

**Literature, Culture and Media**  
**Prof. Rashmi Gaur**  
**Department of Humanities and Social Sciences**  
**Indian Institute of Technology - Roorkee**

**Lecture – 53**  
**Digital Culture, Media, and Literature**

Welcome dear friends. In this module, we would look at the interconnections between digital culture, media and literature.

**(Refer Slide Time: 00:41)**

### Digital Media

- The questions raised by new, interactive technologies have their precursors and echoes in pre-electronic literary and artistic traditions.
- Marie-Laure Ryan in *Narrative as Virtual Reality* (2001): Is there a significant difference in attitude between immersion in a game and immersion in a movie or novel?
- What are the new possibilities for representation offered by the emerging technology of virtual reality?
- Formerly a culture of immersive ideals—getting lost in a good book, for example—we are becoming a culture more concerned with interactivity.
- Idea of virtual reality is a metaphor for total art



The questions which are raised by new interactive technologies have their precursors and echos in the pre-electronic literary and artistic traditions. To some of these traditions we have referred to in the previous module also. A very interesting question has been raised by Marie-Laure Ryan in a work *Narrative as Virtual Reality* published in 2001 and she asks whether there is a significant difference in attitude between immersion in a game and immersion in a movie or immersion in a novel. So, thereby she wants to know what are the new possibilities for representation offered by the emerging technology of virtual reality. She also suggests that the culture of immersive ideals is now being shifted to a culture which is more concerned with interactivity. According to her, formally we belong to a culture of immersive ideals for example, getting lost in a good book but now we are becoming a culture which is more concerned with interactivity simultaneous presence and participation through social media.

**(Refer Slide Time: 02:00)**

## Digital Media

- Electronic revolution of the past few years has resulted in new textual genres, such as hypertext, electronic poetry, interactive movies and drama, digital installation art, and computer role-playing games.
- Key critical/literary theorists had foreshadowed what we now call virtual reality -- Baudelaire, Huysmans, Ignatius de Loyola
- A main central issues in modern literary theory is the opposition between a presumably passive reading that is taken over by the world a text represents and an active, deconstructive reading that imaginatively participates in the text's creation.
- Moving towards a different type of participatory culture in literary perceptions



So, the idea of virtual reality has now become a metaphor for total art, electronic revolution of the past few years has resulted in new textual genres, such as hypertext, electronic poetry, and computer role playing games etc. We also know that there have been various critical and literary theorist who have foreshadowed the quintessence of what we now call virtual reality and we can particularly refer to the work of Baudelaire, Huysmans, Ignatius de Loyola.

A central issue which is emerging in modern literary theory is the opposition between a presumably passive readings that is taken over by the world which is represented by a text versus an active deconstructive reading that imaginatively participates in the creation of a text. So we are moving towards a different type of participatory culture as far as literary perceptions are concerned.

**(Refer Slide Time: 03:01)**

## Digital Media

- Deployment and communication with digital media
- Flows, reimaginings, amplifications, erasures, and transformations of a wide range of cultural representations, experiences, and identities
- Extended their influence into the heart of everyday life most notably through cell phones, smart phones
- Helped in engendering new collectivities: 'Web-cam girls, gamers, hackers, and others, whose senses of self, vocation, and group sociabilities are shaped significantly, although not exclusively nor deterministically, by digital technologies' (Gabriella Coleman 2010)



Digital media is associated with deployment and communication as well as flows, reimagining's, amplifications, erasures and transformations of a wide range of cultural representation, experiences and identities. The influence of the digital media has been extended to the heart of everyday life most notably through the smart phones and the cell phones now, it has also helped in creating new collectivities, for example, web cam girls, gamers, hackers and others whose sense of self, vocation and group sociabilities are shaped significantly although not exclusively nor deterministically by digital technologies.

**(Refer Slide Time: 03:49)**

### Categories of Ethnographic Approaches to Digital Media:

1. Relationship between digital media and the cultural politics of media.
2. Vernacular Cultures of digital media
3. Prosaics of digital media

Evanescent and provisional categorization with intersecting boundaries



---

The ethnographic approaches to digital media can also be categorised into three main categories; the first is the relationship between digital media and the cultural politics of media, the second is

vernacular cultures of digital media and third is the prosaics of digital media. This categorisation is only provisional and remains evanescent with intersecting and overlapping boundaries.

**(Refer Slide Time: 04:18)**

### Categories of Ethnographic Approaches to Digital Media

- Relationship between digital media and the cultural politics of media.
  - how cultural identities and representations associated with youth, nation, and diaspora are communicated, reproduced and subverted through
- Relationship between digital media and the cultural politics of media
  - How cultural identities and representations associated with youth, nation, and diaspora are communicated, reproduced and subverted through individual/collective engagement with digital technologies
  - The examination of hacker communities. Blogging, migrant programmers and internet memes
  - How these communities are organized around the logic of digital media



When we talk about relationship between digital media and the cultural politics of media. We normally want to find out how cultural identities and representations associated with youth, nation and diaspora etc., are being communicated, reproduced and subverted through individual or collective and participative engagement with digital technologies. Vernacular cultures of digital media want to find out how vernacular cultures are being manifested in various digital centres and collectivities.

We also look at the examination of hacker communities, blogging, migrant programmers and Internet memes and how these communities are organised around the logic of digital media.

**(Refer Slide Time: 05:05)**

- Prosais of digital media
  - How digital media feed into, reflect, and shape other kinds of social practices, like economic exchange, financial markets, and religious worship (Coleman 2010)
  - Attention to these processes, rituals, material and social protocols illuminate how digital media became incorporated into social, cultural, economic life
- These three categories are provisional and tactical; boundaries often overlap

Prosais of digital media want to look at how digital media feed into reflect and shape other kinds of social practices like economic exchange, financial markets as well as religious worships. So attention to these processors, rituals, material and social protocols illuminate how digital media is becoming incorporated into the social cultural as well as economic life of the people on an everyday basis.

However, as I have mentioned earlier these categories remain to be provisional and tactical and the boundaries are also not watertight and compartmentalised, they can often overlap.

**(Refer Slide Time: 05:52)**

### Brief Review of Studies on Digital Media

- On cultural implications of digital media (Appadurai 1996, Escobar 1994, Fischer 1999, Kirshenblatt-Gimblett 1996)
- Ethnographic research in terms of emergent digital technologies (Baym 2000, Danet 2001, Kendall 2002, Miller & Slater 2000).
- Scholarly work on the new posthuman subject residing in a "digital age" or "network society" (Castells 1996, Hayles 1999, Turkle 1995).
  - Ushered in an "historically new reality" (Manuel Castell 1996: 92)
  - "Fundamentally alter[ed] the way we . . . we live, we sleep, we produce, we consume, we dream, we fight, or we die" (31).
  - Concerned with questions of transformation and rupture



If you look at a brief review of major studies which have come up on digital media, we find that several approaches become clear to us, most of the studies started in the late 1990s on understanding cultural implications of digital media. As we started to enter the 21st century, we find that ethnographic research was carried on in terms of emergent digital technologies. At the same time, we find that in the path breaking research, Castells, Hayles and Turkle have talked about the new post human subject residing in a digital age or network society.

The digital age has ushered in what is termed as a historically new reality, it is fundamentally altering the way we are born, we live, we sleep, we produce, we consume, we dream, we fight or we die, so it is concerned with questions of transformation and rupture.

**(Refer Slide Time: 06:54)**

- Others have been skeptical of the autonomous power of technology to bring about change (Hakken 1999, 2003)
- Others note that instead of heralding novelty, digital technologies have been responsible for enabling social reproduction and "expansive realizations" of self and culture (Miller and Slater, 2000)
- By 2004, popular hype about digital technologies saw a resurgence with the proliferation of Web 2.0 technologies
  - Contemporary social media (Wikis, blogs, embedded videos) as opposed to static web pages and message forum, extol social media for social connectivity, interactivity, flexibility, user-generated content, and creativity, allowing democratic participation for a global population
- Others(Hindman 2009, Lovink 2008, Mosco 2004, Scholz 2008) contest the liberatory aspects of Web 2.0 technologies and focus on the digital divide

Other studies have been skeptical of the autonomous power of technology to bring about change and some studies have also noted that instead of heralding novelty, digital technologies have been responsible for enabling social reproduction and expensive realisations of self and culture. However, we find that by the time we enter 2004, the popular hype about digital technologies sees a resurgence with the proliferation of web 2.0 technologies.

It is related with the emergence of contemporary social media, wikis, blogs, embedded videos as opposed to the static webpages and message forums which were being maintained earlier. Social media is often extolled for social connectivity, for interconnectivity, flexibility, user generated,



content, creativity and it has also allowed democratic participation for global population. At the same time we find that people who started writing about the digital technologies and digital literature after the incorporation of the 2004, new technology they started to talk about the liberating aspect of the web 2.0 technologies and also focused on the digital divide.

**(Refer Slide Time: 08:25)**

- Ginsburg (2008) investigates how digital technologies and media revives dated modernization theories
- Influences the agenda of development projects
- Can marginalize groups such as indigenous communities.
  - Marginalized communities are excluded from scholarly accounts of digital media
- This techno-imaginary universe of digital eras and divides... has the effect of reinscribing onto the world a kind of "allochronic chronopolitics" ... in which "the other" exists in a time not contemporary with our own.
  - This has the effect of restratifying the world along lines of a late modernity despite the Utopian promises . . . of a 21st-century McLuhanesque global village." (pp. 130-31)

Ginsburg has investigated how digital technologies and media revives dated modernisation theory and looks at the way the development projects are influenced as well as the agenda of different development projects can be influenced by it, he also investigates whether marginalised groups such as indigenous community etc., are excluded from a scholarly accounts of digital medias.

The techno-imaginary universe of digital era and divides has the effect of as Ginsburg suggest re-inscribing onto the world a kind of ‘allochronic chronopolitics’ in which the other exists in a time not contemporary with our own, this has the effect of the restratifying the world along the lines of the late modernity despite the utopian promises of a 21st century, McLuhanesque global village. So, we find that some of the critics are also talking about the global divide, the digital divide which exists significantly in our world.

**(Refer Slide Time: 09:32)**

- The use of digital media for producing culturally and politically meaningful discourses
- Questions of access and capacity remain to be significant
- Required skills and media literacy
- Digital media cannot be the sole ground for producing a shared subjectivity or a new sensorium
- These discourses are constituted by exclusionary practices
- Despite critiques, digital media's role in cultivating new communication models and modes of selfhood cannot be ignored
- Establishment of collective interests, institutions



---

The use of digital media for producing culturally and politically meaningful discourses remain significant and at the same time, we find that questions of accessing it and the capacity to be able to use it are also associated with it. One requires a set of the skills to be able to move over this digital divide and one also requires a particular type of media literacy. Digital media cannot be the sole ground for producing a shared subjectivity or a new sensorium.

These discourses are constituted by exclusionary practices and despite various critics, we find that digital media's role is significant in cultivating new communication models and modes of selfhood. It has also been successful in establishing collective interest as well as collective institutions.

**(Refer Slide Time: 10:32)**



---

## Digital Pasts and Digital Futures

Ref: Nora Almeida's, "Dismantling the Monolith: Post-Media Art and the Culture of Instability." (2012)

- Art that falls under the "new media" paradigm is problematic
  - Problematizes many traditional assumptions about art
- In a practical sense, new media art raises fundamental questions about the nature of curation and preservation and the role of cultural heritage institutions as stewards of digital assets.
- Expanding concepts in information and media theory help shape curation contexts and redefine approaches to preservation, that should be viewed through the lens of "postmedia" theory.
  - Introduces the concept of the "new repository"



A very interesting work which we must refer to at this point is by Nora Almeidas, in her book *Dismantling the Monolith: Post-Media Art and the Culture of Instability* published in 2012, she has talked about digital pasts and digital futures. She says that it is not only the art that falls under the new media paradigm which is problematic but it also renders various traditional assumptions about art as problematic.

In a practical sense, we can say that the new media art raises certain fundamental questions about the nature of curation and preservation and the role of cultural heritage institutions as stewards of digital assets. So as we are becoming digitally literate and we are producing more and more information using digital means, the problem of preservation of knowledge in digital medium and its curation has also become a problem now.

Expanding concepts and information and media theory would help, shape curation context and redefine approaches to preservation but this should be viewed through the lens of what she has termed as a 'post-media theory'. She has also introduced the concept of new repositories. So, let us quickly scan what are the main concerns which have been raised by her.

**(Refer Slide Time: 11:58)**

### Digital Preservation and Archiving

- Problem of curating and preserving artwork dependent upon technology
- Artwork in digital formats
- Fields of art librarianship devoted to developing digital preservation strategies
- Challenges of archiving; providing access to new media artwork
- Directives by Library of Congress National Digital Information Infrastructure and Preservation Program cannot wholly address the problems presented by complex digital art objects.
- Examination of ideological frameworks which determine curation and preservation decisions



When she talks about digital preservation and archiving, she talks about the problems of curating and preserving artwork which is dependent upon technology that means that she wants to talk about artwork which exist in digital formats. So fields of art librarianship which are devoted to developing digital preservation strategies are yet to be disseminated.

It has got its own challenges of archiving, for example providing access to new media artwork and to protect it from different spams etc. The directives which are traditionally given by various institutions in various countries for example, still remain in adequate and are not able to look at different possibilities and challenges which are being presented in this field of curation. In examination of ideological frameworks which determined curation and preservation decisions therefore becomes necessary.

**(Refer Slide Time: 13:09)**

- The co-dependence of new media art and theory: extol technologies as aesthetic viewpoints and incorporate cultural techno-speak into exhibitions
- Techno-centric approach to media preservation is problematic: digital art is not static or tied to a physical medium the way analog art is
- Rupture between medium and apparatus continues in a digital context as “data diffusivity.” (Ben Fino-Radin)
- Preservation decisions must account for “human questions of an artist’s intent, material, conceptual authenticity, and commodification” along with pragmatic questions of “longevity and data authenticity”
- Role of mass media technology in matters of aesthetics blurs distinctions between reproducible commodities and fine art objects



There is also a co-dependence of new media art in theory. We can extol technologies as aesthetic viewpoints and incorporate cultural techno-speak into exhibitions. A techno-centric approach to media preservation also remains problematic as a digital art is not a static, it is not tied to a physical medium the way analog art is and therefore our understanding of preservation of new media becomes a problematic issue.

So, there is a rupture between medium and apparatus which continues in a digital context as data diffusivity. Preservation decisions now must account for human questions of an artist intent, material, conceptual, authenticity and commodification along with pragmatic questions of longevity and data authenticity. Role of mass media technology in matters of aesthetics blurs distinctions between reproducible commodities and fine art objects.

**(Refer Slide Time: 14:16)**

- “[W]orks of locative media art . . . are now indistinguishable from non-artistic, management applications for the visualization and monitoring of certain data, [and] net art . . . cannot always be distinguished from on-line content.” (Ben Fino-Radin)
- The notion of artistic intention deeply fraught in the age of digital media: majority of works are generative, interactive, and algorithmic.
- *New media* as digital, hybrid, and conceptual artworks is mostly useless; “media-based typology” (material-type designation) is still the de facto organizing principal for art collections and basis for curation and preservation activities (Nora Almeida)



We find that this particular concern brings us close to the concerns raised by the theoretician of the Frankfurt School of criticism, I quote Ben Fino Radin in this context first, he says “Works of locative media art are now indistinguishable from non-artistic management applications for the visualisation and monitoring of certain data and net art... cannot always be distinguished from online content”.

So, the notion of artistic intention is deeply fraught in the age of digital media because majority of the works are generative, interactive and alogarithmic, we find that almost similar concerns were being raised although in a very different context by the Frankfurt School critics. It is digital, it is hybrid and conceptual artworks contained in it may also be criticised often as being only use less, it has been termed as a media based typology and is still the de facto organising principle for art collections and basis for curation and preservation activities.

**(Refer Slide Time: 15:33)**

### Post-media aesthetics

- Reflects a shift from media-based typology towards “the condition of general equivalency” (Krauss): loss of medium specificity and distinctions between commodities and fine art objects
- Post-media art: self-reflexive, subverts and appropriates functions of communication tools.
- “New conceptual system which would replace the discourses of mediums” (Manovich)



---

The post-media aesthetics reflects a shift from media based typology towards the condition of general equivalency. There is a loss of medium specificity and distinctions between commodities and fine art objects. Post media art is self-reflexive, it subverts and appropriates functions of communication tool. New conceptual system which would replace the discourses of mediums therefore have to be considered carefully.

**(Refer Slide Time: 16:04)**

### Post-media aesthetics

- Three features of post-media aesthetics—
  1. Replacement of media concepts by net culture concepts;
  2. Appropriation of mass media tools for art making; shift to a user-centric model of communication
  3. Their developing impact on curation and preservation initiatives
- The Variable Media approach: an inventive digital stewardship model as an alternative to media-based typologies.



---

The three features of post media aesthetics can be listed here. The first is replacement of media concepts by net culture concepts, the second is appropriation of mass media tools for art making, a shift to a user centric model of communication, the third is the developing impact on curation

and preservation initiatives. The variable media approach also becomes important here because it is an inventive, digital stewardship model as an alternative to media based technologies.

**(Refer Slide Time: 16:47)**

## Effects of New Technologies on Books and Literary Establishment

- Technology Changes How Writers Write
- E-books
- Digital Libraries



New digital technologies have had their impact not only in the way literature is produced but they have also impacted books as well as literary establishments. The three points which we can look at in this context is how technology changes the way writers write the e-books and their market as well as the digital libraries.

**(Refer Slide Time: 17:07)**

### Technology Changes How Writers Write

- The focus is not on writer's style of writing, but on their writing process
- Shifts in writing process:
  - Manuscripts written by hand or typed using typewriters or other typing instruments, typing on computers/laptops, speech-to-text softwares
- Nietzsche: "Our writing instruments are also working on our thoughts."
  - "Writing instruments, he suggested, are not just conveniences or contrivances for the expression of ideas; they actively shape the limits and expanse of what we have to say. Not only do we write differently with a fountain pen than with a crayon because they each feel different in our hands, we write (and think) different kinds of things." (Matthew Kirschenbaum 2016)
  - Refers to the Writing Ball Nietzsche used while his eye sight started to fail

Technology has changed the way writers approached the task of writing. The focus now is not on writer's style of writing rather it is on the process of writing. The process of writing has also

shifted. There was a time when manuscripts were written by hand or they were typed using typewriters or other instruments or typing on computers and laptops has also been replaced by a speech to text softwares.

It is interesting to quote Neitzche, when he had said that “our writing instruments are also working on our thoughts”, he was not aware of the shape technology would take, he was talking in the context of the writing ball which he had started to use while his eyesight started to fail. He suggested that “writing instruments are not just conveniences or contrivances for the expression of ideas; they actively shape the limits and expenses of what we have to say, not only to do we write differently with a fountain pen than with a crayon because they each feel different in our hands, we write and think different kinds of things”. This statement is very true even now.

**(Refer Slide Time: 18:30)**

- What can writing instruments reveal about writing?
  - How computers had changed literary style for individual authors and the literary establishment
  - Tracking changes about the history of word processing
- On the question of style
  - Stylometry: the academic study of words and phrasings; the use of language to express ideas or thoughts
  - Style is often associated with a writer’s essence or aura, his/her unique voice or peculiar ‘feel’ of their prose
  - Style is a product of different influences – writing instrument, market trends, editorial directives, a writer’s emotional and psychological state, contemporary times, and much else besides.
  - It’s why people are interested in figuring out how computers affect style

So, the writing instruments also reveal certain things about writing and change our fundamental perception of writing. Computers have changed literary style for individual authors as well as for the literary establishments, so we can track changes about the history of word processing for example. As far as the style is concerned, we find that it had been associated previously with the essence of a writer or the aura of a writer or the unique voice or peculiar feel of the prose of a particular writer.



But now it is considered as a product of different influences, writing instrument, market trends, editorial directives, a writer's emotional and psychological state, contemporary times and much else besides. So that is why people are interested in figuring out how computers affect style, so we have started to look at what is known as the stylometry. The academic study of words and phrasings the way we use language to express ideas or thoughts.

**(Refer Slide Time: 19:46)**

- How word processing changed writing
- Changed the nature of literary writing
- Revision became more convenient; revision and composition become simultaneous processes
- Eroded the distinction between revision and composition
- WordStar: a word processor used by early adopters
- Word processors became part of plots and settings
- Circumstances of literary production began to change
  - In 1984, Primo Levi writes "It's (word processor) a lot more than that! It's a memory prosthesis, an archive, an unprotesting secretary, a new game each day, as well as a designer, as you will see from the enclosed centipede picture."



The use of word processing has also changed writing. It is also changed the nature of literary writing. Among other things we can see that the revision of whatever we have written has also become convenient. In fact, revision and composition have become simultaneous processes now and the distinction which used to exist between revision and composition etc., has been eroded. The early adopters used to work on word star which was a word processor. But then these word processors have also become part of plot and settings and they have started to change the circumstances of literary production.

**(Refer Slide Time: 20:34)**

- Impact of word processors on the 'sense of the text'
- Writing happens in the present moment—line by line, paragraph by paragraph—on a typewriter
- The manuscript can be grasped 'as a whole, a gestalt' (Kirschenbaum 2016)
- The availability of search functions, the ability to rearrange sentences and paragraphs and reorder chapters or sections at will makes the textual field fluid and flexible— 'a potentially infinite expanse, or at least limited only by the computer's ever-expanding memory' (ibid)
- Offers greater control over writing space:
  - "Once you really get used to a computer and you get used to entering the information from that keyboard, things happen in your mind, I mean, you change as a writer. You're able to do things that maybe you never would have thought of doing before." (Anne Rice)

The impact of word processors can be felt on what has been termed as the 'sense of the text', on a typewriter writing happened only in the present moment. It used to happen line by line, paragraph by paragraph, so there was a sense of serenity in it, on the other hand in word processing, the manuscript can be grasped 'as a whole' simultaneously, it has been termed as a 'gestalt' by some authors.

The availability of search functions, the ability to rearrange sentences and paragraphs and recorded chapters or sections at will make the textual field fluid and flexible, a potentially infinite expanse or at least limited only by the computers ever expanding memory. So we find that the computers generate and offer greater control over writing price, I would quote from Anne Rice, and she says "once you really get used to a computer and you get used to entering the information from that keyboard things happen in your mind, I mean, you change as a writer, you are able to do things that maybe you never would have thought of doing before", so computer changes the way we approach the process of writing itself.

**(Refer Slide Time: 22:00)**

- Christina Haas calls this the “sense of the text”: ‘the mental model of the words on the page (or screen) and how the writer perceives his or her relationship to them’ (Kirschenbaum 2016)
- Word processing dramatically alters the sense of the text—how they approached writing and what they think is possible
- The use of computer algorithms to analyze texts can throw light on the specifics of how they use language which may not be possible through traditional means of close reading
- One can measure the technology’s impact on literary style through big data approaches: the analysis of works of hundreds of authors
  - For instance: detect the relationship between words and thoughts; find out the trace of word processing in writer’s prose; how in-built grammar checks in word processing impact a writers’ prose

Christina Haas has called this the ‘sense of text’, the mental model of the words on the page or the screen and how the writer perceives his or her relationship to them. Word processing has dramatically altered the sense of the text and how one approaches writing and what one thinks about the process of writing has changed. The use of computer algorithms to analyse text can also throw light on the specifics of how a particular writer uses language which might not be possible through traditional methods and means of close reading.

One can also measure the impact of technology on the literary style of a particular writer through big data approaches and the analyses of the works of hundreds of thousands can also be done easily, for example, we can detect the relationship between words and thoughts, find out the trace of word processing in writer’s prose, how inbuilt grammar checks in word processing impact the prose written by a writer.

**(Refer Slide Time: 23:08)**

---

## E-books

- Dramatic change in the world of writing and publishing in 2010-2011: rising popularity of ebooks
- Hype about ebooks since the 1900s; Sony and Waterstones partnership over ebooks in 2008
- The first e-book readers: related to personal digital assistant (PDA) devices, pocket-sized electronics popular in the 1990s.
- Issues with early e-readers: low battery life and text was difficult to read; eventual development of small and sleek models
- Apple iPhone and the iPad made reading more comfortable



Another aspect which has become suddenly important in our culture is the phenomena of e-books. So there has been a dramatic change in the world of writing and publishing in 2010 and 2011 and it has occurred because of the rising popularity of e-books. There has been a hype about e-books since the 1900s, Sony and Waterstones partnership over e-books in 2000 initiated a major change.

The first e-book readers related to personal digital assistants or the PDA devices, pocket sized electronics became popular in the 1990s. So the issues with early e-readers were related with low battery life and the difficulties which readers faced in reading the text. Gradually, we find that there has been a development of a small and sleek models and Apple iPhone and iPad have made the reading more comfortable on a smaller screen.

**(Refer Slide Time: 24:14)**

- Apple iPad: more than 1.5 million books downloaded within first month of release in 2010 (Maneker, 2010).
- Amazon's e-reading device Amazon Kindle was the most important innovation in the ebook market
  - Allowed Amazon to solidify its existing share in the book market
  - Other notable entrants in the market: Apple iBooks, Kobo, Barnes and Noble's Nook, Sony and Google Books
- Kindle emerged as the biggest single retailer of ebooks
  - 75%-90% of the market share
  - 400,000 titles available for the Kindle device in 2010
  - Devices offer wireless connectivity: easier to download/access books

Apple, iPad offers more than 1.5 million books which have been downloaded within first month of its release in 2010. Its e-reading device, Amazon Kindle was the most important innovation in the e-book market which allowed Amazon to solidifies its existing share in the book market. Other notable and trends in the market can also be listed for example, Apple iBooks, Kobo, Barnes and Noble's Nook, Sony and Google books.

Kindle however has emerged as the biggest single retailer of e-books and it holds 75 to 90% of the market share. It has got several million titles available on its devices which offer wireless connectivity and therefore it is easier to download a book and access it on this particular medium.

**(Refer Slide Time: 25:09)**

- Print sale figures in the time period 2010-2016 remain stagnant or show a downward trend because ebooks continued to capture the market
- Between 2012 and 2014 ebooks market share grows from 20% to a 33%
- Ebooks are fairly cheaper; e-readers are more convenient to carry; thousands of books can be stored in one device, takes up less space
- More than a million public domain titles are available as free e-books because of Gutenberg Project and Google Books
- Ebooks are more biased towards commercial or genre fiction or bestsellers



---

It is also inversely related with the sales of books in the print medium, the same figures of the print medium during the time period of 2010 and 2016 remain either a stagnant or show a downward trend. Between 2012 and 2014, the market share of e-books has grown from 20% to 33%. E-books are now available in a fairly cheaper manner and e-readers are also more convenient to carry and thousands of books can be stored in one device.

So, we find that technology has changed the way in which writers write a particular book and also the way the readers access it. So, we find that though e-books have a certain bias in favour of offering commercial or genre fiction or only the best sellers to its authors is still it has given an option which has changed the manner in which people who are interested in reading books have changed their preferences.

**(Refer Slide Time: 26:19)**

- Research shows that because of the rise in digital, old school readers and dedicated readers of literary fiction in particular continue to value physical printed books
- Both print market and ebook market show a downward trend in the sale of literary fiction
- Digital technology in publishing and retail proves a boon for the book market as a whole



Research shows that because of the rise in digital, old school readers and dedicated readers of literary fiction in particular continue to value physical printed books. But the new generations, the generations of the 21st century are moving towards the e-books only however. We find that as far as the sales of literary fiction, pure classical literary fiction is concerned, there is a downward trend in the sale whether it is in the form of a printed volume or it is in the shape of an e-book. However, we find that digital technology in publishing and retail proves a boon for the book market as a whole.

**(Refer Slide Time: 27:01)**

### Digital Libraries

- Stores its materials in a digital format
- Accessible by computers
- Some can be accessed locally; Others can be accessed remotely through internet
- Give access to books to a large number of people with the click of a button; democratizes knowledge
- Makes fragile, rare or antique materials available to browsers without damaging the originals
- Libraries and institutions can share important texts without shipping books



Another way in which literature is preserved for posterity and it is preserved for circulation has also changed by the impact of the digital revolution. So now we are looking at the digital



libraries; libraries which stored literary material in a digital format, it is accessible by computers, some computers can be accessed locally and others can be accessed through Internet. So we find that digital libraries provide access to books to a large number of people with a certain ease.

It has also resulted in a democratisation of knowledge and at the same time, we find that the rare or antique books can also be easily browsed and the danger of damaging the original which was a difficulty in traditional library system has also been countered. Libraries and institutions can also share important text without shipping books. It is important at this point to refer to what is known as the project Gutenberg.

**(Refer Slide Time: 28:16)**

#### Project Gutenberg

- The oldest digital library; founded by Michael Hart in 1971
- Initial goal: Put 10,000 of the most-consulted titles in the public domain by the end of the century
- Digitization as a revolution much like the printing press
- Process slowed because of manual copying until 1989
- In the 1990s, scanners and text-recognition software automated the process” to break down the bars of ignorance and illiteracy” through its library of digitized books (Hart & Newby, 2004)
- More than 30,000 public domain works available for free download by 2010



This is the oldest digital library which was founded in 1971 by Michael Hart and the initial goal of this project was to put 10,000 of the most consulted titles in the public domain by the end of the century. We can say that digitisation has been as much as a revolution as a printing press had been in its days. We find that by 2010 more than 30,000 public domain works were available for free download.

The process was slowed because of manual copying until 1989 but we find that in the 1990s scanners and text recognition software had automated the process of copying.

**(Refer Slide Time: 28:56)**

- Page-turning scanner machine used by Stanford to digitize 1,000 book pages an hour
- It's estimated that nearly all printed books could be digitized in the next 50 years
- Stanford's partner in digital library production is Google Books
  - Scanned over 10 million books since 2004
  - Not run by an academic institution; has several partners
  - Around 15% of all books available are free digital books
  - Millions of titles can be fully searched and downloaded
  - Also include in-print texts (after publishers make a deal with Google)



So, page turning scanner machine which was used by Stanford to digitise 1000 book pages an hour averted the pace and it is estimated that nearly all printed books could be digitised in the coming 50 years. Stanford's partner in digital library production is Google books which is a scanned over 10 million books since 2004 interestingly, it is not run by an academic institution but by several partners.

And what Lyotard had said in his 1979 essay on the post-modern condition proves to be futuristic, around 15% of all books which are available are free, digital books and millions of titles can be fully searched and downloaded, they also include in print texts after publishers have made a deal with Google.

**(Refer Slide Time: 29:52)**

- Some texts only allow readers to preview a limited number of pages
- Often provide links to the publisher's website and booksellers
- Makes out of print books searchable; copyright holders can get the snippets removed; benefits both readers and publishers
- Controversies: Google's policy of digitizing books without looking into copyright claims; accused of profiting from others' works; violation of intellectual property laws; accused of monopolizing information for profit



Some text may allow readers only to preview a limited number of pages and often they provide links to publisher's websites and also to booksellers, so that one can also get a physical copy. It makes the print books searchable but at the same time, we find that there are certain controversies associated with copyright provisions. It is true that copyright holders can get the snippets removed and it benefits both the readers as well as the publishers.

But Google's policy of digitising books without looking into copyright claims and as well as accusations of being profited from other people's works are there. The violation of intellectual property laws has also been alleged against Google.

**(Refer Slide Time: 30:42)**

- Literature, Culture, Media are being reshaped by digital technologies.
  - Print Base in all three domains is shrinking and becoming redundant.
  - Digital culture has forced us to reassess how we read, write and assess. E.g., self-publishing is a popular option for amateur as well as professional writers.
  - With the advent of digital media, old-media industries, such as the book industry, must find ways to adapt.
  - Contemporary literary practice has responded to—and is shaped by—the everyday language of the World Wide Web as well as media authoring tools and formats such as iPads, mp3s, and Flash.

We find that literature, culture and media are being reshaped by digital technologies. The basis of print in all these three domains is shrinking and gradually becoming redundant. Now, the questions we have to face is not about what the text says but where is the text in new media and these type of questions have become more significant. Digital culture has forced us to reassess how we read, how we write and how we assess.

An interesting example is about self-publishing. Self-publishing in earlier days used to carry a social stigma as well as it was associated with a very high cost, but now it has become an increasingly popular option for amateurs as well as for professional writers and it is cost-effective. It appeals to authors who may have an initial audience or who want better control over their work.

With the advent of digital media, old media industries such as a book industry are struggling to find ways to adapt to these changes. We can say that contemporary literary practice has responded to and it is also shaped by the everyday language of the World Wide Web as well as media authoring tools and formats such as iPads and mp3's and flash. To sum up we can say that the digital revolution has changed the way in which we perceive literature, its product as well as its use. The way we look at culture and also the way we look at media, our perceptions are being reshaped by the digital revolutions, thank you.