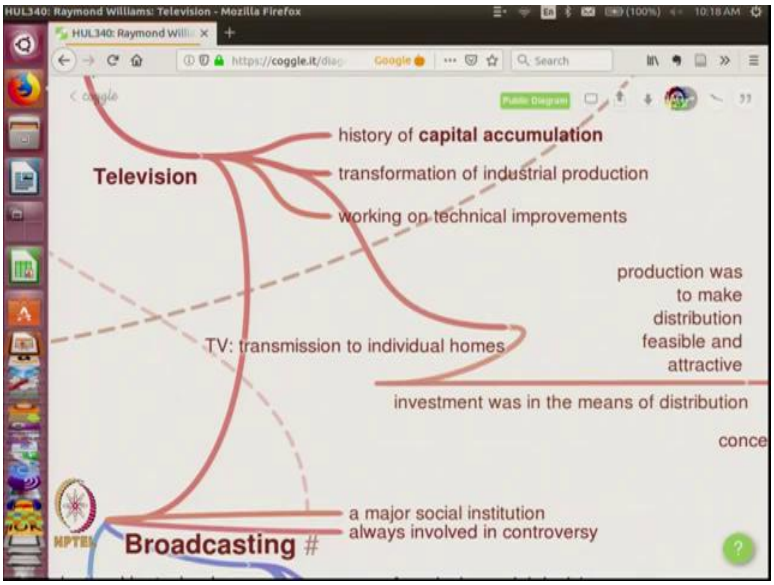

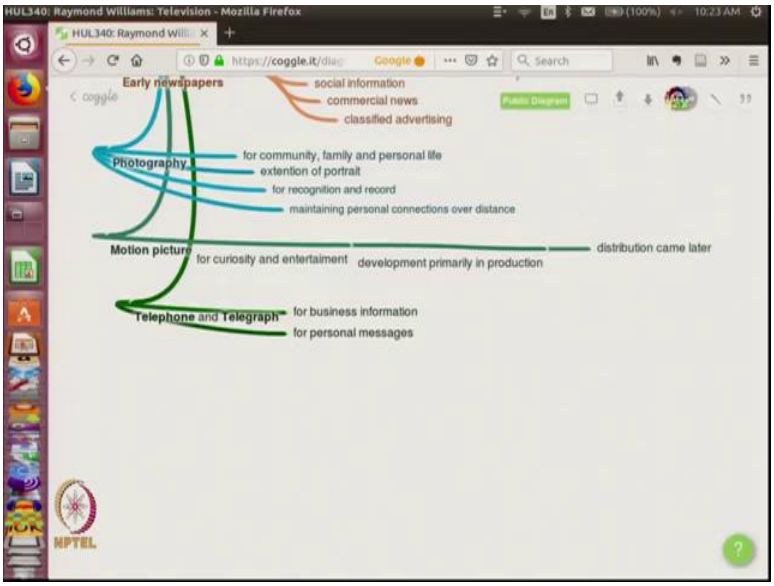

And that is when the radio got developed, that phase. So at around the first half of the 20th century is really where the radio played a very important role. So he says that the moment in which the television technology was first developed, one can locate this within several other developments that were happening alongside, one, it was the history of capital accumulation. Now, what does he mean by capital accumulation? That increasingly more and more capital was getting concentrated in fewer and fewer hands.

And that is the idea of the capital accommodation, this was happening through the market mechanism, as capital gets accumulated, now it becomes possible that more and more of money can now be invested in research and development, number 1. Number two, with greater capital

accumulation, if this capital accumulation is happening through a private mechanism then the desire for boosting profits grows exponentially.

Now, of course capital accumulation can happen through two mechanisms, either through public mechanism that is through collection of taxes, the government has more capital, more revenue accessible to it, investible revenue and the government funds research and development, or if it is in private hands then it leads to private research and development. Endowments being given to academic communities, scientists and technologists, engineers to be able to develop newer technologies.

And the transformation of economic production is another important point, where the kind of goods that are getting produced, if they undergo a certain change then the nature of circulation of those goods are going to also undergo a change and the way in which these goods would be advertised, their usage would be encouraged, would also undergo a certain change.

And he says that people who are already working on technical improvements in communication mechanisms, the news reels were a precursor of television, where a certain news reel would be physically transported to various locations for people to watch. So these news reels would also be transmitted before cinematic exhibitions, before movies.

In fact, if some of you may recall that in the era of the 35mm film transmission, transporting of the reels would be very interesting, that typically a movie would come in maybe a dozen odd reels. And in order to reduce costs various cinema houses across the city or across a particular part of the city would hire one particular set of reels and the reels would get transported from one cinema hall to another through a particular show.

So the matinee begins in one particular hall and then once the reel is finished there, would go to another hall and then it get transferred to another hall and thereby one single copy of the film could be screened across several movie houses simultaneously. So this transfer of the news reel is something akin to that, so people already were interested in developing better, the need for greater communication of the moving image was becoming necessary and television was answering that.

Now, transmission of television to individual homes is something that became a need and this is very different from what he just talked about, the development of other technologies where the development of a certain technology which we saw here in the form of the development of the motion picture he says, that the development was primarily in production, the distribution mechanism came later.

Whereas, he says, in the case of television, the transmission to individual homes was a need, if one looks at the various kind of correspondence between various technical houses, he says that the need for investment in means of distribution was pretty high. So the aim of the production, the aim of the research and development was to make this kind of distribution possible for transmission to take place to individual homes.

Remember already the radio was transmitting to individual homes, but it was only transmitting voice, it was only transmitting sound, not visuals. And just to point this out, remember while you can see today, the radio has become a much more personal device, earlier it would be a family device, it would be a large sort of a machine. And people would be watching these, would be listening to the radio transmission within the home and various members of the home could be listening to it.

Today of course if we listen to the radio, it is a completely individual listening mechanism through the earphone, but that is not how things were when Williams was writing this essay. Now, if we think of it, even today, even with the personalized form of access to the radios, sounds, one can go about and doing other work and in fact that is the entire idea that you keep listening to music, you keep listening to the radio transmission or you keep listening to the commentary of a particular sports event and you go about doing certain other chores or certain other kinds of works.

You certainly cannot study while listening to sports commentary or news, but people do try to, some people do manage to study with some light music on. So the radio kept a certain activity on. But television certainly captivates people, you cannot watch something and do some other things there is a certain level of distraction which the television does not allow. So the television generates the couch potato. Television actually occupies people's attention a whole lot more to

the extent that it renders the human body passive. So that kind of distribution was something that was sought after.

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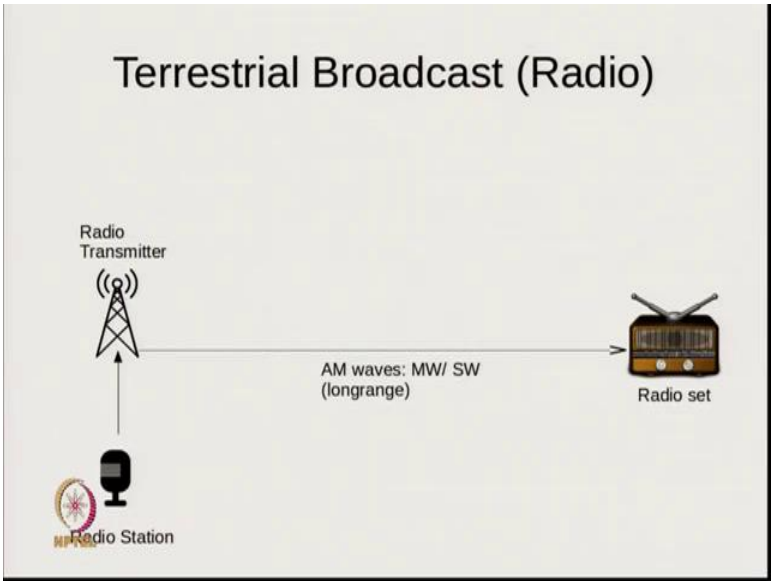

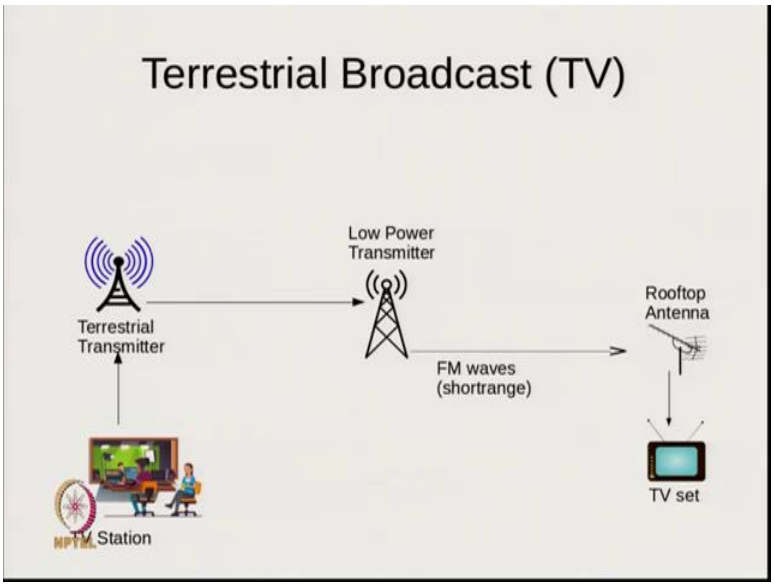

Now, I will take a closer look at various kinds of distribution mechanisms these electronic broadcast technologies or electronic means of communication, which will help understand the points that Williams is trying to make. So this is a terrestrial broadcast radio. So typically, the recording will happen in a radio station and that recording will be with the use of a radio transmitter, would be broadcast to specific radio sets and these will be amplitude modification waves, and they will be long range. Typically, we know that in the radio sets that the medium

wave or the short wave, short wave can travel far greater distances and can be used for long range distances.

In Indian sub-continent, that would lead to long range transmission within the country but one could also listen to international transmission using the short wave. So the only way in the pre satellite television era, the only way one could listen to some foreign programming would be through the short wave or rather listen to the Voice of America or to the BBC. And the short wave also became a very important tool of war during the Second World War and other wars where the enemy would be able to transmit into the territory of the neighbouring, deep into the enemy territory.

And in fact they would organize transmission in the language of the enemy country invading country or the warring country and try to disrupt the political equilibrium within that country. And that is very interesting; I mean if you look at what we have already looked at in the kind of way print was trying to disrupt political equilibrium within certain domains where the boundaries of the national law making, law keeping forces, law enforcement agencies were sought to be subverted by the transport of forbidden books, forbidden material into that country.

Whereas books would have to be physically carried in, radio waves do not have to be physically carried in, radio waves could be transmitted and there were mechanisms of retaliation of course but that is something that is very interesting. But these were the terrestrial broadcasts which could travel across geography, certainly across political boundaries also. But then when television develops, you have the first terrestrial broadcast mechanism where the television studio would be recording and there would be transmission from the terrestrial transmitter which would be further distributed through low power transmitters which would distribute within local areas.

And these will primarily be frequency modulation waves and therefore, they would be short waves; what we call FM, much clearer signals and also therefore, they would be able to carry far heavier signals content and they could carry the visual content as well along with the sound content. And these would be the very early days of television, there will be rooftop antennas, where every house would be dotted with these rooftop antennas which would try to gather these

signals from these low power transmitters and through a wire they transmit it to the TV set inside the home.

So in extreme weather of course this would not work so that was the kind of mechanism that there would be. So you can see the kind of centralization one is looking at in both the systems, where the radio station and the transmitter becomes central. This is of course before radio transmitters become cheaper and more accessible. Setting up a television station of course would require far greater investment of capital, these would be very heavy equipment and there would be very few and far between, that would be there.

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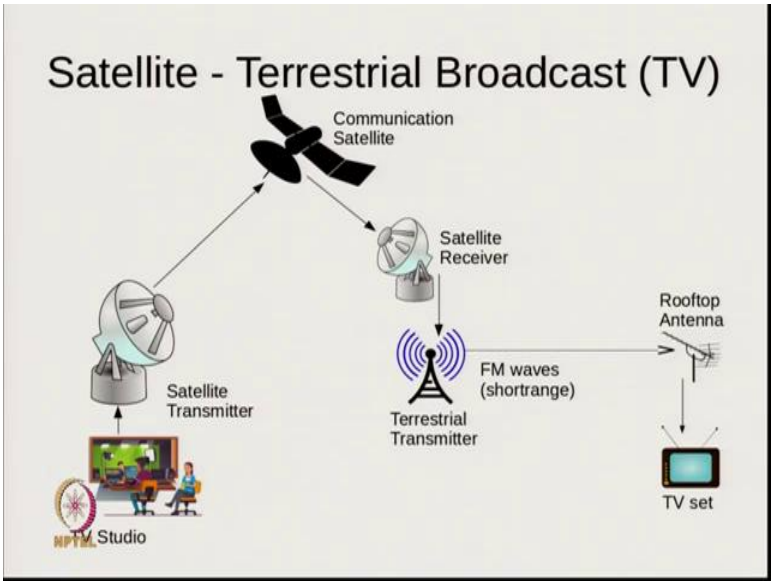

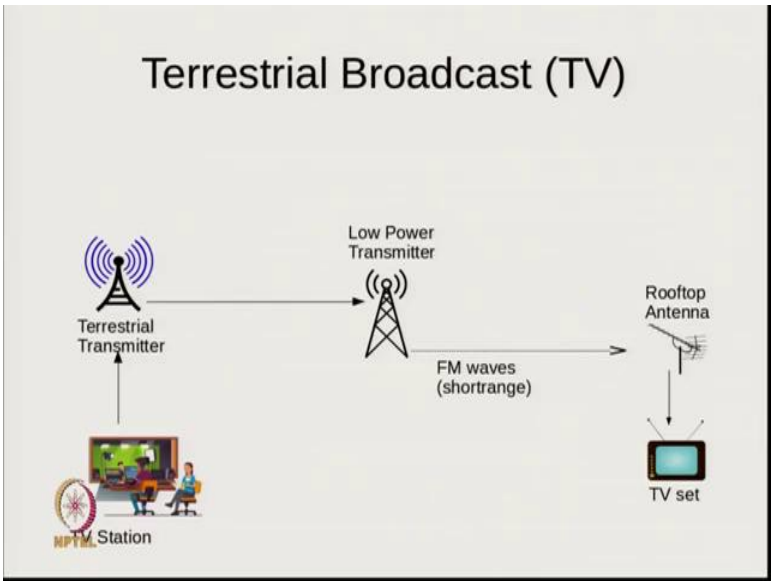

In the modern day of course you had more closer to satellite broadcast, it is still not the direct to home satellite broadcast. You would have the television studio and the signal instead of going terrestrially, goes to a satellite and then this signal is received back from satellite at various parts of the country and then through the terrestrial transmitter, transmitted to the homes.

The difference between these two would be that in the first kind of terrestrial broadcast, there would be local stations. So typically when, when television broadcast began in India, if you look at the history of television broadcast in India, they would have begun in specific locations. So there would be a transmission in Bombay, there would be a transmission in Delhi, in Calcutta and they would not be interlinked, there would be separate programming that would happen. Typically in the evening everyday they were not 24 hour and there would be greater amount of content within the local languages which were transmitted, more local programming would be there.

Whereas with the combination of the satellite and terrestrial broadcast, the national transmission, the national program would become possible and this national program would be transmitted from Delhi, typically that is how it was designed. These broadcasts became an important affair in the 1980's when the government took a series of steps to increase the number of terrestrial transmitters, satellite receiver and terrestrial transmission. And there was also development of communication satellites which would help the transmission of the signal across the entire

country and almost every week new transmitters were being installed at very remote locations across the country.

And typically what would happen is that a transmission would begin may be by 5 o' clock or 6 o' clock and first few hours of local programming, programming in the local languages and then all action would shift to Delhi. Programming form Delhi, from 8 or 9 onwards there will be the news in Hindi and then the news in English followed by the first mega serials on Indian television some of you may be able to check them out; "Hum log" and "Buniyaad" and these kind of very popular television serials that started being transmitted on Indian television, set the tone of the Indian television, development of the Indian television in the 1980's.

In fact, television stars became bigger than the film stars for the first time in the 1980's through these nationwide broadcast. And this actually brings a lot of power, remember, this entire satellite broadcasting is happening from Delhi that means the government in Delhi starts having a greater say over the rest of the country. This is something that Williams is actually going to talk about in his essay.

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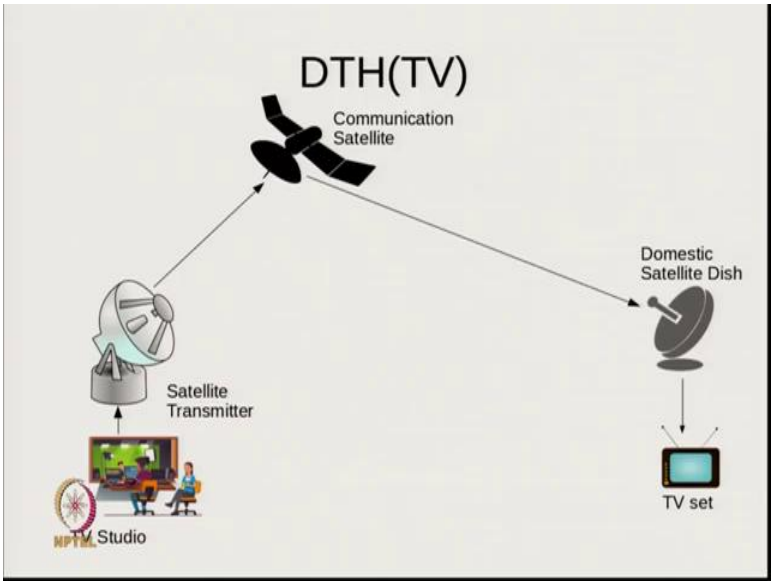

The kind of communication mechanism, the television mechanism that we follow today and which you may be able to very easily recognize is this one- where the satellite transmitter directly transmits to the domestic satellite dish and then to the TV set. Though this is being replaced now through the coming of the internet transmitted app based television where you can

login to a particular website, or login to a particular app which will allow you through usage of data to be able to watch programming.

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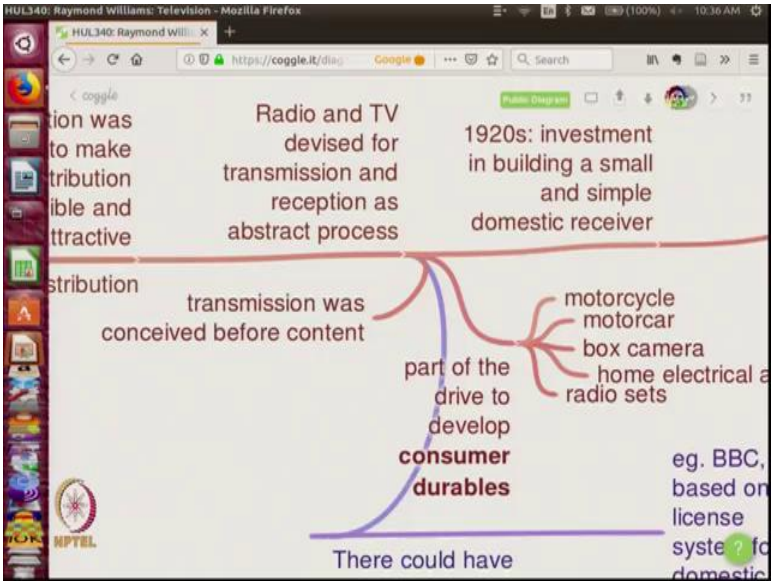

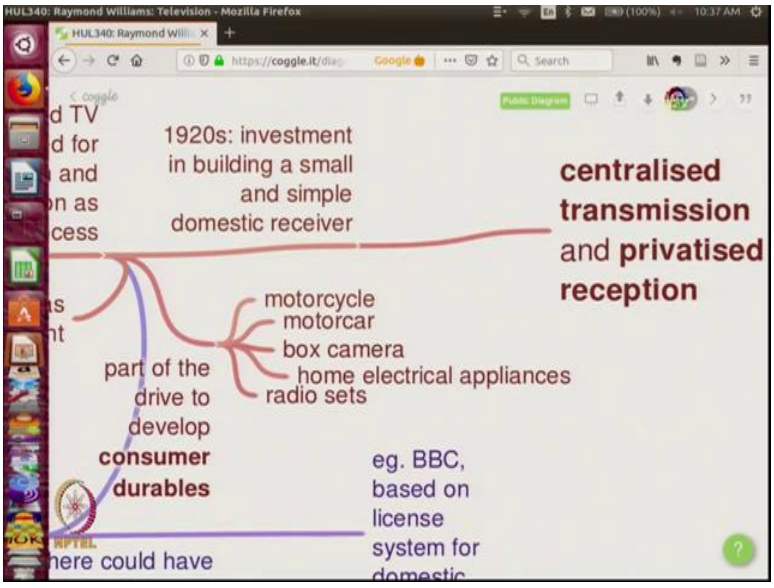

Now we need to keep these models in mind to be able to understand what Williams is saying; that this kind of distribution on two individual homes was the goal that was there. And why was this goal there? This goal was there because since the 1920's there was investment in building this small domestic receiver and this kind of transmission was conceived before content, that you actually needed to advertise; he says that this is one of the important reasons, increase advertisement of consumer durable s.

Newer kinds of industrial production were taking place, goods of consumer durables were being developed. The motor cycles the motor cars and other kind of home and electrical appliances and other things were getting developed. And therefore, there was a need for centralized transmission. Now you cannot just transmit advertisements so therefore, there was a need for programming. So these two things became amalgamated; with need of commerce to advertise and need for the government to actually control the narrative.

Now with this kind of a centralized mechanism, the government starts having a very important say over the politics within the certain country. Remember the press was becoming much more democratized, by now printing presses were cheaper and so increasingly you had more and more newspapers that were coming into being and were becoming more and more difficult to control without actually censoring them. If one were an extremely authoritarian government, one could actually censor the press, but that would bring in a certain kind of authoritarian bias. It will be looked upon as a serious drawback of a certain government to actually censor the press.

However, with the coming of the power of television, since the government actually controlled television till such time that you had the combination of the satellite and terrestrial transmission, in this particular kind of communication mechanism, the government had far greater control over what was getting transmitted really. And these two needs were getting amalgamated.

In fact, one would also recall that in case of any military takeovers, the military coup; if you see the history of military takeover of government in the 1980's and 90's, in fact the 1970's onwards, one of the first things that the coup administraion would do would take over the TV station of the country and the TV transmission mechanism. As long you are in control of the TV transmission mechanism, you are in charge of the country. That is how one would know exactly who is in power. So television became a very important centre of power.

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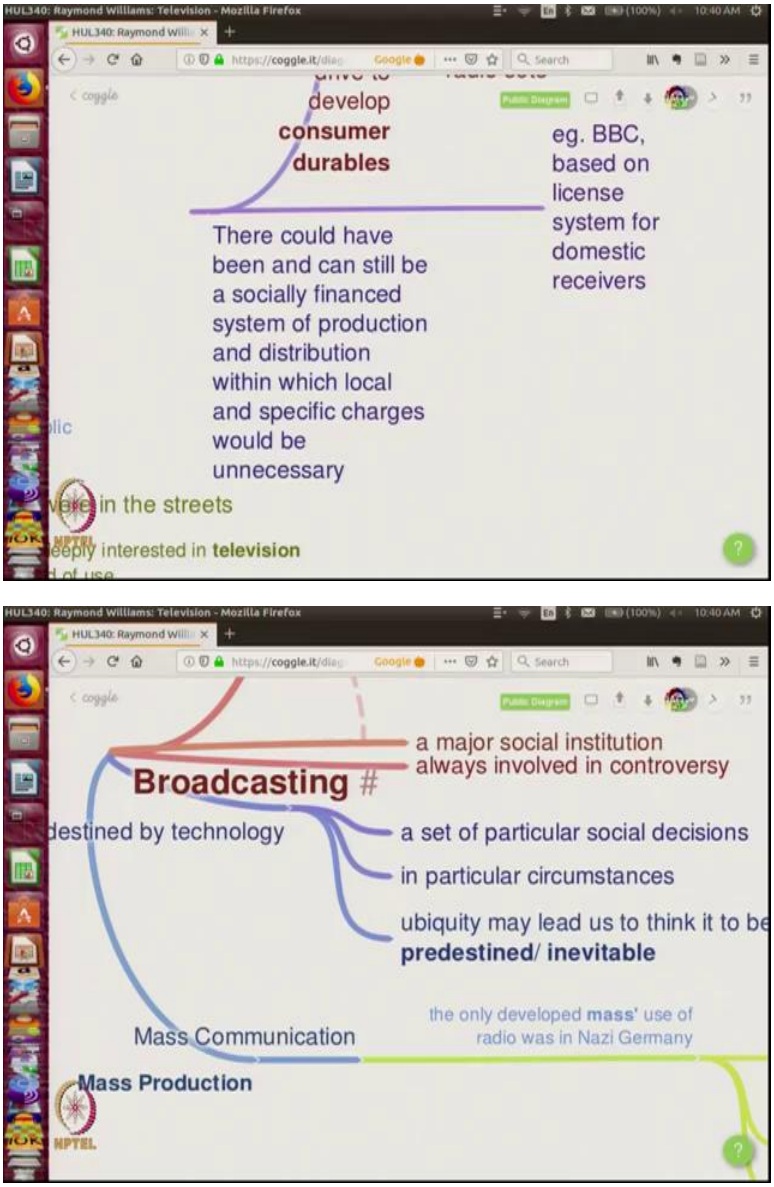

Now though television would be centrally organized, there was a possibility that this kind of television could be also privately organized. They could be run by the government, but they could also be run privately, different kind of mechanisms could be there. Certainly, the Indian experience was, till such time that satellite television becomes, the cable television becomes possible in the 1990's, you had only the national broadcast, only the government broadcast and that gave a huge amount of power to the central government, this control of television, something that was sought to be challenged by the press, challenged by the votaries of the freedom of the press.

Those of you who are interested, can look through the debates on the Indian television and the development on the Indian television in the 1980's and the 1990's. It will lead to a far greater understanding. But it is beyond the scope of this particular course, because what you are really interested in studying certain broad tenets of communication technologies, for us to be able to understand the digital media.

Now broadcasting was always a major social institution mostly involved in controversy mostly because of the very power that it had. Now broadcasting was not predestined by technology as we saw. There was a certain need which brought broadcasting into the fore, and they were a result of certain specific social decisions and it came together in particular circumstances. And because broadcasting is everywhere, it might lead us to think that this is the way the world is. Many of the people of present generation cannot possibly conceive of a world where the television or the internet are not there.

But what broadcasting really brought about, was a need of a certain kind of mass communication, because there was increased atomization of the society. More and more people were living in nuclear families. Smaller and smaller, already the large joint families were breaking up. And the need to communicate directly, the traditional mechanisms of communications, the church or the schools were becoming weaker.

Earlier governments, the colonial government in India would probably communicate much easily through the education mechanism, through workplace orders, they could control. Education policies could actually control the way people are oriented and thinking. But with the atomisation of society, with more and more nuclear families, this need for directly communicating to people. So now you had a mass communication which is centrally controlled.

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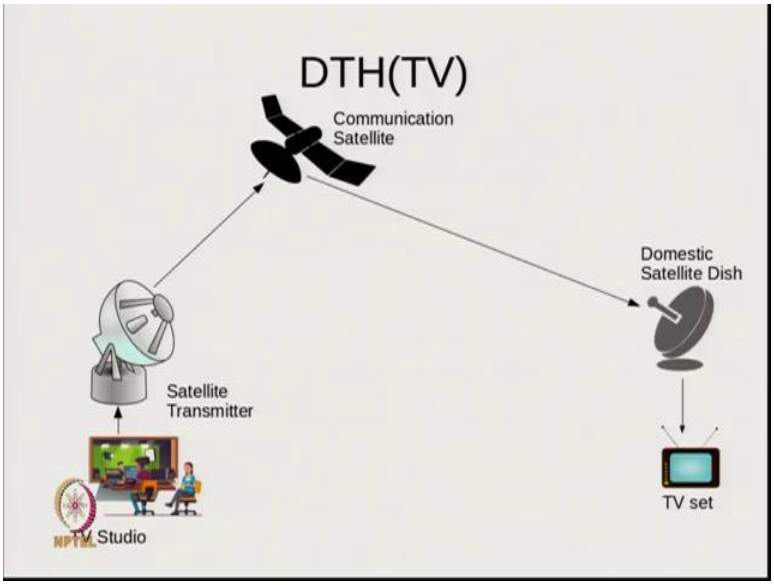

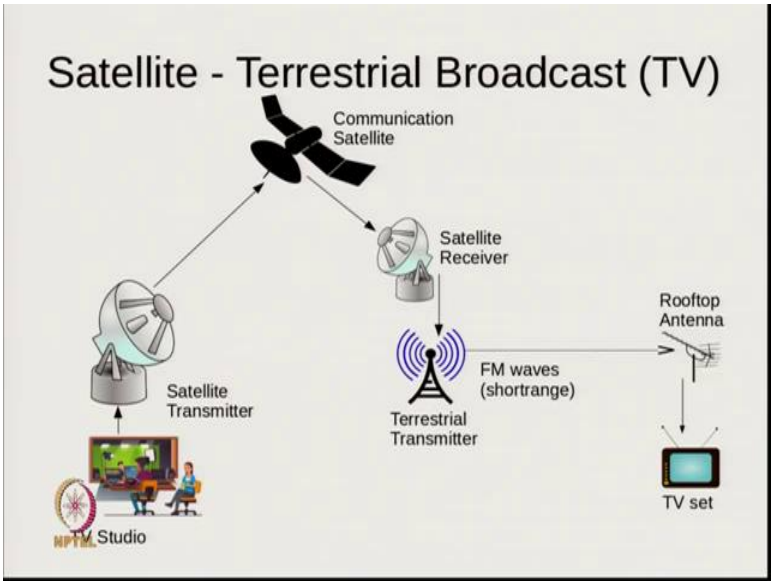

This is a model which is very different from what we see here, or even with the DTH, the television, that is there is one content which is getting transmitted to every home, every single home. Whereas with the internet today, with the coming of social media, what we have today is a very different kind of communication technology where there is customized communication. It is mass communication, but it is customized communication, each person gets to see different things.

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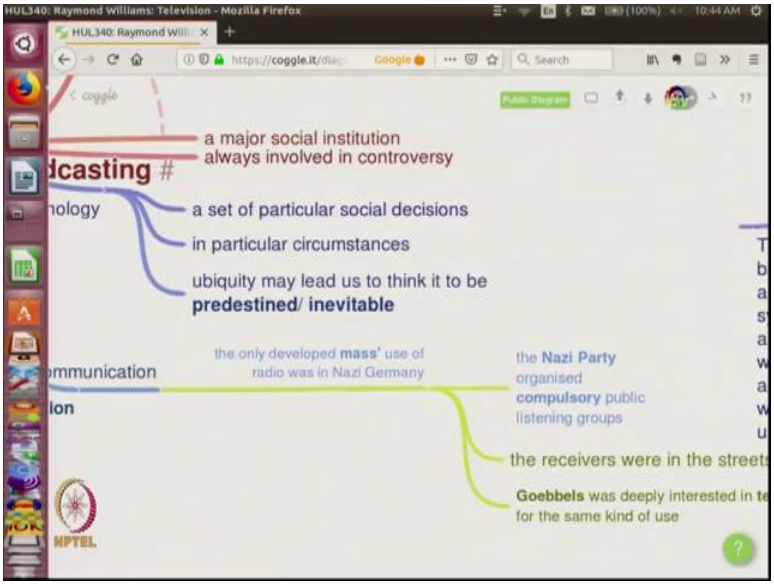

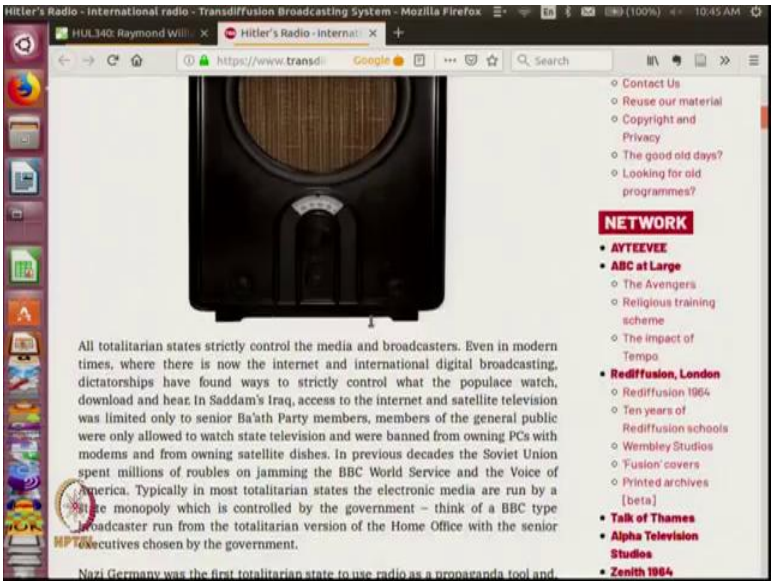

So in the age of television, in the age of broadcasting we see a kind of a centralized mass communication and this was something that was developed. The only example before television, the only example of the mass use of the radio was in Nazi Germany where Hitler used communication mechanism, in fact he worked, the Nazi government worked towards the development of cheaper radio sets which would enable the Nazi government, Hilter's government, to transmit its various programmes and various ideas to the people. You can read a little bit more about all this.

And moreover, and they would also carry entertainment. The entertainment would keep the audience engaged and the messages, the political messages of the Nazi party were also developed.

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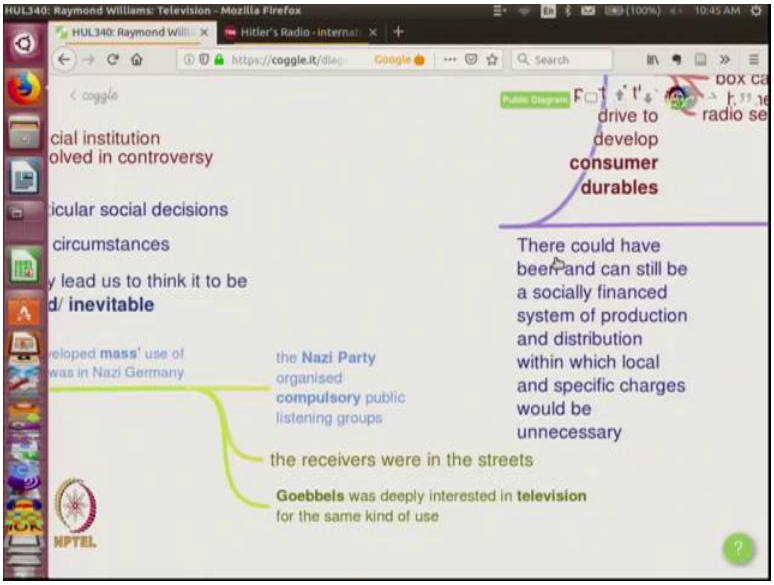

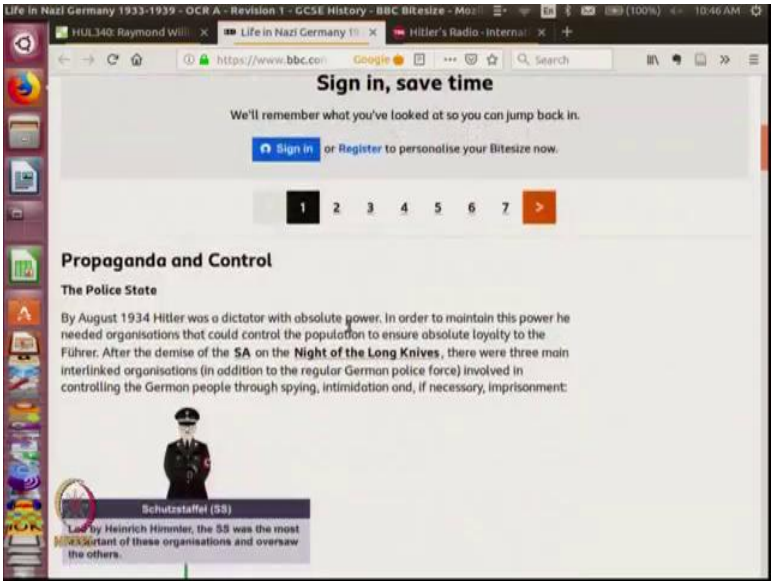

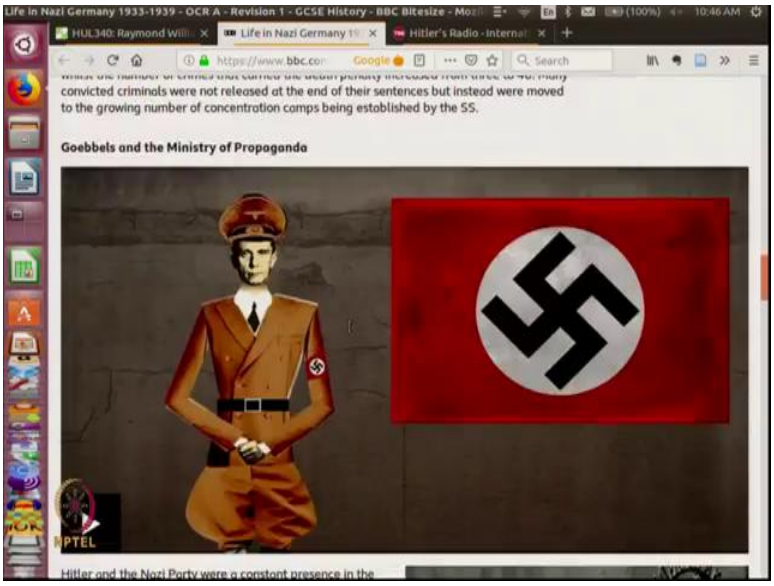
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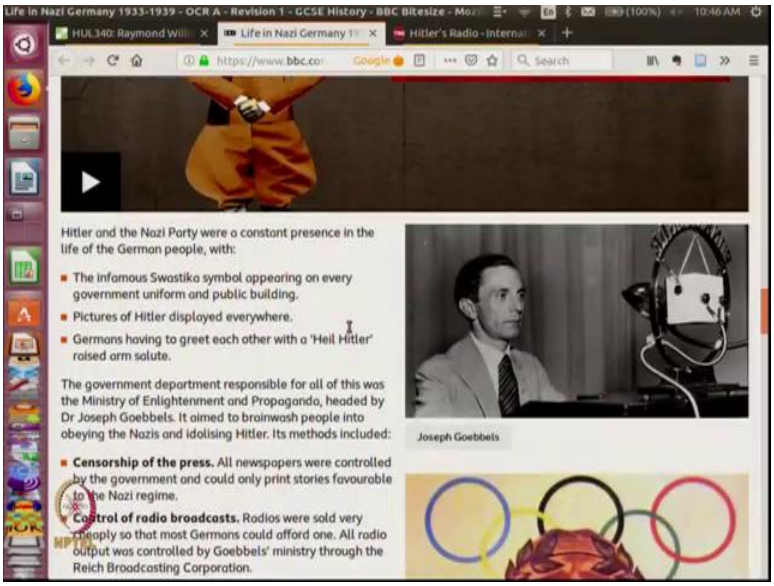
convicted criminals were not released at the end of their sentences but instead were moved to the growing number of concentration camps being established by the SS.
Goebbels and the Ministry of Propaganda
Hitler and the Nazi Party were a constant presence in the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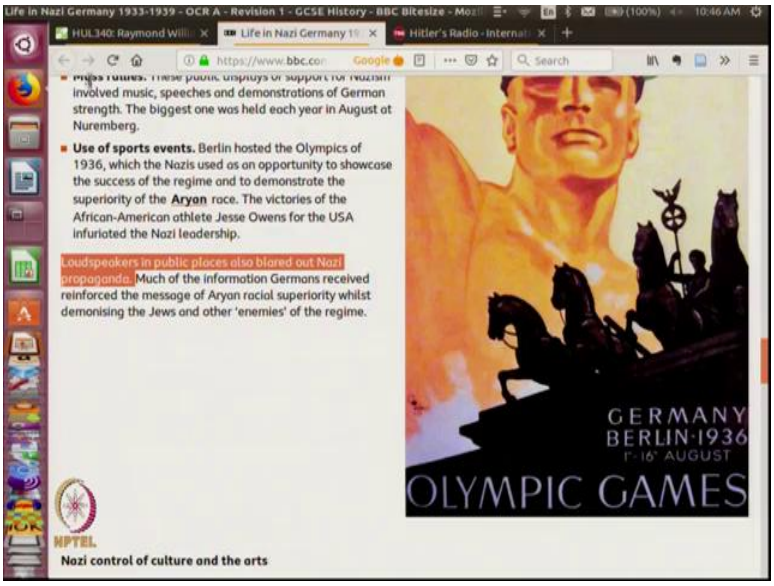
Hitler and the Nazi Party were a constant presence in the life of the German people, with:
The infamous Swastika symbol appearing on every government uniform and public building.
Pictures of Hitler displayed everywhere.
Germans having to greet each other with a 'Heil Hitler' raised arm salute.
The government department responsible for all of this was the Ministry of Enlightenment and Propaganda, headed by Dr Joseph Goebbels. It aimed to brainwash people into obeying the Nazis and idolising Hitler. Its methods included:
Censorship of the press. All newspapers were controlled by the government and could only print stories favourable to the Nazi regime.
Control of radio broadcasts. Radios were sold very cheaply so that most Germans could afford one. All radio output was controlled by Goebbels' ministry through the Reich Broadcasting Corporation.
Joseph Goebbels



So there were receivers installed in the streets and his communication adviser, Goebbels was deeply interested in the television for same kind of use but of course their regime was over before it could really be done. In fact one of the things that the Nazi party also did was organize compulsory listening to Hitler's speeches. People were made to listen to his speeches compulsorily.

So the Nazi party controlled the radio broadcast and used these kind of events to be able to listen to. So the loud speakers would be placed in public places to blare out Nazi propaganda through the use of radio mechanism.

That is one extreme kind of centralization that was made possible by electronic means of communication, by the electronic medium. But certainly these were ideas that were being developed according to the need of a certain society, a certain kind of levels of economic development, certain models of social organization which actually gave shape to this technology of television. That is what Williams argues, that the way to look at technological development is by historicizing the development of technology really. Thank You.