

Indira Gandhi National Open University  
School of Journalism and New Media Studies

# **THEORISING DIGITAL MEDIA**

**School of Journalism and New Media Studies**  
**Indira Gandhi National Open University**  
**New Delhi**

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# **COURSE INTRODUCTION: MNM-030**

## **THEORISING DIGITAL MEDIA**

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With three decades of experience with digital media platforms, this course attempts to capture the concepts of human communication through cyberspace. Multiple perspectives and various angles of scrutiny over the Units would give an opportunity to understand the nuance of online-based communication patterns. We have divided the course into three blocks. The first provides a holistic understanding of the communication patterns of digital media, the second Block takes through a critical discussion of cyberspace-based actions, and the last Block introduces the unique features of digital media into interactivity and participation.

**Block 1 Communication Patterns of Digital Media.** We will explore the intricate dynamics shaping digital communication landscapes. Unit 1: Multi-Platform Communications help us to navigate the ever-evolving terrain of digital media, where we will analyse audience engagement and craft compelling content across diverse platforms. In Unit 2: Understanding Mediatisation, we explore the profound impact of mediatisation on human interaction, discerning its nuances and global implications across various sectors. Unit 3: Computer-mediated Communication explains the complexities of synchronous and asynchronous interactions, offering insights into psychological implications and agency within CMC. Unit 4: Network Society discusses the transformative power of interconnected networks, shedding light on Castell's perspective and its relevance in understanding contemporary social structures. Lastly, Unit 5: Information Theory discusses the essence and applications of information theory, bridging mathematics and communication to illuminate its role in quantifying news and communication systems.

**Block 2 Introduction: Critiques of Cyberspace.** In this Block, we will explore on a journey of critical exploration into the complex realm of cyberspace. Within this Block, we will learn about various aspects of the digital landscape, scrutinising its implications on humanity, culture, and society. From challenging traditional notions of humanity to navigating the intricacies of online identities and communities, each Unit within this Block offers a unique perspective on the evolving relationship between humans and technology. Unit 6: Post-Humanism and Cyborg Manifesto challenges us to rethink conventional understandings of humanity, inviting us to explore the fusion of biology and technology through a post-human lens. Unit 7, Online Identities and Communities - discusses the nuanced dynamics of online identities and communities, unravelling the complexities of identity management and participation in the digital sphere. In Unit 8, we examine the intersection of pop culture and digital expression, analysing how digital media shapes and reflects cultural phenomena. Unit 9 explores the dynamics of online communication and collaborations, highlighting the opportunities and challenges digital technology presents in facilitating global interaction and teamwork.

**Block 3 Analysis of Participation.** This Block comprises five units, each exploring distinct aspects of the intricate digital landscape. Unit 10: Mode of Production in Cyberspace illuminates the transformative power of digital platforms on economic, social, and technological fronts. Understanding these shifts is paramount for navigating modern journalism and communication. Unit 11: Ideology and Digital Communication explores the interplay between ideology and online discourse, shedding light on how

beliefs shape digital content and consumption. Unit 12: Semiotics and Digital Communication delve into signs and symbols online, unravelling how meaning is constructed and conveyed in the digital sphere. Unit 13: Issues of Big Data navigates the expansive terrain of big data, probing its impact on media while critically examining its social and ethical ramifications. Unit 14: Political Economy and ICT introduces the intricate relationship between political economy and information communication technology, dissecting ownership dynamics and evolving paradigms in the digital age.

We hope that the course will be an eye-opener for understanding the nuances of digital media-based human communication patterns.

The concepts discussed in this Block might provoke you to consider how communication is exchanged in cyberspace. You might be interested in learning and exploring specific aspects of digital media, and this course will help you find meaning in your curiosity about digital media.

**Block-1**

# **Communication Patterns of Digital Media**



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# **BLOCK 1 COMMUNICATION PATTERNS OF DIGITAL MEDIA**

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Digital media differs from the legacy mainstream media in multiple perspectives - it combines various media elements into one platform, gives horizontal communication flow by providing powers to individuals, and digital gadgets facilitate the immense experiences of interactions and participation more flexibly and conveniently. This network of networks gives ample scope for every stakeholder to reap significant benefits. All these characteristics of digital media are based on the simple technological features of cyberspace - encoding and decoding through fragmentations. These concepts are explained in this Block.

**Unit 1: Multi-Platform Communications.** In this Unit, we'll explore the dynamic communication landscape across various platforms. From understanding media forms and formats to analysing audience engagement, we'll delve into the intricacies of digital media ecology. You'll learn to craft effective content for diverse platforms-news, entertainment, and advertising. We'll also examine the prospects and challenges posed by emerging technologies like AI and mobile communication.

**Unit 2: Understanding Mediatisation.** In this Unit, we explore mediatisation's impact on human communication, distinguishing it from mediation and examining its characteristics and modes. From social to cultural realms, we delve into its influence on politics, education, and commerce. We assess both advantages and disadvantages and analyse global changes driven by mediatisation.

**Unit 3: Computer-mediated Communication.** In this Unit, you will learn about the dynamic world of Computer-mediated Communication (CMC). We'll explore its nuances, from understanding its essence to dissecting its multifaceted theories. From grasping the agency within CMC to examining its psychological implications, this journey will equip you with a comprehensive understanding. By the end, you'll discern the intricacies of synchronous and asynchronous communication alongside their pivotal roles in modern-day interactions and mass communication.

**Unit 4: Network Society.** In this Unit, we'll discuss the intricacies of the Network Society, exploring its definition, characteristics, and challenges. From understanding networks to examining Castell's perspective, we'll uncover the evolution of social structures and transformations in our digital landscape. By the end, you'll grasp the significance of the Network Society in navigating the complexities of our interconnected world.

**Unit 5: Information Theory.** This module explores the essence and applications of information theory in communication systems. Originating from the works of Nyquist, Hartley, and Shannon, information theory intersects mathematics, probability, and engineering. Despite its mathematical roots, this Unit presents the theory non-technically, focusing on its relevance to communication and news quantification. By the end, you'll define information, trace its historical evolution, and explore its applications across disciplines.

These Units will help you broaden your understanding of the communication patterns of digital media.



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# **UNIT 1 MULTI - PLATFORM COMMUNICATIONS**

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## **Structure**

- 1.0 Introduction
- 1.1 Learning outcomes
- 1.2 Understanding multi-platform communications
  - 1.2.1 Media forms and formats
  - 1.2.2 Audiences
- 1.3 Digital media ecology and multi-platform capabilities
  - 1.3.1 Processes and emerging patterns
  - 1.3.2 Effectiveness of digital platforms with effective communication
- 1.4 Writing multi-platform Content
  - 1.4.1 News
  - 1.4.2 Entertainment
  - 1.4.3 Advertising and Public Relations
- 1.5 Prospects and Challenges
  - 1.5.1 New avenues with mobile communication, Artificial Intelligence, and ease of learning
  - 1.5.2 New challenges of identity theft, privacy breach, and deep fake
- 1.6 Let Us Sum Up
- 1.7 Keywords
- 1.8 Further Readings
- 1.9 Check Your Progress: Possible Answers

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## **1.0 INTRODUCTION**

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As technology transformed, the communication process also transformed. Today, we communicate with people in multiple ways through various means and media simultaneously. Observe how many communication devices you have or how you communicate on a single device, for example, your mobile phone, laptop, or the smart TV screen you have in your living room! You not only see multiple screens such as a TV screen, the screen of your personal computer (PC) or laptop and your mobile screen, but interestingly, you see and communicate with various forms and formats of content using multi-platforms on a single screen device. For example, you might have a commerce-based application on your phone; you might be visiting a social media platform such as Facebook, X (formerly Twitter), Instagram, etc.; you might be using Facetime on iPhone or text-based chat applications like WhatsApp or Telegram. It is possible that you might be communicating the same content on various platforms altogether since they are ‘interoperable’ and linked.

We live in an age of multiple devices – personal computers, laptops, tablets, mobile phones, and Internet-based ‘smart’ TVs – with multiple communication platforms, forms, and formats. Everything is converging here, and “what we are seeing is

a media industry that is as much about media production, exhibition, and distribution as it is about facilitating communication among its audience.” (Marshall, 2009) Therefore, to better understand the medium, its formats, and various forms of communication associated with it, we also need to understand the changing nature of audience/s. This becomes pertinent especially when social networking sites, through removing technical barriers in content production, enable the ‘audiences’ to ‘produce their content’.

Comprehending the media ecosystem and its audiences also leads us better to equip ourselves with the writing skills for multi-platform publishing. Due to the changing roles of the audience, digital media is all-pervasive and yet contextual. In this regard, knowledge of the emerging practices, in terms of “the three Ss” – sharing, storing, and saving –in the online media and social media environment becomes essential. As the “contextualised sharing” of content is an inseparable part of media practice–comments, likes, reposting and sharing with the added content, and a range of other site-specific tools – all work together to contextualise the content to give it “a specific local meaning”, it has to be seen and incorporated as a related factor for content generation (Koskela, 2004; Daisuke Okabe, 2005 cited in Hinton & Hjorth, 2013). In this backdrop, we will learn about multi-platform media, their practices, audiences, and content, which can enable us to create content effectively.

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## **1.1 LEARNING OUTCOMES**

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After completing this Unit, you should be able to:

- Define and comprehend the forms and formats of multi-platform communications;
- Understand the processes and emerging patterns of multi-platform communication;
- Write and create multi-media content for different media and forms for various types of audiences; and
- Assess the prospects and challenges involved with the emerging multi-platform communication and publication.

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## **1.2 UNDERSTANDING MULTI-PLATFORM COMMUNICATIONS**

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Digital media is all-encompassing of:

- Physical devices – from computers, tablets, smart phones, smart TVs, etc., and
- Soft of structures – websites and portals, social media platforms, chat applications and, Over-the-top or OTT services/platforms.

The media content—text, visual and audio-visual—is the ‘interoperable digital data’. The users/audience access it in various forms and formats on digital devices. Also, it is more ‘personal’ and accessed as part of the personal content. Remember how you received a funny video in the chat group? Let’s discuss digital media’s emerging forms and formats and their audiences.

## 1.2.1 Media Forms and Formats

Today, all content is mainly created in a multimedia format using text, videos and visuals used in varied degrees. We may classify the content into long-form (blogs, video blogs/vlogs, podcasts, full-length films/documentaries) and short-form (reels, shorts, clips, memes). The content is created using traditional and new formats according to information, infotainment, and/or entertainment needs. Let us find out some of the forms and formats in detail:

### 1. Interview and talk-show format:

**Podcasts:** Podcasts are audio/video downloadable programmes based on a particular theme. Podcasts present a particular issue per episode related to the broad theme. Low-cost with a massive impact. Podcasts allow for a broader distribution through subscription-based platforms such as Spotify, Google, and Apple podcasts. A 2-to 3-hour podcast is presented in an interview or conversation format, including information and fiction/non-fiction content.

### 2. Article/Feature Format

**Blogs/V blogs:** Blogs are information or infotainment-based online journals. Blog writing may be an organisational tool for promotion or individual expression. Usually, blogs are text-based pieces of writing which incorporate 2 to 3 pictures/videos and related hyperlinks (clickable digital references to another digital document). Feature-based content presented in audio-video format is known as Video blog or V-blog. You may find such vlogs on YouTube, a video-sharing social media platform. Blogging platforms like WordPress, Joomla, Wix, Squarespace, etc. provide writers with visual design and SEO (Search Engine Optimisation for increasing visibility on search engines) opportunities to create blogging content in attractive ways.

### 3. News Format:

**News Feeds:** News feeds are an Internet-specific format for news that works through RSS (Really Simple Syndication). RSS provides flexible codes for news stories/posts from different websites and synchronises them on the host website or device. Thus, it works as a digest of selected feeds to provide the reader with easily accessible material from different sources in one place; for example, a news feed/RSS feed indicating headlines of various stories on a single page. RSS news feeds are interactive, like social media platforms where users can see the likings and postings of others.

**Social Media news aggregation:** Like news feeds, a news aggregator also provides curated content around the source and the topics. News aggregators provide tailored content based on ‘user preferences’ through a search algorithm. Google News, News 360, and Flipboard are examples of news aggregators.

### 4. Social Media and new formats (shorts, reels, memes):

**Shorts and reels:** These are the short-form video formats supported by synoptic description in text. Based on different purposes, they may be small clips cut out from the mainstream (long form) content produced by social media users on mobile phones or may be created by professional organisations for promotional activities. YouTube is the most popular platform which facilitates

producers/users to upload, view and download such video content as “shorts”. It works like a search engine to show the ‘viral’ content, especially the entertaining content at the top. Similarly, short videos produced by social media users showcasing ‘entertainment’ created out of daily life and shot through mobile phones are presented as ‘reels’ on the social media platform Instagram. Nowadays, professional organisations are also using the format for promotions.

**Meme:** Meme is certainly the most revolutionary form (in a ‘mash-up’ format) that has evolved in digital media. This is copied content, which is then transformed by mixing it with a local context. Graham Meikle (2016) can be quoted in full to understand the form of memes:

Internet memes circulate so widely through social media because many different individuals in many different contexts find them meaningful and choose to make them, share them with others, and, in doing so, make both their memes and themselves visible... They are making a remix.

Increasingly, mobile phones are becoming a host of content. From ringtones and screensavers to games and applications of all sorts, a camera phone has become a centre of “new contexts for image distribution like microblogging and location-based services (LBSs) – [where] we are witnessing the emergent type of visibility. Through LBSs such as Facebook place, ambient images, and geographic locations” (Hinton & Hjorth, 2013). However, it is the intrinsic ‘audience- content-media’ relationship that is forming the activity and “many of these technologies could not exist in the forms they do without sharing, modification, swapping, downloading, uploading and reworking of material among users” (Goggin, 2011).

### 1.2.2 Audiences

To understand the changing nature of audiences, we will have to look at the older practices of audiences. As a part of media and process research, audiences have been seen as ‘passive’ or ‘active’. However, to relate to the digital age, we may borrow the audience’s classification as given by Denis Mcquail:

- the *available* (or potential) audience: all with the basic skill (e.g., literacy) and/or reception capability;
- the *internal* audience: those who pay attention to sections, types, or single items of content;
- The *cumulative* audience: the overall proportion of the potential audience that is reached over a particular period;
- The *target* audience is that section of a potential audience singled out for reach by a particular source (e.g., an advertiser).

Today, we may observe all these traits in digital media users in a single time frame. This changing user behaviour has been well noted by Matt Locke (cited in Dewdney, 2014), “such as people using mobile phones while they were watching TV to exchange and look for information or go online to follow up on things, they had just seen for added cultural experiences.”. Here, one thing which can be prominently observed is – the **choices** in terms of multimedia and multi-content and the personalised behaviour to use and utilise that content. Media experts observe this

as an emerging **democratisation** media landscape where every individual is counted as an important potential active user who selects and chooses from the given array of media and content. “India’s deep mobile connectivity means both choices and content have been democratised” across class and creed, and the content has to be about every individual who consumes it (Ghosh, 2024).

On the other hand, the media industry sees audiences as divided as never before. **Segmentation and fragmentation** are how audiences have been seen in media and content. With the increase in mass media devices and practices, people tend to choose between media devices and content, leading to “channel fragmentation”. In turn, producers and distributors go for audience segmentation and try to reach different types of people with content tailored specifically for them (Turow, 2019). Although the practice is fluid and dynamic, to customise the content based on ‘what the user wants’, content is filtered through fragmentation. Moreover, it restricts the content choices given to the audiences, contrary to the ‘democratisation’ principle.

To look at the solution, we may look at the user not from the ‘audience’ perspective but as a co-actor in the total media ecosystem. P David Marshall (2009) suggests the concept of “user-subjectivity” to understand new-age audience practices that take place through Internet-enabled mobile phones and software to consume and co-create the content with a social-media-driven distribution mechanism. This “enable[s] users to fabricate their own stories, their own connections, and their social networks”. In Axel Bruns’s (2008) words, this is “produsage” (production and usage of digital media) having “enormous commercial as well as public value”. To simplify, we can see how user-generated content is produced and consumed through multi-media, multi-platforms, and multi-dimensional activities.

### Check Your Progress: 1

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. List any three forms of Internet-based digital media content.

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2. Explain audience segmentation and fragmentation.

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## 1.3 DIGITAL MEDIA ECOLOGY AND MULTI-PLATFORM CAPABILITIES

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Open access and interactivity in digital media transformed one-way mass communication into two-way inter-personalised mass interaction. Today, ‘targeted content’ is being “delivered cheaply to the user (or even for ‘free’)” with a widespread reach. “You get a data-driven response” - likes, comments, and most importantly,

shares or reposts to amplify the brand image at zero cost, with successful audience engagement (Ghosh, 2024, Athique, 2013). The dynamics of this interchange between producer and consumer in the emerging convergence culture has been described by Henry Jenkins (2008) in terms of three basic elements:

- cross-media experiences and consumption of cultural goods;
- a participatory media culture, and
- collective or collaborative intelligence in the media experience.

Let us discuss the ecology of contemporary digital media in detail.

### 1.3.1 Processes and Emerging Patterns

The advent of digital media did not replace the older media but increased the range of media. Today, “people construct for themselves a mix of outlets and content that provides what they want from the media” (Tewksbury & Rittenberg, 2012). A similar extension provided for the integration and expansion of industry as explained by Miller (2011), “deregulation of the media and telecommunications industries (regulatory convergence) has led to media industry convergence, in which large media corporations have expanded both vertically within their own industry and horizontally across other media sectors.”

With this, media organisations can reach the audience across varied types of media using multi-platform communication. Interestingly, this new system is not limited to the ‘large corporations’ but creates an inclusive environment for small working groups, contractors, individual freelancers (working as content creators, designers, and managers for different platforms), and the consumers and users of digital media at large to give it a “translocally situated experience” (Hesmondhalgh, 2006 cited in Deuze, 2009).

According to Deuze (2009):

Not only does this perspective on convergence culture from the view of the industry offer us a more complex, hybrid, and colourful palette for looking at the production of culture, but it also opens the door to include the audience, the consumer, and the user into our framework for understanding the collisions and collusions of “old” and “new” in the contemporary media ecology.

### Convergence in the work and organisational structures

Mark Deuze (2009) further describes the factors of media work as:

- The *inclusion* of various stakeholders – professional producers, audiences, sources, and sponsors – in the (co-)creation of media content and experiences;
- The *integration* of various media industries in a global production network;
- The media production process involves the complex *coordination* between distinctly different goals – creativity, commerce, content, and connectivity.

Similar patterns in terms of work organisation can be drawn in the scheme given by Hartley (2009):

1. Agents (origination), who may be individuals or firms, characterised by choice, decision-making and learning;

2. Networks (adoption), both real (social) and virtual (digital);
3. Enterprise (retention), market-based organisations and coordinating institutions (Potts et al. 2008).

### Convergence and hybridity in content creation

The hybridity of convergent media has been explained by Dewdney (2014) as follows:

1. **Overlapping practices**

Deuze (2009) calls this “Convergence of *place*, as in the sites of media production”. The practice may be further explained by the cross-referencing of content in convergent media such as YouTube shorts, Instagram reels, memes, and v-blogs that “feeds the need for satire and self-criticism in contemporary democracies” (Papacharissi, 2010).

2. **Dissolving of conceptual boundaries of potential meaning**

The characteristic has been described by Deuze (2009) as a “*convergence of experience*” where, through specific activities and interactions on digital media platforms, people generate new meanings to the content and contexts. For example, memes are created by mixing the content to create a pun- intended contextual message. The prominence of satirical content reveals a playful mood that results in a creative and “nonsensical pastiche of content that is befitting of post-modern political tastes and orientations” (Papacharissi, 2010).

3. **Emergence of new hybrid practices.** For example, interview-based podcasts contain the ‘personal branding’ and ‘indirect advertisements’ of the organisation/product associated with the guest speaker.

### Convergent identities

We may add one another feature in ‘audience specific’ perspective as cited by Deuze (2009), as Convergence of *identity*, as in notions of professional identity versus the “cult of the amateur” (Keen, 2007), or in terms of the user-producer in digital spaces.

### 1.3.2 Effectiveness of Digital Platforms with Effective Communication

At a time when traditional media (TV and print) was going through a ‘content saturation’ in terms of structured content and fatigue among the audiences, especially the younger ones, Web 2.0 emerged with a new social media culture and content formats. Social networking sites and platforms opened the opportunities for all forms of content meant for all kinds of audiences – blogs, micro-blogs, text-based content, video, and audio – be it on X, YouTube, Wikipedia, or subscription-based online radio platforms like Spotify (Athique, 2013).

As we discussed earlier, user-friendly computer interfaces made the process interactive for users, and user-generated content became a key factor for the success of any digital media organisation in the new media environment. Media companies with “the gradual development of industrial standards” are increasingly “embracing audiences

as co-creators of content” in newer experimental and creative ways (Deuze, 2009). (*Some of the case studies are discussed in the next section*). The overall socio-cultural impact of user-generated content can be mentioned as follows (OECD, 2007, cited in Hartley, 2009):

- Altered economics of information production;
- The democratisation of media production;
- User autonomy, increased participation, and increased diversity;
- Collaborative, sharing information, ideas, opinions, and knowledge;
- A more diverse array of cultural content;
- Diversity of opinion, free flow of information, and freedom of expression;
- However, there are challenges – inclusion, content quality, security and privacy, digital divide, cultural fragmentation, and individualisation of the cultural environment – to create an ideal society that includes all the marginalised groups.

### **Effective content-creation**

Today, stakeholders in content creation are creating long-form and short-form content for user gratification and engagement. To capture depth and context, such content is created with visual effects and graphics, depending on the desired length and format. The long-form content creates ‘communities’ of like-minded people who read long texts, watch/listen to programmes or episodes that are 1-2 hours long and engage in ideological conversations. On the other hand, “virality-driven” short-form content attracts people more frequently than ever before. Such content is further co-created by adding up the ‘personal’ context and keeps on being shared.

### **Effective distribution and consumption of content**

“Social media is rich in its ability to transmit text, sound, video, and images and it can transmit this information instantaneously in both directions to and from anyone around the world...in terms of its potential for effectiveness” (Quesenberry, 2016). content carved out with “social presence” (based on interpersonal ‘face-to-face communication parameters) and “media richness” (the amount of information transmitted in each time by a particular medium) is broadcast, narrowcast (personalised and customised content shared with a limited audience), shared, and circulated across the platform. With a peer-to-peer mechanism, the content is shared with the help of digital features and tools such as – bookmarking, file storage and sharing – as part of content consumption practices. For example, long-form content, like podcasts, can be carved into smaller segments such as reels, clips, and posts to be sent to different segments of audiences on social media platforms like X, Facebook, Instagram, and LinkedIn as part of an effective communication strategy.

Social media, with its embedded networking capacity, automatically leverages content outreach. It provides a venue for “organic reach” where friends or fans/followers of one user see all updates (Quesenberry). Further, the content gets boosted with the user-producers’ co-creation and recreation, which remains in circulation. Thus, digital media platforms are the vehicle of effective communication through the dynamic nature of the networks and content-creation flexibilities.

## **Check Your Progress 2**

**Multi-Platform  
Communications**

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. List the factors of media work given by Mark Deuze as part of a convergent pattern of media organisations. Ns?

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2. Describe various peer-to-peer content distribution systems used for effective communication on digital platforms.

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## **1.4 WRITING MULTI-PLATFORM CONTENT**

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Today, there are myriad opportunities to create and communicate with the audience. You may write a blog using WordPress, Tumblr, Blogger, etc.; visit imaging sites such as Flickr and video-hosting sites like YouTube, or high-end content-sharing services platforms such as Vimeo, Snapchat, SlideShare and many more. However, it is essential to select the right platform. Likewise, creating the right content for the right platform by the purpose is equally important. At the same time, considering every individual as a potential reader, content should be rich in diversity with varied contexts woven into a single text (or, given as multiple contents), as described by Denis McQuil (2010). The content should incorporate the following:

- a wide range of choices for audiences on all conceivable dimensions of interest and preference;
- many and different opportunities for access by voices and sources in society;
- a true or sufficient reflection in the media of the varied reality of societal experience.

Let us discuss how we can enrich the content for various platforms.

### **1.4.1 News**

As described in the previous sections, digital media spaces in news segments can be categorised as news websites and portals (as the expansion of the newspaper/TV news organisations) and curated news services. On the convergent digital media platforms, the news portals/websites work through a ‘hypermedia’ ecosystem, where multiple messages or media forms can be seen instantaneously. Embedded video, visual elements, interactive graphics, infographics, pictures, slide shows, etc., are the hypermedia features given on the webpage with the essential text. In a hypermediated environment, the news portals are designed with a user interface to

make the content interactive. Users click on the given interface to access and give responses to the content. Thus, the major difference between traditional news media and current media is interactivity and two-way communication. For this, we need to create content that talks, creates a dialogue for continuing conversation, and prompts the reader to take further action. Let us see how it works.

While the journalistic perspective for digital writing remains the same—content rich in information and education leads the content—the commercial strategy increases the reach. For this, organisations target specific audiences with ‘push notifications and news alerts through messages and app notification services. ‘For a wider audience’ reach, multi-platform content publishing is done to increase ‘clicks and engagement’. The strategy includes selecting the platform and format, creating content, and enhancing content and Search Engine Optimisation (SEO).

**Selecting platform and format:** Select the platform based on the requirement. For instance, a live blog/or live reporting may be streamed on Facebook and X, apart from your portal. A short form of the same content/microblog can be published on X or Facebook, and videos can be uploaded to YouTube and Instagram and shared on WhatsApp and Snapchat for instant messaging combined. Storytelling formats for telling the news differently should be practised for multi-platforms per their orientation. For example, you may tell the story by highlighting the location and focusing on the key character. Sometimes, raw videos are more impactful on X since they convey a sense of immediacy. Similarly, an audio slideshow or video interview in a journalism format will go with a YouTube channel or podcast.

**Content creation:** The simple journalistic writing principles with a little twist work well for multi-platform publishing. Some of the tips given by Bradshaw (2019) can be described here:

- Tell the story with clear, concise headlines and subheadlines; do not repeat the print headline.
- Summarise the story.
- Use sub-headings to break up the article into small pieces for easy comprehension.
- Bullet or number lists for updates (it eases the user’s reading).
- Indented quotes or block quotes (it works as an element of visual design as well).
- Use numbers instead of words for numeric data.
- Embolden words to highlight key phrases.
- Give hyperlinks, wherever possible, to link the background material.
- Break up text with images, galleries, charts, video, audio, maps, and other embedded media.
- Consider creating different videos for different platforms. For instance, a 10-second video for Instagram, a 20-second version for X, a 40-second- or 1-minute version for the Facebook page, and a full-length video on YouTube.

- Call the audience for action. Prompt users with the words ‘watch’, ‘see’, and ‘listen’. Invite them to join (a live chat or live blog), meet (an interview), and find out (an explainer or backgrounder).

**Content enhancement and SEO:** Most content management systems allow you to link platforms like Facebook, Instagram, YouTube, and X using hashtags and tags for effective communication. Write creative hashtags and use tags while referring to people. Specifically, for search engine optimisation, use maximum keywords which are related directly to your content and go for an operating system (OS) that enables your content to be screened on multiple devices – computer screens, mobile phones, and tablets – effectively with different screen aspect ratios and user interfaces.

**Curating the news:** ‘Keeping up to date with developments’ is the simplest way.” Indeed, in most cases, you need only click the ‘share this’ or ‘like’ buttons on a story to add it to your feed” (Bradshaw, 2019).

### 1.4.2 Entertainment

While cross-media experiences changed how we created and consumed entertainment-based content, there have been area-specific developments in digital media. For example, OTT or Over-The-Top digital services like Netflix, Jio Cinema, Zee5, Amazon Prime Video, Disney Hotstar, etc., are the streaming platforms for essentially entertainment-based content like films and series. However, some of them also showcase live streaming of sports events. From a multi-platform publishing and communication point of view, these platforms can be reached if one has a story to tell in a short story format. For example, Prime Video also curates short films in the regional Indian languages.

Besides that, media industry convergence has robustly been used by big corporate film studios in production. For example, Jenkins (2006) uses the film *The Matrix* and its sequels as examples of multi-platform, cross-media convergent storytelling. The complete sequel has three movies - *The Matrix*, *The Matrix Reloaded*, and *The Matrix Revolutions*. However, as a part of a complete ecosystem, the filmmakers also developed – a series of short animated films titled *The Animatrix*, graphic novels, and two video games (*Enter the Matrix* and the *Matrix Alternate Reality Game*). Every piece of work is somewhere different yet related to the basic theme, and that is how it adds an extra layer to the story to entertain several audiences. The whole content is well-connected so that one work or content leads to the other. For instance, the cheat codes for the game *Enter the Matrix* are hidden in billboards included in film shots in the Matrix trilogy (You may see Jenkins, 2006 for details about the Matrix transmedia strategy using different narrative styles across media platforms).

The entertainment industry regularly experiments with creative writing styles on the same theme using gaming, reels, shorts, and animation. This enriches the users’ viewing experience and enhances the outreach of entertainment-based content using a multi-platform communication strategy. For example, the extensive strategy of the *Star Wars* series of films, cartoon films, series, video games, and apps on *Pokemon* is further being extended to Augmented Reality ‘semi-real’ games and real events, as well as mashups and co-created content by users in the form of reels and shorts.

### 1.4.3 Advertising and Public Relations

The advertising industry in the digital age is observing a shift from “sales pitch” to “ideas forum”. Storytelling has become crispier with “planting change-making initiatives” to sell a product. “Now an ad is compressed between several windows on your device and fights for attention. For instance, Cred, a reward-based credit card payment app, masked its ad as scrollable content” (Ghosh, 2024). Thus, advertising, and public relations firms must be more creative in creating transmedia and multi-platform communication with the user, especially when the users create competitive content in Instagram reels and YouTube videos. Therefore, storytelling and embedding the product in the story is the real challenge for advertisers. Also, brand websites and blogs offer RSS feeds to ensure updated content is automatically delivered via a feed reader.

The creative industry incorporates more people and their cultures into stories. Here are two examples (Ghosh, 2024):

1. Cadbury’s latest Mother’s Day campaign involved creating a microsite that asked every user to fill out some personality details about their mothers. Creators then fed every mother’s description into ChatGPT and asked it to compose a song based on the information. This was set to music, and an mp3 file was created and emailed to the mothers.
2. Zomato made the daily news cycle its promotional vehicle, retweeting news that would suit its customer base, especially those related to food, and adding its take on them. In that sense, the consumer has become the new show runner.

Vlogs are another entertainment-based content that integrates ratings and reviews with geo-location sites to enhance business. Users are attracted to place-specific products and places for direct business.

**Activity - 1** Select an area (news, entertainment, advertising) of writing according to your choice. Identify a recent event or product. Write a blog in 4-5 paragraphs using appropriate images and links. Recreate the content in short form for Facebook, X, and Instagram.

## 1.5 PROSPECTS AND CHALLENGES

We have seen how media content in various forms – from images to videos, films to storytelling ads, news, and interviews to discussions – continuously takes new fluid shapes to form a convergent culture. “In the world of media convergence, [where] every important story gets told, every brand gets sold, and every consumer gets courted across multiple media platforms”, there is more to go with more advancements in media and communication technologies (Jenkins, 2004 cited in Miller). Let us discuss the new prospects and challenges thereof.

### 1.5.1 New Avenues with Mobile Communication, Artificial Intelligence and Ease of Learning

As the number of mobile phone users is increasing, mobile applications for cross-platform publishing are coming with operating systems (OS) capable of working

on Android and iOS equally. This enables content creators to communicate more effectively across platforms. Software and app developers are increasingly making these apps more secure, efficient, easy to use, and fast.

Similarly, AI (artificial intelligence) tools make content presentation in various forms easy. These may be used as supporting tools to enrich the work, such as summarising the long reports, and video synthesis for smooth content distribution across platforms. There are specific AI tools for specific functions. Experts tell us about various activities the different types of AI tools perform. The AI may be categorised as:

- Reactive AI (performance-based pre-set tools) for a set work assigned, such as the ones we use for image correction.
- Generative AI (memory-based ‘super’ AI that is self-correctable and generates images, text, and other content) for creative support.

For example, image generation and correction are text-based tools that not only help synchronise the written text but also support writing creative headlines, titles, hashtags, social media captions, etc. Also, there are tools for multi-platform support to convert and customise the content for social media platforms – Facebook, X, Instagram, LinkedIn, etc. Some tools convert text to audio/video or video to text. In addition to these, AI tools offer embedded/built-in social media calendars for scheduling, organising, and publishing social media posts.

### 1.5.2 New Challenges of Identity Theft, Privacy Breach, and Deepfake

Autonomy and control over the communication process given to users make digital media distinctive. In the online convergent media, individuals create their day-to-day lives and realities in their stories. In this depiction of the self, the users or “produsers” feed a large set of personal data into the digital Internet-based networks. However, such amalgamation of content between users and producers is the new-age media and communication practice that not only gives creative ideas and cultural insight to the advertising and entertainment industry (as discussed in the previous section) but also poses a challenge to keep your identity intact. The easily accessible data of anyone by anyone is increasingly leading to the problem of **identity theft**. There are cases reported by celebrities and social media influencers where their data (pictures, videos) have been used to recreate sensational content for easy publicity. Similarly, commoners’ data is used for financial fraud and cybercrime.

Users’ identities are also revealed by their ‘profiles’ on social media. Although the practice from users’ perspective has been seen as positive and supportive of enhancing the ‘networks, Miller (2011) takes a critical view on the digital media and social media organisations for the mechanism of profile management, “the point of creating databases and constructing profiles is to get closer to the individual: to make them measurable and thus ultimately predictable”. The control of the media organisations over this data and monitoring of the same is categorised as **surveillance** and hence **privacy breach**, as it impedes users’ right to control their name and other information about ‘self’ and, the intrusion of their virtual space in terms of ‘unwarranted intrusion and intimidation’.

Miller (2011) takes a more commercial perspective of surveillance since it is more connected to what we observe about **deep fake**. Miller suggests, “The governments

do not collect the lion's share of surveillance data, but by private corporations operating under the central principle at work in the information age: that information itself has attained the status of a commodity". Thus, personal data is collected, organised, and sold to marketing and advertising firms and individuals in this' information economy'. With machine learning and technology, the data is vulnerable to creating deepfakes. According to the Merriam-Webster dictionary, a deepfake is "an image or recording that has been convincingly altered and manipulated to misrepresent someone as doing or saying something that was not done or said". The content convergence in multi-platform communication systems increases the problem as it is being used to spread misinformation, manipulate public perception, or engage in fraudulent activities.

Therefore, we need to understand the multi-platform media ecosystems thoroughly and the challenges associated with data usage so that whenever we use freely accessible online data or request information or content from users, we should be vigilant and cross-check the details. Also, it indicates applying journalistic ethical practices in using solicited data only after obtaining due consent from the original source.

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## 1.6 LET US SUM UP

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In this Unit, we discussed the nuances of the digital media ecosystem that comes with multi-platform communication opportunities. We reviewed various media forms and formats emerging with digital media. We also tried to identify the shift in the audience's needs and formations in new media. We learned about the processes and emerging patterns of multi-platform content for effective communication.

By observing some good examples of creative content from the industry, we tried to obtain the required skill set for writing multi-platform content in the fields of news, entertainment, advertising, and public relations. We discussed the possibilities for easy and effective multi-platform communication using mobile communication technology and artificial intelligence. We also examined the challenges with the ever-increasing digital networks so that we may remain careful while creating content to make it authentic and credible.

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## 1.7 KEYWORDS

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- |                      |  |
|----------------------|--|
| <b>Big data</b>      | : Voluminous data containing information about the audience.   |
| <b>Hybridity</b>     | : Combinations/mixing-up of humans and machines as a digital process, practice, and content.   |
| <b>Interactivity</b> | : is the ability of the computer user to technically 'interrupt' a programmed sequence; it is the process of socio-psychological engagement of the audience/user with media and communication form.                            |
| <b>RSS Feed</b>      | : Rich Site Summary or "really simple syndication". It uses standard web feed formats to publish updates, including blog entries, news, audio, video, and full or summarised text with metadata (author and date information). |

<b>Social bookmarking</b>	: Online service for saving, commenting, and sharing bookmarks of web documents/links.	<b>Multi-Platform Communications</b>
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## 1.9 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress: 1

1. Three forms of Internet-based digital media content
2. Audience segmentation and fragmentation

### Check Your Progress: 2

1. Mark Deuze describes the factors of media work as:
  - The *inclusion* of various stakeholders;
  - The *integration* of various media industries;
  - The complex *coordination* in the media production processes.
2. Bookmarking, file storage and sharing for peer-to-peer communication and business-to-business content-sharing services are part of the multi-platform communication distribution mechanisms.

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## **UNIT 2 MEDIATISATION**

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### **Structure**

- 2.0 Introduction
- 2.1 Learning Outcomes
- 2.2 Understanding Mediatisation
  - 2.2.1 Change in Human Communication by Means of Media
  - 2.2.2 Difference Between Mediation and Mediatisation
  - 2.2.3 Media Logic
- 2.3 Definitions of Mediatization
  - 2.3.1 Definitions Based on Time
  - 2.3.2 Definitions Based on Technology
  - 2.3.3 Definitions Based on Theory
- 2.4 Characteristics of Mediatization
- 2.5 Modes of Mediatization
  - 2.5.1 Networked ‘Scopic’ Media
  - 2.5.2 Digitisation
- 2.6 Impact of Mediatization
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  - 2.7.1 Society
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  - 2.7.3 Law and Public Policy
  - 2.7.4 Culture
  - 2.7.5 Science
  - 2.7.6 Religion
  - 2.7.7 Education
  - 2.7.8 Popular Culture and Art
  - 2.7.9 Commerce
  - 2.7.10 Sports
- 2.8 Advantages of Mediatization
- 2.9 Disadvantages of Mediatization
- 2.10 Issues of Contention
- 2.11 Global Changes and Ongoing Transformations
- 2.12 Let Us Sum Up
- 2.13 Keywords
- 2.14 Further Readings
- 2.15 Check Your Progress: Possible Answers

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## **2.0 INTRODUCTION**

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You read about multi-platform communications in the last Unit. Now, imagine your life without the media.

While life without media might seem simpler in some aspects, it would mean missing out on day-to-day conveniences, global connectivity, and instant access to information. It would be like stepping back in time before the widespread use of technologies like television, radio, newspapers, and the Internet.

Without the media, we would not get information instantly. We must rely on word of mouth and personal experiences for information. News about distant events would be slower to reach us, and staying updated on global affairs might be challenging. Forget about binge-watching our favourite movies and TV shows. Entertainment would be limited to local live performances. The idea of global celebrities and public figures might not exist as we know it today.

The media gave great impetus to society's growth and development, influencing almost every sphere of human life. This ubiquitous influence led social scientists and communication experts to study this phenomenon, which they later defined as mediatisation.

Mediatisation refers to the increasing influence of media on various aspects of society, including culture, politics, religion, and everyday life. It is not just about the expansion of media content or the spread of media technologies; it encompasses the broader impact of media on society and behaviour and the perception of the people about the world. Livingstone defines it as the meta-process shaping everyday practices and social relations through mediating technologies and media organisations.

Mediatisation is considered one of the major social processes, along with globalisation, individualisation, and commercialisation, that contributes to social, cultural and communication changes.

With the advent of digital technologies, the speed and impact of mediatisation have increased manifold. According to Statista Consumer Insights Global, in India, daily media consumption reached 6.23 hours compared to the global average of 6.37 hours in 2023. Television and videos accounted for the highest media consumption share among the country's population in 2023, with digital media growing rapidly. There were 751.5.0 million Internet users and 462.0 million social media users in India in January 2024.

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## **2.1 LEARNING OUTCOMES**

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After completing this Unit, you should be able to:

- Understand the meaning and characteristics of mediatisation;
- Know about the growth and impact of mediatisation on other institutions like society, culture, art, education, and politics;
- Identify the global changes and ongoing transformation due to mediatisation; and
- Compare the advantages and disadvantages of mediatisation.

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## **2.2 UNDERSTANDING MEDIATISATION**

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Now, the question is why there is a need for a media studies student to know about such a term as mediatisation. Before answering that, let us know about a few impacts of media technologies on our lives.

From the time we get up from our beds to sleep, we use and depend on all sorts of media-supported gadgets, systems, and mechanisms. For example, we get our schedules and updates at the click of a button. We conduct virtual meetings with colleagues and make phone calls to stay in touch with friends and family who are not physically present. We socialise via social media sites even while working. We shop, trade, and study on e-business, e-commerce, and education sites. We complete our work more efficiently and conveniently with facilities like e-governance, online education portals, virtual workspaces, and online banking. Even for entertainment and sports, we can have videos-on-demand, virtual reality games (VR) and augmented reality (AR) games on our TVs and mobile phones.

These are some real-life examples of a Mediapolis. This media-saturated society highlights the transformational impact of media on various aspects of society, including social, cultural, and individual experiences. As an invisible and powerful agent, media uses, appropriates, and penetrates all aspects of contemporary life, creating mediatisation that underpins everyday experiences. It has even modified our sense of identity and reality. Mark Deuze rightly assessed this impact by saying, “Our life is lived in [media], rather than with media.”

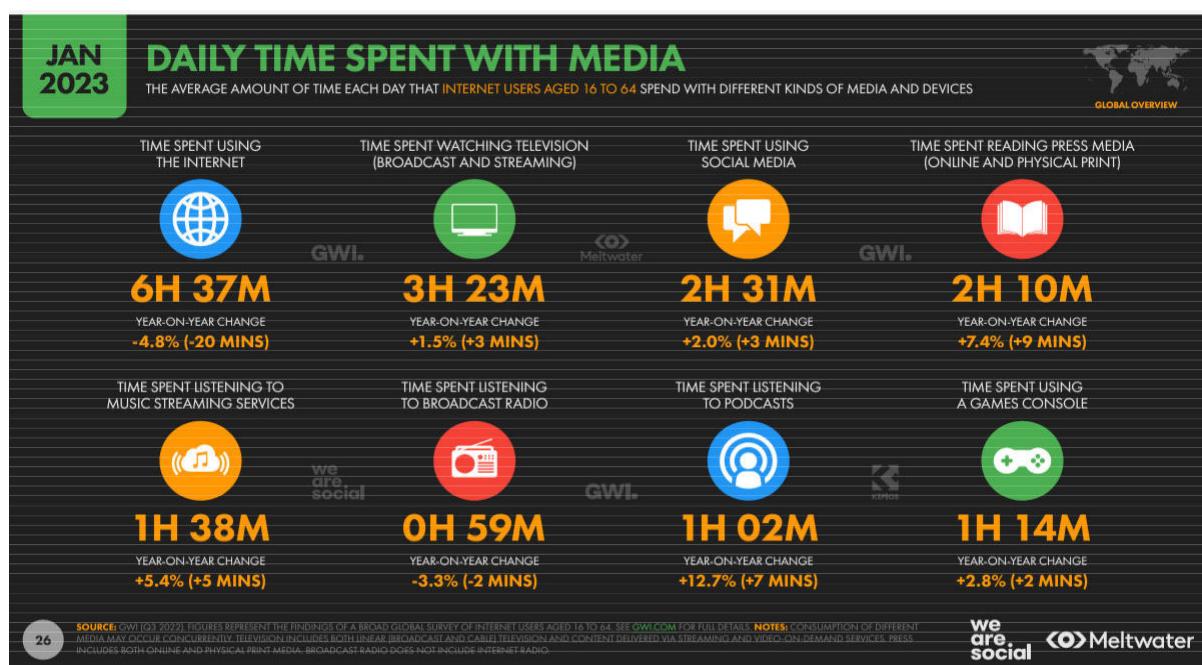
This impact of mediatisation is so profound that it cannot be left unstudied, and as media studies students, we must understand its impact in totality.

Mediatisation can be analysed at three levels. ***Micro, Meso and Macro*** levels.

**Micro level:** It is media’s interaction at the individual level (personal media usage and within a given institution, i.e. communication between family members via mobile phones)

**Meso level:** It is interaction at the institutional level (through telecommunications media that allow one to work from home);

**Macro level:** It is media interaction at the societal level (events of importance to the community at state, national, and global levels, be they festive, threatening, or tragic).



## 2.2.1 Change in Human Communication by Means of Media

There is no denying that the landscape of human communication has evolved due

to the invention of different media technologies. Thompson has given three distinctions to capture this evolution of communication succinctly:

1. Face-to-face interaction: Involve both verbal and non-verbal expressions.
2. Mediated quasi-interaction (as in newspapers, TV, radio): Addresses an unspecified audience.
3. Mediated interaction (telephone conversations) allows identified individuals to interact on an equal footing.

However, these traditional categorisations and interactions have diminished with the arrival of new digital technologies, such as SMS, email, video calling, and online streaming. The lines between mass and interpersonal communication have blurred, allowing for more dynamic and participatory exchanges.

Let us glance over the historical growth of mediatisation, closely tied to key technological inventions and innovations in the media field.

**Pre-Writing Era:** The period of oral tradition followed by rich oral traditions and cultural narrative.

**Printing Press (1440s):** Johannes Gutenberg's invention of the printing press was the first revolution in the evolution of the media. It revolutionised the production of books. This invention played a crucial role in the dissemination of knowledge, the rise of literacy, and the standardisation of languages, marking an early form of mediatisation. It snatched away the authority of religion from the hands of the church and put it in the domain of the common public by printing copies of the Bible then.

**Telegraph (1830s-40s):** The invention of the telegraph enabled near-instantaneous long-distance communication, laying the groundwork for the mediatisation of information across regions.

**Photography (1839):** Louis Daguerre and William Henry Fox Talbot invented photography, which added a visual dimension to news reporting.

**Phonograph (1877):** Thomas Edison's phonograph invention introduced the capability to record and reproduce sound, a significant development in the mediatisation of music and oral communication.

**Radio (1890s-1920s):** Guglielmo Marconi's work on wireless telegraphy and subsequent developments by others led to the invention of radio. The introduction of radio revolutionised music accessibility, news, and cultural dissemination.

**Television (1920s-1930s):** Television technology evolved from mechanical systems to electronic broadcasting. It transformed entertainment, influenced public opinion, and introduced visual storytelling.

**Internet (1960s-1980s):** The development of the ARPANET in the 1960s laid the foundation for the modern Internet, which, over subsequent decades, revolutionised communication, information dissemination, and how people access and share media content.

**World Wide Web (1990s):** The creation of the World Wide Web by Tim Berners-Lee in the early 1990s significantly impacted how information was shared, leading to the rise of online media, global connectivity, democratisation of information and digital culture.

**Mobile Phones (1980s-1990s):** The proliferation of mobile phones in the late 20th century and their subsequent evolution into smartphones transformed communication. Mobile devices became a primary platform for accessing digital media content. It increased accessibility, changed social dynamics, and transformed personal relationships.

**Social Media (2000s):** The emergence of social media platforms like Facebook, Twitter, and Instagram revolutionised online interaction. These platforms enabled user-generated content, real-time sharing, and the rapid dissemination of information, contributing to the mediatisation of social life. It altered communication patterns, facilitated global connections, and transformed activism and social movements.

**Streaming Services (2000s-2010s):** The rise of streaming services in the 21st century, such as Netflix and YouTube, disrupted traditional media consumption patterns. On-demand access to video content transformed the entertainment industry and altered viewing habits globally.

The historical timeline that each technological advancement has contributed to the expansion of media's influence on communication, culture, and society.

## 2.2.2 Difference Between Mediation And Mediatisation

There was much debate initially over terminology, exploring whether it should be termed mediatisation, mediasation, medicalisation, or mediation. Many scholars preferred and used "mediation", like how "mediatisation" is used now. Both terms were used interchangeably. However, clarity emerged over time; now, each term has separate and distinct meanings.

Mediatisation gained prominence in political research in the late 1990s when John B. Thompson introduced the idea of the "mediatisation of culture." Swedish professor Kent Asp was the first to develop the concept of mediatisation as a coherent theory and used it to study "the mediatisation of politics." Since then, European academics, particularly in Germany, Great Britain, Norway, and Denmark, have been actively engaged in conceptual, theoretical, and empirical research on mediatisation.

Mediation refers to conveying, transmitting, or interpreting information or messages between sender and receiver. It involves the presence of an intermediary or mediator or a medium which facilitates communication. On the other hand, mediatisation is a more long-lasting process of changing social and cultural institutions due to increased media influence. The term is used to characterise changes in social, cultural, and political practices, cultures, and institutions in media-saturated societies, thus denoting transformations of these societies themselves.

Agha defines mediation as the essential concept in social life whenever individuals are connected through speech or signs in communication. It involves material vehicles like telephone lines, email or video conferencing facilitating communication, and mediatisation encompasses long-term structural transformations resulting from ongoing mediated communication. It goes beyond individual acts of mediation and leads to sociocultural changes. Mediatisation involves processes like "remediation," where each act of mediation builds upon others.

There are two types of mediation.

**Direct Mediatisation** involves transforming non-mediated activities into mediated forms. For example, it involves transitioning games like physical chess boards and ludo to online chess and ludo games or online banking.

**Indirect Mediatisation:** It influences activities through mediagenic symbols or mechanisms. An example is the merchandising industry around pizza and burger restaurants in a shopping mall, where the experience includes exposure to mediagenic symbols like cartoon mascots and cosplayers like Wonder Woman (DC Comics universe) and supervillain Loki (Marvel Comics universe). This has a direct influence on the sale of toys.



Game on with the legends: Cosplayers in a mall in Chennai source New Indian Express Jan 24, 2024

### Check Your Progress: 1

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. Keep a media consumption diary for a week, reflecting on how different forms of media impact your daily life and decisions. List at least any five activities.

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### 2.2.3 Media Logic

Understanding media logic is crucial when examining the process of mediatisation. But before understanding media logic, we should first see media from the perspective of an institution.

#### Media as Independent Institution:

“Mediatisation implies that media not only play a role in their own determination but have become independent institutions. They intervene in and influence the activities of other institutions while providing shared communication fora for society. This evolution from being instruments to independent entities involves changes in rules, resource allocations, and the professionalisation of media practices” (Hjarvard, 2008).

#### Historical Transformation of Media Institutions:

1920s-1980s: Media was an instrument in the hands of other institutions like science,

politics, religion, and commerce. It primarily served the specific interests of the institutions, e.g., the political party press, and was an instrument rather than an independent entity.

**1980s-Present:** Structural changes, deregulation, and technological advancements led to a more commercial and competitive media climate. Media evolved from cultural institutions to more market-oriented entities, focusing on audience preferences.

Media has become increasingly intertwined with various aspects of society and plays a significant role in shaping public discourse, influencing cultural norms, and impacting how individuals perceive and interpret information.

It has a logic that other social institutions must accommodate to get a larger audience as more and more of their activities are performed through the media. Now, actors of other institutions like politicians, opinion makers, corporate honchos, civil society leaders, and others have no choice but to adapt their communication methods to a form that suits the logic and preferences of the media to exist in business. However, the extent to which media logic helps and affects these institutions depends on the mutual interaction of the institutions and society.

Altheide and Snow contributed a lot to the Media Logic Theory. According to them, “Media Logic” refers to the distinctive ways in which media organisations and their content shape the presentation of information and influence the thinking and behaviour of individuals and society. The modus operandi of media logic plays out at three levels: the institutional, technological, and content presentation levels.

Let us discuss the key aspects of media logic:

**Simplification and Dramatisation** involve condensing information and framing stories to capture attention.

**Personalisation:** By focusing on individuals or specific cases, media can make information more relatable and emotionally compelling for audiences.

**Visual Orientation:** Media logic prioritises images, videos, and graphics to convey information.

**Fragmentation:** In the era of 24-hour news cycles, media logic prefers fragmentation of information. News stories are often presented in shorter, easily digestible segments and lack depth.

**Speed and Immediacy:** The demand for breaking news and real-time updates is a key aspect of media logic. Prioritising getting information out quickly sometimes leads to misinformation.

**Entertainment Value:** Media logic recognises the entertainment value of content. Stories have to be engaging and entertaining to retain the audience’s attention.

**Interactivity:** Social media platforms, for example, allow users to engage with and contribute to content, blurring the lines between media producers and consumers.

**Commercial interests** often drive media logic. The need to attract advertisers and maintain profitability can influence the selection and presentation of content, leading to a focus on content that is likely to generate higher TRPs/ratings or clicks.

## Check Your Progress: 2

- Note:** 1) Use the space below for your answers.
- 2) Compare your answers with those given at the end of this Unit.
1. What media logic will you follow while writing a news story for TV opposing a policymaker's decision on clearing of wastelands for development work?

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## 2.3 DEFINITIONS OF MEDIATISATION

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This section provides an overview of the diverse definitions of mediatisation proposed by various authors and scholars in communication, sociology, and cultural studies. Most definitions acknowledge the significance of dimensions like **Time, Technology, and Theory**.

While not all definitions can be easily categorised within one of these three perspectives, most can be associated with either, with the primary dimension appearing to be the most decisive.

### 2.3.1 Definitions Based On Time

Mediatisation is a complex and multifaceted concept, and various scholars have emphasised its temporal dimension.

Friedrich Krotz, a German communication scholar, has contributed significantly to mediatisation. He emphasises the temporal aspect by conceptualising mediatisation as a long-term process. According to Krotz, mediatisation involves reorganising social and cultural practices over extended periods, gradually integrating media into various aspects of society. Krotz's approach highlights the historical and evolving nature of mediatisation.

Stig Hjarvard, a Danish media scholar, has also explored mediatisation with a focus on time. He suggests that mediatisation is a historical process characterised by a long-term transformation in which media become more influential and intertwined with different social spheres. Hjarvard's perspective underscores the idea that mediatisation is not an instantaneous occurrence but a gradual development that unfolds over time.

Norwegian media scholar Knut Lundby has contributed to the development of mediatisation theory. His approach acknowledges the temporal dimension by examining the historical trajectory of media influence. Lundby suggests that mediatisation involves a long-term restructuring of communication patterns and practices, emphasising the evolutionary nature of media's impact on society.

All these scholars stress that mediatisation is a dynamic and historical process involving media integration and societal transformation over extended periods.

### 2.3.2 Definitions Based On Technology

While prioritising technology in the definitions of mediatisation may not be as common as emphasising other dimensions, some scholars have highlighted the role of technology in shaping the concept. They believe mediatisation primarily develops in modern, industrialised, and western societies. Globalisation and mediatisation are interconnected, relying on the technical means provided by media, and further propelling the process of mediatisation in new contexts.

Andreas Hepp, a German communication scholar, emphasised technology's central role. He argues that mediatisation is closely tied to technological advancements and changes in media infrastructure. According to Hepp, the transformation of communication practices is intricately linked to developing and deploying new media technologies.

Stig Hjarvard, in addition to his emphasis on time, as mentioned earlier, also acknowledges the significance of technology in mediatisation. He suggests that the process involves the historical evolution of media influence and the technological changes that enable and shape these transformations. Hjarvard's perspective underscores the interplay between technology and the mediatisation process.

It's important to note that while these scholars prioritise the technology dimension in their discussions of mediatisation, they also recognise technology's interconnected nature with other dimensions, such as time and theory.

### 2.3.3 Definitions Based On Theory

Definitions of mediatisation, primarily within the theoretical dimension, suggest that mediatisation research is currently more focused on theoretical foundations than empirical applications. This inclination applies to definitions based on Time and Technology as well. Many scholars focusing on theory also present studies of mediatisation in various domains such as politics, state strategies, public bureaucracy, corporations, law, sports, and popular culture to show concrete evidence. Most of these definitions have a theoretical foundation that considers "media logic" as a driving force in mediatisation.

For instance, Strömbäck and Esser, European scholars, concentrate on the mediatisation of politics, defining it as a long-term process where the media's importance and spill-over effects on political processes increase. They emphasise the dynamic relationship between "political logic" and "media logic." Hjarvard, too, understands "media logic" as the "modus operandi" in mediatisation processes,

Nick Couldry, a British sociologist, works incorporate critical theoretical perspectives on power dynamics, social structures, and the implications of mediatisation on democracy.

Some authors used cultural domains and referred to concepts like "logic of practice" (from Bourdieu's sociology). Others, like Kunelius and Couldry, canter their theoretical approaches on social interaction, communication practices, and symbolic interaction, emphasising the interrelation between changes in media, communication, culture, and society.

While there may not be a single universally agreed-upon definition of mediatisation, scholars often incorporate theoretical perspectives into their discussions.

## 2.4 CHARACTERISTICS OF MEDIATISATION

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Let us discuss the key characteristics of mediatisation:

**The pervasiveness of Media Influence:** Media, accessible from virtually anywhere, shapes news, entertainment, and social interactions.

**Integration into Everyday Life:** Media seamlessly blends into daily life, blurring public and private boundaries.

**The interconnectedness of Media and Social Institutions:** Media is intrinsic to institutions like education, politics, religion, and the economy, influencing public opinion and discourse.

**Shaping Cultural Practices and Norms:** Media constructs cultural practices, values, and norms, forming shared meanings and influencing understanding.

**Identity Construction:** Media significantly shapes individual and collective identities, impacting perceptions of gender, race, and sexuality.

**Mediation of Social Interaction:** Platforms like Facebook, Instagram, and Twitter centralise communication, information sharing, and opinion formation.

**Media Influence on Public Opinion:** Media coverage sways public opinion, impacting perceptions of people, issues, or products.

**Technological Determinism:** Mediatisation considers the impact of media technologies, such as digital media and AI, on social and cultural change.

**Media Logic:** The concept involves distinctive characteristics of media systems, shaping information presentation, consumption, and dynamics.

**Temporal and Spatial Changes:** Mediatisation explores how media alters perceptions of time and space, affecting information dissemination and breaking geographical barriers.

**Globalisation of Media:** Mediatisation acknowledges the global dissemination of information, transcending national and cultural boundaries.

**Commercial Interest:** Mediatisation influences advertising, journalism, and entertainment, disrupting traditional models with platforms like YouTube and Free ad-supported streaming TV (FAST).

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## 2.5 MODES OF MEDIATISATION

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Modes of Mediatisation encompass different ways in which media integration occurs. Key modes include:

**Technological Mediatisation:** Examines the impact of tech advancements on media, transforming information consumption. Examples: TikTok, Video on Demand (VOD), OTT Platforms.

**Cultural Mediatisation:** Explores how media shapes cultural practices, identities, and narratives.

**Political Mediatisation:** Focuses on the media's role in political processes, communication, and opinion formation. Examples: Election campaigns and political movements to make separate states like Telangana, Jharkhand, and Chhattisgarh.

**Economic Mediatisation:** Studies media's economic impact on markets, advertising, and business models. Examples: Online advertising and e-commerce platforms like OLX.

**Social Mediatisation** explores the media's influence on social interactions, relationships, and community dynamics. Examples include social media activism and public movements.

**Institutional Mediatisation** examines media integration into institutions like education and healthcare. An example is the use of online platforms for education.

**Temporal Mediatisation:** Explores media's influence on temporal structures, providing real-time access to news and information.

These modes are interconnected, offering a multifaceted understanding of how media permeates contemporary life.

### 2.5.1 Digitisation

Digitisation profoundly impacts mediatisation, transforming media consumption, production, and distribution:

**Increased Access:** Online streaming and digital news platforms provide instant global access to diverse content.

**Convergence of Media Platforms:** Digitization merges text, audio, and video into a single digital format, enabling multimedia storytelling.

**User-Generated Content:** Platforms like YouTube and TikTok empower users to create and share content, influencing trends.

**Personalisation and Targeting:** Digital tech enable personalised content delivery based on user preferences, as seen in streaming service algorithms.

**Interactivity and Engagement:** Digitisation fosters interactive experiences through comments, likes, and social media interactions during live events.

**Data Analytics:** Digital platforms leverage data analytics for insights into audience preferences, trends, and consumption patterns.

**Shift in Advertising Models:** Digitisation transforms advertising with targeted ads and sponsored content online.

**Challenges to Traditional Media:** Digitisation challenges traditional media outlets, impacting revenue models and distribution channels.

**Real-Time Communication:** Digitisation facilitates instant communication and real-time news updates.

**Global Connectivity:** Digitisation enhances global connectivity, fostering cultural exchange on a global scale.

In summary, digitisation accelerates and amplifies the Mediatization process.

### Check Your Progress: 3

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. Briefly discuss the impact of OTT platforms on young children's behaviour.  
List any four positive or negative impacts.

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.....  
.....

### 2.5.2 Networked 'SCOPIC' Media

Digitisation enables networked 'scopic' media, a visualised network for simultaneous meaning-making and interpretation. This reflexive mechanism collects and focuses activities on a single surface, reducing the centrality of face-to-face interactions. Scopic is derived from the Greek term "scope," meaning "to see. Scopic media refers to mechanisms of observation and projection. It is a great boon for complex work at large networks. It creates synthetic situations where everyday activities migrate to the Internet, reducing the centrality of face-to-face interactions.

#### Characteristics of Scopic Media:

- Synthetic Situations: Transforms face-to-face situations without physical presence.
- Visualisation of Remote Events: Presents content sequentially, streaming remotely.
- Shifting and Narrowing Physical Boundaries: Creates parallel realities.
- Expansion of Agency through Algorithms.

#### Benefits:

- New global coordination for massive work.
- Enhances trust through transparency, making information visible globally.

Example: In share market offices, networked 'scopic' media streamlines coordination, communication, and decision-making. Large screens, Bloomberg Terminals, and Video Walls present real-time data, enhancing efficiency. Interactive technologies and algorithms offer a visually immersive environment, enabling traders to observe, analyse, and coordinate in real time.

## 2.6 IMPACT OF MEDIATISATION

#### Mediatisation Impact:

- Increased Social Media Influence
- Expansion of Digital Storefronts

- **Influence on Public Opinion and Trends:** Social media shapes fashion and political decisions.
- **Transformation of News Consumption:** 24/7 news cycles on online platforms influence public perception.
- **Advertising and Consumer Choices:** Media shapes consumer culture, promoting products and influencing purchases.
- **Evolution of Political Communication:** More options and ease in reaching the public.
- **Boom in the Entertainment Industry:** Mobile phones bring entertainment to our fingertips.
- **Enhancement of Educational Tools:** E-learning platforms and apps have become integral to modern education.
- **Versatile Workplace Communication:** Digital tools revolutionise remote collaboration, virtual meetings, and instant messaging.
- **Amplification of Celebrity Culture:** Media turns individuals into global icons, influencing trends and causes.
- **Role in Crises and Social Movements:** Real-time reporting mobilises support during crises and protests.
- **Personal Branding through Media Platforms:** Individuals showcase expertise and experiences on various platforms.

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## 2.7 MEDIATISED AREAS

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### 2.7.1 Society

Media profoundly impacts society, altering how individuals and communities perceive and engage with the world. It creates loose couplings in social spaces and destabilised local, national, and global links. Media-mediated interactions reshape communication dynamics and social norms. One such norm is the open posting of ridicule and gossip on social platforms. It de-links traditional face-to-face norms and establishes a virtual ‘stage’ for interaction. This mediatisation extends to cultural transmission globally, an impact seen in the worldwide reach of Shah Rukh’s films and global music and fashion influences. Social media and dating apps further contribute to the mediatisation of society, shaping romantic expectations. Examples of mediatisation include social movements like the Arab Spring and the Black Lives Matter movement, crisis communication during emergencies like Covid 19, and the influence of celebrity influencers.

### 2.7.2 Politics

Political campaigns during elections are a great example of mediatisation in politics. Political campaigns increasingly rely on media platforms to reach voters. Social media, televised debates, and online advertising have become central to political communication. Political leaders also use media and social media platforms to influence public discourse and transform public opinion. Agnipath Scheme 2022, for recruiting

soldiers below the rank of commissioned officers into the three services of the Indian armed forces and ‘One Nation, One Election’ to synchronise elections for the Lok Sabha and all state assemblies, are examples of such political rhetoric. Even all social revolution and independence movements have political communication driven by mediatisation.

### **2.7.3 Law and Public Policy**

Mediatisation significantly impacts law and policymaking, shaping public awareness and advocacy through coverage of issues like the Narmada Bachao Andolan and the Use of CNG in Delhi. Media influences policy agenda setting with examples such as the Jan Lokpal Bill and Black Lives Matter movements. Legal cases like the Nirbhaya rape case see media pressure leading to reforms in the Juvenile Justice Act.

Media campaigns on gun control affect public opinion and lawmakers’ decisions. Global issues, such as the Rohingya crisis, gain attention through the media, leading to international pressure for legal action. Like Edward Snowden’s NSA disclosures, whistleblower revelations drive public debates and calls for legal reforms.

Media trials, as seen in the Sushant Singh Rajput case, are criticised for sensationalism and interference in investigations. Through movements like #MeToo and #ClimateStrike, social media raises awareness about legal issues and contributes to policy discussions. These examples illustrate how mediatisation shapes the legal landscape, influencing public perceptions, legal proceedings, and ethical considerations. The intersection of media and the legal system brings both positive and challenging consequences for the administration of justice.

### **2.7.4 Culture**

Mediatisation profoundly shapes culture, influencing perception, creation, and engagement. Key aspects include cultural exchange through films, music, and literature, fostering cross-cultural understanding. Mediatisation contributes to cultural homogenisation, exemplified by the global influence of western fashion and lifestyle portrayed in digital forms.

Cultural appropriation and fusion emerge through the exchange of cultural elements, as seen in fusion cuisine. The globalisation of pop culture is evident in the global popularity of Hollywood films and Bollywood music. Mediatisation impacts language, communication, and social media-driven cultural movements. Digital storytelling on media platforms transforms narrative structures, while virtual experiences enable the exploration of cultural events and heritage. Challenges arise from media reinforcing stereotypes, as seen in representations of ethnic or cultural groups and issues like racism.

Mediatisation dynamically influences culture, fostering positive exchange and presenting challenges in representation, appropriation, and identity. The examples illustrate the intricate relationship between media and culture in today’s globalised world.

### **2.7.5 Science**

Mediatisation significantly impacts science, influencing how information is disseminated, scientists communicate, and the public engages with discoveries.

**Public Communication by Scientists:** Scientists interact with the media to share research and foster public understanding. For example, the media coverage of the Higgs boson discovery at CERN.

**Science Journalism:** Popular science magazines and newspaper sections offer understandable explanations of scientific studies relevant to the public.

**Citizen Science Engagement:** Mediatization supports citizen science projects, such as those on Zooniverse, enabling global contributions to astronomy, biology, and environmental research.

**Scientific Outreach via social media:** Scientists use social platforms for direct public engagement, democratising access to scientific information and building online communities.

**Impact on Funding and Research Priorities:** Media campaigns promoting the urgency of climate change influence public perception, leading to increased funding, and shaping policy agendas.

**Ethical Debates and Controversies:** Media coverage amplifies debates on the ethical implications of scientific advancements, influencing public opinion and policy considerations. Example: CRISPR-Case discussions on gene-editing technologies.

**Scientific Misinformation Challenges:** Mediatisation brings challenges, including the spread of misinformation on topics like vaccines and climate change, requiring active correction by scientists.

**Collaboration and Interdisciplinary Research:** Media attention to topics like AI and space exploration fosters collaborations between scientists, engineers, ethicists, and policymakers.

These examples showcase the diverse impact of mediatisation on science, influencing communication, engagement, research, and ethical considerations.

## 2.7.6 Religion

Mediatisation significantly shapes religion, impacting how practices, beliefs, and institutions are communicated globally. Examples include:

**Global Dissemination:** Mega-churches and leaders use TV, radio, podcasts, and online platforms to broadcast globally, broadening the reach of religious teachings.

**Online Religious Communities:** Social media platforms enable online religious communities, fostering connections, sharing experiences, and facilitating discussions.

**Religious Education Online:** Mediatisation influences religious education through online resources, providing access to texts, study guides, and educational materials for believers to engage with their traditions.

**Representation in Media:** Mediatisation shapes religious representation in mainstream media, influencing public perceptions. An example is Ram Mandir's inauguration in Ayodhya.

**Digital Worship:** Digital technology allows virtual religious services, enabling remote participation, especially during crises like the COVID-19 pandemic. Online Discourse: Online platforms facilitate religious discourse, allowing believers and non-believers

to converse about beliefs, practices, and ethical considerations. Religious Marketing: Religious movements use professional websites, logos, and videos for branding, appealing to potential believers with contemporary practices.

### 2.7.7 Education

Mediatisation in education, marked by online platforms and digital tools, enhances accessibility but poses challenges. Real-life examples include:

**MOOCs and Online Learning Platforms:** Coursera, edX, and Khan Academy offer global access to top-quality courses.

**Digital Classrooms and E-Learning Systems:** Learning Management Systems like Canvas transform traditional classrooms, enabling the digital sharing of materials and discussions.

**Educational Podcasts and Webinars:** TED-Ed and webinars provide insights, discussions, and strategies for various subjects.

**AR and VR in Education:** Mediatisation introduces immersive experiences through AR and VR technologies, enhancing learning with simulations and virtual field trips.

**Educational Apps and Games:** Duolingo for language learning and Minecraft: Education Edition offer interactive virtual learning environments.

**Flipped Classrooms and Video Lectures:** Mediatisation leads to flipped classrooms, where students review online content before class. Video lectures and multimedia enhance pre-learning resources.

**OER and Digital Textbooks:** OpenStax and NCERT free ebooks provide accessible, peer-reviewed textbooks, reducing students' financial burdens.

**Social Media in Education:** Platforms like Twitter and Facebook groups connect educators, allowing them to share articles and discuss topics.

While offering opportunities, mediatisation in education brings challenges, including digital literacy, privacy concerns, and the need for effective pedagogical strategies.

### 2.7.8 Popular Culture and Art

Mediatisation profoundly impacts popular culture and art, shaping their creation, distribution, and consumption. Key points include:

**Globalisation and Cross-Cultural Exchange:** Mediatisation enables global cultural influences, fostering cross-cultural fertilisation and the emergence of hybrid expressions in art.

**Influence on Artistic Expression:** Artists, aware of their role in a mediatized system, use various forms (painting, sculpture, digital art), considering how medium choice contributes to the message. A contemporary artist reflecting on digital media through their work is an example.

**Integration of Technology:** Artists incorporate digital technologies, giving rise to new forms of expression like media art, interactive installations, and digital storytelling. Example: Evolution of live and mediated musical performances challenging traditional authenticity perceptions.

Digital platforms revolutionise popular culture and art distribution, enhancing global accessibility. Mediatisation involves commercialisation, impacting artistic processes. Media representation of popular culture influences societal norms. Social media provides immediate feedback, impacting artists' development and fostering a dynamic creative process.

### **2.7.9 Sports**

**Video Gaming Culture and Esports:** Mediatization has transformed gaming from a niche subculture to a global phenomenon, with professional gamers becoming celebrities. This has influenced social perceptions of gaming and contributed to its acceptance as a legitimate form of entertainment.

The growth of esports (competitive video gaming) has turned gaming into a mainstream form of entertainment. Tournaments are broadcast on platforms like Twitch, attracting large audiences.

### **2.7.10 Commerce/ Corporate:**

Media can make or break the reputation of an organisation. Embracing digital channels, social media, and data-driven strategies has become essential for businesses to stay competitive, connect with their audience, and adapt to the evolving landscape of the mediatised business environment.

**Consumer Behaviour and Advertising:** The mediatisation of Advertising and Public Relations profoundly affects consumer behaviour and the company's growth. Advertisements on various media platforms, including television, social media, and online content, can shape preferences, influence purchasing decisions, and contribute to the creation of consumer culture.

Public relations can even save a company from crisis. Toyota Recall Crisis (2009-2010), Samsung Galaxy Note 7 Recall (2016). In both cases, the company communicated openly about the issue, apologised to consumers, implemented new safety measures in their product development and recalled their product. This transparent communication strategy helped the company mitigate long-term damage to

**Web Presence and Branding:** A strong online presence, including a well-designed website, contributes to a company's branding efforts. Businesses invest in creating visually appealing and user-friendly websites to showcase products, services, and brand identity.

**Digital Storefronts:** The rise of e-commerce platforms and online marketplaces has transformed how businesses sell products and services. Companies establish digital storefronts, which reach global audiences and enable transactions 24/7.

**Brand Promotion:** Social media platforms have become powerful tools for promoting brands, engaging customers, and managing reputations.

**Content Marketing and Information Dissemination:** Businesses use content marketing to provide valuable information, establish expertise, and attract potential customers. Blogs, articles, videos, and other forms of content engage and educate the audience.

**Data-Driven Decision-Making:** Businesses use data analytics to gather insights into consumer behaviour, preferences, and market trends. This information guides strategic decision-making in product development, marketing strategies, and customer relationship management.

Online Customer Service, Influencer Marketing, Online Reviews and Reputation Management, E-commerce and Digital Transactions through Digital Payment Systems are other examples of mediatisation in the commerce sector.

## 2.8 ADVANTAGES OF MEDIATISATION

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In today's digital landscape, the ease of access to diverse information across the globe has transformed the way we perceive and interact with the world. This accessibility has facilitated rapid dissemination of ideas and knowledge, fostering global communication and collaboration. Moreover, it has opened unprecedented educational opportunities, granting individuals enhanced access to digital learning resources and enabling lifelong learning. Alongside educational benefits, the digital realm has played a pivotal role in shaping political awareness and participation, empowering citizens with informed engagement and facilitating civic involvement. Furthermore, the proliferation of digital platforms has provided a vast array of entertainment options, catering to diverse tastes and cultures, while also optimizing social interaction by streamlining connections and communication channels.

Simultaneously, the digital sphere has catalysed economic growth through the expansion of digital economies, nurturing e-commerce platforms and fostering global collaborations. Social networking platforms have strengthened social ties and facilitated the formation of online communities, while also enabling rapid crisis management through the quick dissemination of information during emergencies. The democratization of media through citizen journalism has empowered individuals to actively participate in shaping public discourse, contributing diverse perspectives, and fostering innovation. Moreover, the continuous evolution of new media technologies has spurred cultural exchange, production, and creativity on a global scale, serving as a platform for the expression and celebration of diverse cultural identities. Additionally, the ability for individuals to exert control over the flow of information in media interactions has emerged as a critical aspect, emphasizing the importance of understanding and navigating digital spaces responsibly.

While acknowledging these advantages, addressing associated drawbacks is crucial for responsible and beneficial mediatisation.

## 2.9 DISADVANTAGES OF MEDIATISATION

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**Loss of Privacy:** Constant media presence, especially on social platforms, exposes personal information without explicit consent.

**Erosion of Critical Thinking:** Exposure to biased or sensationalised content may diminish critical thinking skills, fostering acceptance without scrutiny.

**Erosion of Critical Thinking:** Exposure to biased or sensationalised content may diminish critical thinking skills, fostering acceptance without scrutiny.

**Social Isolation:** While enabling global connections, excessive digital reliance can lead to social isolation, which can impact mental health.

**Media Manipulation:** Mediatisation can be accompanied by manipulative narratives controlled by entities for their interests.

**Normalisation of Superficial Values:** Media emphasis on superficial values normalises certain standards, impacting societal pressures and individual well-being.

**Reduced Face-to-Face Interaction:** Excessive digital communication reduces face-to-face interactions, potentially affecting social skills and relationship depth. Recognising these drawbacks is essential for addressing challenges and mitigating negative impacts while maximising positive contributions.

Understanding these disadvantages is crucial for individuals, policymakers, and society to address the challenges of mediatisation and mitigate its negative effects while maximising its positive contributions.

## 2.10 ISSUES OF CONTENTION

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While mediatisation can bring about positive changes, it also raises several issues of contention. As per Brown, mediatisation collapses ontological divisions, blurring distinctions between fact and fiction, nature, and culture, global and local. Baudrillard says that media create simulacra, representations of reality that seem more real than physical and social reality, thus creating confusion and hyperreality.

So, mediatisation brings concerns, too:

- **Privacy and Cybersecurity:** Increased digital footprint raises identity theft and hacking concerns, demanding a focus on cybersecurity and ethical tech use.
- **Commercialisation of News:** Reliance on advertising revenue may prioritise sensational content over substantive news, impacting journalistic quality.
- **Media Literacy Challenge:** Manipulation, biased reporting, and filter bubbles challenge media literacy, impacting democratic processes and fostering polarisation.
- **Disinformation and Fake News:** Digital platforms facilitate the rapid spread of false narratives, making it difficult to distinguish reliable sources.
- **Hyperconnectivity and Information Overload:** Constant information flow can lead to confusion, anxiety, and a lack of critical thinking.
- **Cultural Homogenization:** Global media dominance may overshadow local cultures, impacting diversity and identity.
- **Digital Divide:** Unequal access to media and technology contributes to social disparities and limits opportunities.
- **Ethical Challenges:** Mediatisation raises ethical questions about technology use, privacy, and the media's role in shaping public discourse. Balancing benefits with ethical safeguards requires a comprehensive approach involving media literacy, regulation, and ongoing public discourse.

### Check Your Progress: 4

- Note:** 1) Use the space below for your answers.
- 2) Compare your answers with those given at the end of this Unit.

1. Host a discussion forum in the family or class to explore how mediatisation has influenced local culture, traditions, or social dynamics.

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2. Analyse a case study of a specific event, news story or phenomenon and identify how mediatisation shaped public perception.

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## 2.11 GLOBAL CHANGES AND ONGOING TRANSFORMATIONS

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Mediatisation has brought about many global changes and ongoing transformations across society. Tomlinson discusses how media, particularly the Internet and satellite TV, have contributed to globalisation by de-territorialising cultural experiences and social interactions. Media products and communication flow across national boundaries, creating a globalised context. Though most of these trends and changes have been discussed in this chapter under various sub-topics, so we are just reiterating their headings to put them under one umbrella category of global changes:

**Information Access and Dissemination**

**Communication and Connectivity**

**Cultural Influence and Globalisation**

**Political Engagement and Activism**

**Economic Shifts and E-Commerce**

**Education and E-Learning**

**Media Consumption Habits**

**Employment Landscape**

**Change in Media Industry Dynamics with Digital Disruption.**

***Transformation in Social Dynamics and Online Communities.***

These ongoing trends and transformations highlight the complex interplay between mediatisation and various aspects of global society. They influence how individuals, communities, and institutions interact and evolve in the digital age, underscoring the importance of addressing emerging challenges and ensuring responsible and ethical use of media technologies.

## 2.12 LET US SUM UP

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In this Unit, we discussed media integration into society, known as mediatisation. It has brought about a complex interplay of advantages and disadvantages in contemporary life. On the one hand, it has facilitated widespread information access, global communication, and educational opportunities, contributing to economic growth and fostering cultural exchange.

On the other hand, it posed challenges as well. Privacy and cybersecurity concerns have grown with increased digital presence. Commercialisation of news and sensationalism may compromise journalistic quality, while media literacy challenges impact democratic processes. Disinformation, fake news, and the potential for information overload threaten critical thinking. Cultural homogenisation, the digital divide, and ethical dilemmas regarding technology use further underscore the need for a balanced approach.

To navigate these challenges, society must prioritise media literacy, enact regulatory measures, and engage in ongoing public discourse. This balanced approach aims to harness the positive aspects of mediatisation while mitigating its potential negative consequences, fostering a responsible and beneficial integration of media into the fabric of modern life.

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## 2.13 KEYWORDS

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### **Institutions**

- : Domain or field of social life governed by a particular set of formal or informal rules, displays a particular structure, serves certain social functions, and allocates resources for various actions in various ways. Example: Family, work, political system, religion, sports, business, and Media; Hjarvard, 2014

### **Mediapolis**

- : Mediapolis is a term that combines the word “media” with the various meanings of “polis” (city, state, citizens). It’s a way of interweaving media, politics, and cities.

### ***Artificial intelligence (AI)***

- : Is the intelligence of machines or software. It is a broad term for techniques that enable machines to mimic or exceed human intelligence. It involves studying the patterns of the human brain and analysing the cognitive process.

### **Media Convergence**

- : Exemplifies the integration of various media forms, such as text, audio, and video, into digital platforms. For instance, online news articles often include multimedia elements like images, videos, and interactive graphics.

### **Misinformation**

- : False information that is spread, regardless of whether there is intent to mislead.

### **Disinformation**

- : Deliberately misleading or biased information; manipulated narrative or facts; propaganda.

## 2.14 FURTHER READINGS

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## 2.15 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress: 1

1. Checking news updates on my preferred news app. I noticed that the headlines often set the tone for my mood and influence my initial thoughts for the day. Social Media Breaks During Work: I took short breaks to scroll through social media platforms. Initially intended for relaxation, these breaks are sometimes extended longer than planned. I realised that social media can significantly distract

me, impacting my productivity and focus. Online Shopping Influence: I observed that targeted advertisements influenced my purchasing decisions. Recommendations based on my browsing history and preferences led me to explore and buy items I might not have considered otherwise. I typically unwind by watching a TV show or streaming content. I noticed that the content I choose significantly affects my mood and relaxation level Late-Night Reading and Digital Books: The accessibility of a vast library at my fingertips has changed my reading habits.

### **Check Your Progress: 2**

1. It is crucial to follow media logic that aligns with the visual and auditory nature of television broadcasting. Here are some considerations for creating a compelling and balanced TV news story:
  1. Visual Storytelling
  2. Interviews and Testimonials
  3. Location Shots
  4. Documentary-style Segment
  5. B-Roll Footage
  6. Graphics and Infographics
  7. Community Impact
  8. Experts in the Field
  9. Legal and Regulatory Visuals
  10. Timely Updates
  11. Engaging Narration

### **Check Your Progress: 3**

#### **1. Positive Impacts:**

1. Educational Content
2. Entertainment and Creativity
3. Diversity of Content

#### **Negative Impacts:**

1. Excessive Screen Time
2. health issues
3. Inappropriate Content Exposure
4. Impact on Social Interactions:
5. Indulging in Commercialisation and Advertising

**Check Your Progress: 4**

1. Possible points can be Changed in:

Media Consumption Patterns

Social Media and Community Interaction

Traditional Practices

Or

Impact on Language and Communication, Thinking patterns, and Cultural Awareness about different countries.

2. Example: Mandal Commission: Defining creamy layer and its exclusion from reservation.

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## **UNIT 3 COMPUTER - MEDIATED COMMUNICATION**

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### **Structure**

- 3.0 Introduction
- 3.1 Learning Outcomes
- 3.2 Agency in Computer-mediated Communication
- 3.3 Advantages and Disadvantages of Computer-mediated Communication
- 3.4 Theories of Computer-Mediated Communication
  - 3.4.1 Social Presence Theory
  - 3.4.2 Media Richness Theory
  - 3.4.3 Social Information Processing Theory
  - 3.4.4 Hyperpersonal Model of Computer-Mediated Communication
- 3.5 Types of Computer-Mediated Communication
  - 3.5.1 Synchronous Communication
  - 3.5.2 Asynchronous Communication
- 3.6 Benefits of Synchronous Communication
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- 3.8 Computer-Mediated Communication and Psychology
- 3.9 Computer-Mediated communication and its use in Mass communication
- 3.10 Let Us Sum Up
- 3.11 Keywords
- 3.12 Further Readings
- 3.13 Check Your Progress: Possible Answers

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### **3.0 INTRODUCTION**

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Computer-mediated Communication (CMC) refers to communication in which users interact with each other with the help of computers and networks. CMC facilitates communication among people at different locations and in different time zones. Electronic mail, text messaging, chat rooms, video calls, and instant messaging are ways to practice CMC. Since CMC happens with the help of computers, Internet-enabled devices, networks, and the Internet, the chances of having noise are high. This is unlike the FtF situation; the users may also experience communication barriers.

People lacking digital media literacy skills may struggle to experience CMC. Since it is a virtual mode of communication, users are anonymous, and self-disclosure may be delayed. The machine is an interface that facilitates communication. It sends the data from the sender to the receiver and back to the sender. In CMC, feedback may be instant or delayed. Delayed feedback indicates a lack of interest in conversation or the unavailability of the receiver. The message has to be encoded in a manner which can be decoded easily by the receiver and vice versa. People with common interests can come together and form virtual communities with the help of CMC.

## 3.1 LEARNING OUTCOMES

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After completing this Unit, you should be able to

- Understand the concept of Computer-mediated Communication;
- Learn the theories related to computer-mediated communication;
- Understand the types of computer-mediated communication and their advantages and disadvantages; and
- Learn the role of computer-mediated communication in mass communication.

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## 3.2 AGENCY IN COMPUTER-MEDIATED COMMUNICATION

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Agency in computer-mediated Communication (CMC) refers to the ability of people to act, make selections, and exert their presence in the digital realm. CMC offers numerous modes of interaction through virtual environments like email, instant messaging, and social media. Here are some key points concerning agency in CMC:

**1. Select the communication platforms:**

Customers can choose the communication platform they want to use. The selection is governed by the sender and receiver's technical literacy levels. For example, they could opt for electronic mail for formal communication and informal conversations with family and friends, or they might choose Facebook and WhatsApp.

**2. Content creation and dissemination:** CMC offers the agency to users to create content in the format of their choice and gives them the control to share it on social media and other platforms. The content may include texts, images, graphics videos and animation. This content allows users to share their thoughts, discuss, and interact on social networks.

**3. Creating online identity:**

CMC offers agency to users, who are free to create their own identities with the help of software tools. Moreover, they can share their online identity with their friends. In virtual chatrooms, users can choose any avatar of their choice. The avatar may indicate the user's persona; the avatar can wear sunglasses, jeans, and a t-shirt to look cool. He can look like a sports star and be dressed accordingly. Virtual gadgets and props can be added to copy any style and resemble a Hollywood actor. So, the user chooses how he would like to present himself on the Internet, his digital presence.

**4. Social presence, interaction, and networking:**

Internet users are free to select their friends and maintain relationships with them. They enjoy the agency where they decide their virtual presence's time, duration, and mode. Moreover, they can choose the social networks they want to participate in. Despite the mediated nature of communication, customers keep the agency in forming and keeping social relationships online. They could provoke conversations, be part of groups, set up connections, and construct networks based on shared interests and affiliations. The users

can choose the discussions they would participate in, where they would like to give feedback and simply want to block unwanted communication.

##### **5. Privacy and security:**

Users can maintain their privacy while communicating through computers and digital devices. They also have the agency to adjust their security levels, allowing access to their files and folders on the machine. The privacy and security settings can also be adjusted through individual apps and browsers.

##### **6. Digital media literacy:**

Developing literacy skills helps users navigate the CMC environments successfully. Media literacy also empowers users to be responsible for their communication. Digital media literacy skills make users aware of misinformation and disinformation.

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### **3.3 ADVANTAGES AND DISADVANTAGES OF COMPUTER-MEDIATED COMMUNICATION**

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The advantages of computer-mediated communication are as follows:

1. CMC can happen anytime and anywhere. The sender and receiver can be in different time zones. It offers flexibility in time and place. The technology used for communication is quite cheap, and the message can be sent almost anywhere in the world. The receiver should have Internet access and a device to receive the message. The message can be sent to one person at a time or many users with a single click. So, in that sense, CMC is a time-saving process. A lecturer can send a single mail to his entire cohort of 100 students. All can see and understand the same message, thus minimising the communication gap. This instant feedback is relevant and makes CMC a productive process.
2. Messages sent through CMC can be archived for later retrieval. Almost all tools, such as WhatsApp, Telegram, Facebook, and email, offer server space where older messages are stored. The metadata of these messages is also stored, providing agency for faster retrieval.
3. CMC can be in the form of text, audio, and video. Users can choose their mode and style of communication. Moreover, visually challenged people can communicate through audio and text, while people who are deaf and dumb can interact through sign language. These days, quite a few CMC tools support emojis and emoticons. The visual cues can be given with the help of emojis. Emojis are quite successful in conveying emotions and state of mind. If one is happy or sad, he can convey this with the help of emojis, built-in WhatsApp and email.

The disadvantages of CMC are:

1. CMC lacks the cues given by FtF communication. The words and emojis may help convey the message, but their impact may be much lesser than that of FtF communication. Communication is not only about text and words. CMC had no non-verbal cues, but the introduction of emojis changed things.

These emojis and pictograms used on mobile apps have made CMC media-rich. Emojis and emoticons can be seen as non-verbal Communication in CMC, but this may also lead to misunderstanding. Young users use animated emojis quite frequently. Again, emojis are to be used with care in different cultures.

2. CMC suffers from a trust deficit, and people often feel that their confidential data and privacy are compromised. Anonymity and delay in self-disclosure led to low trust, which improves with time and as the relationship moves from machine mediated to FtF.
3. For CMC, one needs a basic level of information technology skills. Issues of Internet connectivity, cost of data plans, cost of software being used, and malware attacks often discourage the user from using CMC.

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### 3.4 THEORIES OF COMPUTER-MEDIATED COMMUNICATION

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Some of the theories that explain computer-mediated communication are discussed below.

#### 3.4.1 Social Presence Theory

Social presence theory in communication and psychology explores how users feel connected and socially present in computer-mediated communication environments, such as online discussions, chatrooms, virtual communities, zoom calls and instant messaging apps. John Short, Ederyn Williams, and Bruce Christie contributed towards this theory in 1976. It argues that the social cues given by the various communication mediums differ. This difference in the mediums affects the development of interpersonal relationships.

Presence refers to the physical world and how it is understood in the virtual environment in CMC. For example, when a user wears a virtual reality headset in the metaverse, the virtual stimuli trigger his mind and body.<sup>7</sup> The user may feel the same connection with other users in the metaverse. People who spend more time in a virtual reality simulation perceive it to be like the real physical world and demonstrate physiological effects. Social presence is “the degree to which we perceive another person’s digital presence, say an avatar, as a real person and interact with it as though there is an existing relationship.

During CMC, different technologies and their agency offer varying perceptions from real to virtual. For example, while going through news on a mobile app, we do not forget that it’s a mobile phone and are quite aware of the agency it offers. On the other hand, if one has an online meeting, the behaviour and communication are the same as in a FtF situation. The difference lies in the perception of social presence and the stimuli. Researchers use social presence theory to improvise the design of communication tools and make CMC more effective.

According to the theory, social presence is influenced by factors like:

1. Sensory Richness: Communication channels that provide more sensory cues, such as facial expressions and gestures, tone, and voice pitch, communicate a higher social presence. Video conferencing has a higher social presence

than text-based chat since participants can see and hear each other. Virtual reality environments in the metaverse or augmented reality with some degree of immersiveness enhance social presence by creating a sense of co-presence in the shared space on the metaverse.

2. **Degree of Interactivity:** Interactivity in CMC depends on the device and software used. More interactivity indicates a higher social presence. Higher levels of interactivity, like immediate feedback during real-time interpersonal communication, enhance the sense of social presence.
3. **Personalisation of content:** Social presence is felt more when the content is personalised to suit the needs of the individuals. Tailored content increases the perception of social presence, and they get more involved in CMC, thereby showing a higher degree of interactivity.

### 3.4.2 Media Richness Theory

Richard L. Daft and Robert H. Lengel proposed this theory in the 1980s. It discusses how different communication media differ in their ability to convey information, which affects the understanding of the message and its context. The theory suggests that the richness of the information can be on a continuum, from low to high.

Key components of Media Richness Theory include:

1. **Richness:** Media richness refers to how much a communication medium can convey cues and immediate feedback. Rich media facilitates personalisation and conveys nuance, emotion, and context, leading to more effective and goal-oriented communication.
2. **Rich Media:** FtF Communication and video conferencing are examples of rich media since the visual component provides multiple cues and faster personalisation.
3. **Medium-Rich Media:** Telephonic calls and audio conferences offer some richness as they offer vocal cues and immediate feedback. However, the lack of visual cues makes them less reliable, so personalisation takes time. Text messages in WhatsApp lie on a lower continuum than articles published in a magazine, as the articles might have some photographs, i.e., visual cues. Text messages cannot convey emotions to the extent a photograph does.
4. **Cues** are signals or communication elements present during verbal and nonverbal communication. They provide an additional context to the conversation, help in better comprehension, and thus facilitate faster feedback. Examples of cues include facial expressions, tone, gestures, and proxemics. Cues vary depending on the affordances of the device and software used for CMC.

Thus, this theory postulates that media organisations should plan the richness they want in their messages to achieve the desired results. Rich media can accompany stories and beats, which are more difficult to comprehend, while low richness in media is used for basic stories, which are just informing the audience. For example, a weather report can have rich media like videos and animation, while a simple movie review can be based on text only and would be low rich.

### Check Your Progress: 1

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Discuss the advantages and disadvantages of computer-mediated communication.

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2. What is social presence theory? Discuss.

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3. Explain the concept of media richness theory.

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#### 3.4.3 Social Information Processing Theory

Joseph Walther's social information processing theory looks at how people process information. This theory tries to understand how interpersonal relationships are developed through computer-mediated Communication (CMC). A relationship begins with verbal cues, but there are no non-verbal cues. So, the receiver and the sender form impressions based on the low-rich media, i.e., text messages. Social processing theory attempts to analyse this process. The theory also argues that the relationship formed through CMC becomes stronger over time and moves to an FtF relationship, indicating intimacy and closeness. The basic difference between CMC and FtF Communication is that there is an obligation to reply or give immediate feedback in face-to-face communication. In contrast, the receiver can delay the feedback in CMC, indicating his unavailability to continue the conversation. Moreover, FtF conversation has visual cues, whereas CMC may lack that; also, the interpretation of cues through CMC may be wrong.

#### 3.4.4 Hyperpersonal Model of Computer-Mediated Communication

The Hyperpersonal Model of CMC postulates that under certain conditions, CMC has the agency to transcend traditional face-to-face (FtF) communication. This effect is advantageous for communicators. Communication professor Joseph Walther developed this theory in 1996. The key Components in the hyperpersonal model of computer-mediated communication are:

- 1) **Sender's Selective Self-Presentation:** In a CMC mode, the sender can choose how he wants to be represented. He can decide his persona and appearance. What image would he like to create during virtual

communication? One can decide on the display picture (DP) of their WhatsApp or Facebook profile and plan the status updates and photos the user would like to show others. Self-presentation and cues allow the users to portray their image in the way they like.

- 2) **Receivers:** The recipients also want to like the people they interact with. Their impressions of the sender are formed by their portrayal of their image and the cues they give. Thus, the receivers often justify their reasons for liking the sender. They look for cues that strengthen their inclination towards the sender.
- 3) **Channel:** Senders can choose the channel to carefully construct their message for self-presentation. They can plan the communication time and may synchronise it with the channel settings to deliver cues for image representation. Social media platforms, email, voice messages or video calls are a few channels that are used for self-presentation.
- 4) Feedback is the exchange of messages between sender and receiver. The sender can practice self-disclosure while self-representation and build trust with the receiver, creating a Communication spiral.

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## 3.5 TYPES OF COMPUTER-MEDIATED COMMUNICATION

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Instant messaging on mobile through WhatsApp, Google Chat, Skype, and conferencing are examples of synchronous computer-mediated communication. Sending text messages like SMS, MMS, email, discussion forums on various subjects, and mailing lists are examples of asynchronous computer-mediated communication.

### 3.5.1 Synchronous Communication

Computer-mediated communication has two types: synchronous and asynchronous.

Computer-mediated communication that happens in real time is synchronous. The sender and receiver may be in different places, but with the help of a machine, they interact as though they are sharing the same physical space, just like FtF. Video chats, WhatsApp calls, and FaceTime audio calls are examples of synchronous communication.

### 3.5.2 Asynchronous Communication

On the other hand, in asynchronous computer-mediated communication, the communication is not real-time. There is delayed feedback. The visual cues may be less effective than those in real-time synchronous communication. Examples of asynchronous Communication include text messages and emails.

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## 3.6 BENEFITS OF SYNCHRONOUS COMMUNICATION

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Synchronous communication facilitates feedback in real-time. Mobile devices, WhatsApp calls, Zoom video conferencing, and telephonic calls are examples of synchronous communication. Immediate feedback helps in quick decision-making. Business decisions can be taken immediately as team members discuss the insights

over a video call. Tools like Zoom and Google Meet allow files to be shared, and the user can show the charts and findings through video conferencing. Synchronous communication helps build a rapport faster with other users, which helps form relationships faster. It is time-saving, and the cues help clarify sensitive issues. Faster and immediate feedback also helps in removing communication gaps.

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### **3.7 BENEFITS OF ASYNCHRONOUS COMMUNICATION**

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The receiver can respond when it's comfortable for him. In a team setting, the team gets enough time to plan their response. Asynchronous communication has delayed feedback, which means that users can continue to focus on their job and will not get distracted. They reply when they are prepared. Different team members can co-ordinate and work out a strategy before replying.

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### **3.8 COMPUTER-MEDIATED COMMUNICATION AND PSYCHOLOGY**

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CMC is very different from FtF communication. In audio and text-based CMC, one cannot see the physical and facial expressions of the person with whom one communicates. So, visual cues like gestures and body language are missing here. Psychologists have examined the processes that come into play while practising CMC. Deindividuation, coined by Festinger, Pepitone and Newcomb (1952), is the first such process which says that CMC leads to a decline in concerns about self-presentation, attention to social norms, and a focus on the self. Another psychological process in CMC is anonymity. Those engaging in CMC often practice lower self-regulation since they think they are not seen and can lie about their identity. Anonymity and deindividuation can have positive and negative consequences. CMC is quite impersonal because of the lack of physical space to be shared in real-time.

Moreover, users are unaware of each other's location, gender, age, and background. They only see what the other person wants them to see, and based on that, they make their decisions about each other. So, there is always doubt and curiosity about knowing the other person.

People often enjoy two or more identities online. They have different profiles, profile pictures and avatars on social media platforms and mobile apps. They might show a different aspect of their personality on these apps since some apps and platforms are designed for specific tasks. For example, on LinkedIn, one can show his academic and professional achievements to enjoy a good reputation, increasing his chances of getting a better job. On a gaming platform like Steam, people can upload different details about themselves and highlight their success stories from online gaming. It's quite easy to manipulate a person's identity on the Internet. Multiple identities can be used to commit crimes. So, in real life, a person can be the opposite of what he depicts about himself on the Internet.

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### **3.9 COMPUTER-MEDIATED COMMUNICATION AND ITS USE IN MASS COMMUNICATION**

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CMC is now being used for mass communication due to its convenience, operability, accessibility, and ease of usage. A person must have basic literacy skills to operate

devices used in CMC. With the coming of Windows and mobile operating systems in Hindi and other languages, it is easy for the common man to communicate.

Social media platforms like Facebook, Instagram, and YouTube are used extensively to share information on various topics. Information about every subject, news, topic, and issue is available on the web and is being shared and discussed with the help of social media. Not only news but also business reports, advertisements, annual reports, etc., are being shared with the help of CMC to reach out to its clients, customers, and other stakeholders. Social media also offers interaction and engagement, which allows users to give feedback. The feedback includes likes, shares, comments, and retweets.

Computer-mediated communication allows news to be disseminated through websites and blogs. News websites have video stories that can be shared through instant messaging tools. CMC facilitates the spread of news and other media content to remote areas, provided there is high bandwidth to support media-rich files. Video streaming platforms like YouTube, Vimeo, and Dailymotion can also be used to communicate with and reach their audiences. This form of communication is one-many. This is the major advantage of computer-mediated communication. The message can be encoded and, with the help of technology, disseminated to many homogenous and heterogeneous audiences. As mentioned, the message can also be audio but lacks cues. Since these messages have been produced, they are generally free from any glitches, and the content has also been seen before publishing it on the web. Platforms like YouTube and Dailymotion allow audiences to share feedback and invite user reviews. This helps the producers improve their content for the next programme. Podcasts and images can also be used to communicate. Information on almost any topic can be published through CMC. Thus, CMC has the potential to connect individuals who are physically at different locations and may have different attitudes, beliefs, and cultures. CMC brings them together and facilitates information exchange among virtual communities. These communities are formed because they have similar interests and come together for a cause; once the purpose is fulfilled, the virtual communities start dispersing. This temporal phenomenon happens because of CMC, but the results may last longer.

### **Check Your Progress: 2**

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Discuss the advantages and disadvantages of asynchronous communication.

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2. What is social information processing theory? Discuss.

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3. Explain the role of CMC in mass communication.
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## 3.10 LET US SUM UP

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Computer-mediated communication has revolutionised the way people communicate and exchange data. It is a boon for all, as people in distant places can interact at their convenience. Verbal and non-verbal communication is also done through CMC. All one needs is an Internet-enabled device and an Internet connection. The initial cost of procuring the hardware and software and the Internet fees might deter a few, but if used properly, it can be a game changer. The cost of hardware and software is coming down, and the Internet plans are getting cheaper. CMC is useful for students and working and non-working professionals. It is extremely useful in e-commerce, e-governance, and online education. The use of CMC was witnessed during the pandemic as schools struggled to impart education. People were confined to homes but still could do their work, and the children could complete their education. CMC can be synchronous and asynchronous. Research scholars have suggested a few theories that explain the concept of CMC and the psychological journey of the individuals who experience CMC. CMC has fewer drawbacks as compared to its advantages. Finally, while communicating through machines in a mediated environment, one should be alert and safeguard one's data and identity.

## 3.11 KEYWORDS

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**Affordances** : The product design to be used in a channel offers potential opportunities for usage. For example, a keyboard's curved shape allows the user to use it while relaxing on a sofa. Affordances allow things that can be done with the hardware.

**Agent** : A computer program that acts on its own or behalf of a user, thereby giving an agency in the process.

**Avatar** : A visual representation of a human user on the web. This can be any popular character from films, cartoons, superheroes, or the actual photograph of the user.

Deindividuation is the process of losing awareness of oneself while experiencing CMC.

Emojis are pictographic representations of faces that show different emotional states a human being expresses. They can be added to the text in an email or message to supplement text messages, improving understanding and resulting in faster feedback.

An emoticon is the pictorial representation of facial expressions or actions generated by typing characters on a computer keyboards.

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## 3.12 FURTHER READINGS

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## 3.13 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress: 1

1. Computer-mediated communication offers convenience, global reach, and asynchronous interaction. However, it lacks non-verbal cues, leading to misunderstandings, and may foster impersonal relationships due to reduced social cues and intimacy. Computer-mediated communication (CMC) offers several advantages, including increased accessibility and convenience. Through CMC, individuals can communicate instantaneously regardless of geographical barriers, fostering global connectivity. Moreover, CMC platforms often facilitate asynchronous communication, allowing users to interact at their convenience, enhancing flexibility. Additionally, CMC enables the sharing of diverse multimedia content, enriching communication experiences.

However, CMC also presents some drawbacks. One major concern is the potential for misinterpretation due to the absence of nonverbal cues such as facial expressions and body language, leading to misunderstandings and conflicts. Furthermore, the impersonal nature of CMC may weaken interpersonal bonds, hindering the development of meaningful relationships. Additionally, issues related to privacy and security arise in CMC environments, with the risk of personal information being compromised or misused.

2. Social presence theory suggests individuals perceive varying degrees of intimacy and sociability in online interactions. It explores how technology affects social interaction by examining how users perceive and react to the presence of others in virtual environments, influencing communication dynamics and outcomes. Social presence theory explores the degree of “presence” individuals experience when interacting with others through mediated communication channels. It suggests that the level of social presence, or the sense of being together with others, varies across different communication mediums. In face-to-face interactions, social presence is typically high due to rich nonverbal cues, fostering intimacy and immediacy. However, in mediated communication contexts such as online forums or text messaging, social presence may be lower due to the absence of these cues.

The theory emphasizes the importance of social cues and feedback mechanisms in enhancing social presence within mediated environments. Strategies such as

using emoticons, providing feedback, and incorporating multimedia elements aim to compensate for the lack of nonverbal cues and increase social presence. Overall, social presence theory highlights the dynamic interplay between communication mediums and the perceived sense of connection among individuals.

3. Media richness theory posits that communication effectiveness depends on the medium's ability to convey multiple cues, facilitate immediate feedback, and handle language variety. Rich media (e.g., face-to-face) excel in conveying complex messages, while lean media (e.g., text-based) suit simpler, less ambiguous messages, impacting communication efficiency and outcomes. Media richness theory posits that communication effectiveness is influenced by the richness of the communication medium. According to this theory, communication mediums vary in their ability to convey complex messages and facilitate understanding. Rich media, such as face-to-face interaction, provide immediate feedback, multiple cues, and personalization, enabling the transmission of rich, nuanced information. In contrast, lean media, like text-based emails, offer limited feedback and fewer cues, making them suitable for conveying simple, straightforward messages.

Media richness theory emphasizes matching the communication medium to the nature of the message and task requirements. For complex, ambiguous messages requiring rapid feedback and personal interaction, rich media are preferred. Conversely, for routine, well-defined tasks, lean media may suffice. Understanding media richness helps organizations optimize communication strategies and select appropriate channels to enhance efficiency and effectiveness.

### **Check Your Progress: 2**

1. Asynchronous communication offers flexibility, allowing participants to respond at their convenience. It facilitates thoughtful responses and documentation. However, it can lead to delays in decision-making and misunderstandings due to lack of immediate feedback and context. Asynchronous communication offers numerous advantages and disadvantages. On the positive side, it provides flexibility, allowing individuals to communicate without the constraints of real-time interaction. This flexibility is particularly beneficial for those with busy schedules or in different time zones. Additionally, asynchronous communication allows for thoughtful responses as individuals have time to reflect before replying. It also facilitates documentation and archiving of conversations, making it easier to reference past discussions. However, asynchronous communication can lead to delays in decision-making and problem-solving, as responses may not be immediate. Misinterpretation of tone or intent is also a risk, as non-verbal cues such as facial expressions and tone of voice are absent. Furthermore, asynchronous communication may foster a sense of disconnection or isolation among participants, particularly in collaborative endeavours where real-time interaction is beneficial. Lastly, reliance on asynchronous communication can sometimes hinder spontaneous creativity and innovation, as the immediate exchange of ideas may be limited.
2. Social Information Processing Theory proposes that individuals can form relationships online like face-to-face interactions, given sufficient time to develop trust and intimacy. It suggests that communication cues are adapted

and interpreted differently in online contexts, influencing relational outcomes. Social Information Processing Theory (SIPT) posits that individuals can develop relationships and form impressions of others through computer-mediated communication (CMC) despite the absence of physical cues. According to this theory, individuals compensate for the lack of non-verbal cues by utilizing other information available in CMC, such as linguistic cues and contextual information. Through repeated interactions, individuals can develop relationships and social bonds comparable to those formed in face-to-face interactions. SIPT suggests that the process of forming relationships in CMC may take longer compared to face-to-face interactions, as individuals need time to accumulate and interpret social cues. However, once established, these online relationships can be just as meaningful and intimate as offline relationships. SIPT highlights the importance of self-disclosure and reciprocity in online interactions, as they contribute to the development of trust and intimacy. Overall, SIPT provides insight into how individuals navigate and form relationships in online environments, shedding light on the complexities of virtual social interaction.

3. Computer-Mediated Communication (CMC) in mass communication enables rapid dissemination of information to a large audience. It facilitates real-time interactions, enhances audience engagement, and provides a platform for diverse voices. However, it can also lead to information overload, filter bubbles, and digital divides in access and participation. Computer-mediated communication (CMC) plays a significant role in mass communication by facilitating the dissemination of information to large and diverse audiences through digital channels. CMC platforms such as social media, email, and online forums enable mass communication by allowing individuals and organizations to share news, opinions, and multimedia content with a global audience instantaneously. These platforms democratize the flow of information, empowering individuals to participate in public discourse and engage with media content in ways that were previously inaccessible. Additionally, CMC platforms serve as valuable tools for journalists and media professionals to gather news, conduct research, and interact with audiences in real-time. However, CMC also poses challenges for traditional mass communication channels, as the abundance of user-generated content and the proliferation of fake news can undermine the credibility of information disseminated through digital platforms. Furthermore, CMC blurs the boundaries between producers and consumers of media content, challenging traditional notions of media gatekeeping and control. Despite these challenges, CMC has revolutionized mass communication by offering new opportunities for information dissemination, audience engagement, and interactive storytelling.

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## **UNIT 4 NETWORK SOCIETY**

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### **Structure**

- 4.0 Introduction
  - 4.1 Learning Outcomes
  - 4.2 Understanding Network
  - 4.3 Definition of Network Society
  - 4.4 Network Society from Castell's Perspective
  - 4.5 Characteristics of Network Society
    - 4.5.1 Castell Concepts on Social Structure
    - 4.5.2 Main features of Transformation according to Castells
  - 4.6 Features of the Network Society
  - 4.7 Challenges of Network Society
  - 4.8 Let Us Sum Up
  - 4.9 Further Readings
  - 4.10 Check Your Progress: Possible Answers
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### **4.0 INTRODUCTION**

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Society consists of groups of aggregate people. A social group comes into existence when two or more people are in direct or indirect contact and communicate with each other meaningfully. Society, which finds its roots in social interaction, depends on individuals who live by networking with other individuals using various communication formats to share information and views about different issues that interest them. In the era of tremendous technological revolution, individuals depend heavily on various digital formats for networking.

The history of the term “network” is extensive and intricate, spanning several academic fields such as sociology, economics, and anthropology. A shared understanding of topology or connectivity between, or even within, disciplines is not what a network is. Instead, it is a contested and ‘uncanny’ concept, explains Lovink (2002) in his study. The three key sociological and philosophical approaches that have utilised the concept of ‘network’ are the idea of ‘network society’ / ‘networked capitalism’, theories of ‘social networking’, and actor-network theory. Among the three concepts, ‘network society’ is explored in the following paragraphs.

In this era of digitalisation, it has become normal for people to connect digitally. People denote the digitally connected society using various labels, including information society, global village, wired society, and network society. Since digital networking appears as a natural phenomenon today, the term network society goes further than the information society. Castells, who has promoted the concept of Network Society, primarily goes down to accept that society is not purely based on technology as observed from today’s perspective. It is important to note that society is also based on cultural, economic, and political factors along with other elements like religion, cultural upbringing, political organisations, and social status. The level of these factors’ influences on individuals can help or hurt these communities. People are getting

connected digitally beyond the limitations of geographical boundaries, and all these factors contribute primarily to network society.

Understanding that “Network Society” refers to a society characterised by the widespread use of information and communication technologies, thus leading to interconnectedness and digital networks, we can broadly understand that its characteristics include digital connectivity, where the society uses digital technologies extensively to live in a networked environment. The primary characteristic of a network society is that the Internet’s communication and information exchange usage is common. The second feature of a network society is the ability to connect members beyond geographical boundaries. The members of the society work and stay connected with people worldwide who are known or unknown to them. Among the other characteristics - are the rapidity and widespread of information, which has led to increased access to knowledge and ideas; Decentralisation- where the power and information are now distributed across interconnected nodes in the network; Economic activities turned to digital transactions Ex: e-commerce, digital currency transactions; uncontrolled usage and influence of social media platforms influencing the communication, activism and public discussions; members are empowered concerning publication - the scope to publish their thoughts or access to any information without filters; Formation of virtual communities without any limitations of geographical boundaries based on shared interests and values, transcending geographical boundaries; Evolving forms of governance that leverage digital technologies for decision-making and citizen engagement can be listed as the prime characteristics of society of the new age.

The notion of a “Network Society” prompts us to consider the extent to which these technologies have become a part of our lives. In such a society, we can communicate and share information with distant individuals and machines, free from disruption and occasionally unaware of the networks or devices that facilitate this communication.

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## 4.1 LEARNING OUTCOMES

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After completing this Unit, you should be able to:

- Understand the evolution of the term network society;
- Describe the characteristics of network society;
- Explain the opportunities and challenges of network society; and
- Discuss the consequences of network society in various cultural context.

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## 4.2 UNDERSTANDING NETWORK

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In this digital era, we can simply understand networking as a facility that connects Internet-facilitated electronic gadgets. In his book “Placing Words,” William Mitchell notes how ‘digital devices rarely operate in isolation but are linked to one another by communication channels’. The available ‘Network’ as per technical terminology may be either localised, Ex, Local Area Network (LAN) or Ethernet in modern society, which depends on computers for all activities; keeping with the requirements of present-day society, the characteristics of computer networks have been developed. The connectivity can cover larger areas without limiting any geographical restrictions.

Organisations follow well-defined protocols before connecting the computers. This means the network does not always have a single structural form while connecting the computers. Manuel Castells, the father of computer networking, tries to correlate the lives of people connected across the globe using computers – Network Society.

Manuel Castells is the father figure in the understanding of Network Society. According to Castells ‘networks work as emergent structures, and people are interconnected with several nodes. In a network society, the characters of people who come together vary greatly depending on the type of systems they belong to. For example, a network of people belonging to a stock exchange market or the political party of a country. This makes us understand the concept of a Network Society as closely associated with interactions of social implications that arose from globalisation and the significance of electronic communications in society post-globalisation period.

Manuel Castells provides a detailed explanation of the concept of the network society and how it works in contemporary society to bring in the desired socio-cultural change. For Castells, the crucial step is to view networks as social structures. He says, ‘Networks are open structures, able to expand without limits, integrating new nodes if they can communicate within the network, if they share the communication codes. Castells observes that a network-based social structure is a highly dynamic, open system susceptible to innovating without threatening its balance.

A network, then, is a structural form. Though not new, it wears a different look in the digital age. Information technology gives network access to coordinated decision-making, decentralised execution, and task flexibility, providing a better structure for all human action. Therefore, in real life, we can use the idea of a network to represent a society that is becoming more decentralised, adaptable, and personalised. This action then supports Castells’ concept of “network society,” a form of society defined by the emergence of new “timeless time” and spaces of flows, as well as a change in lived time and space.

Nodes can be understood as centres within communication networks that can both receive and send messages. Individuals can be seen as nodes in social media platforms, and automated answering centres, they are in non-human forms.

### **Check Your Progress: 1**

- Note:** 1) Use the space provided below for your Answers.  
2) Compare your answers with those given at the end of this Unit.

1. How do theorists perceive “Network”? write briefly

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### **4.3 DEFINITION OF NETWORK SOCIETY**

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Network Society is a term framed in 1991. It is thought to represent the social, political, economic, and cultural variations in the networking pattern due to the heavy penetration of digital technologies in communication. The present chapter attempts to understand various aspects concerning the influence of digital technology on society.

It is interesting to note that James Martin utilised the phrase ‘The wired Society’ in 1978, indicating that the future of society will be connected by mass and telecommunication networks. However, the credit for coining the phrase ‘network society’ goes to Jan Van Dijk. In a book written by him, *De Netwerkmaatschappij*, meaning *The Network Society*, Van Dijk characterises “network society” as a way for society to organise its relationships more and more through media networks, either gradually taking the place of or enhancing face-to-face social networks. This suggests that digital technology supports social networks and even personal communication. Ex: Video Conferencing, WhatsApp. Texting using chat boxes, etc. The pattern does not vary as we move from the individual to the organisational level. Thus, seconding our thoughts that Social media networking platforms are influencing the primary means of communication within organisations and, naturally, the most significant social structures in contemporary society.

According to Van Dijk’s book, a society’s primary mode of organisation and key structures are shaped by a confluence of social and media networks at all levels (individual, organisational, and societal). He compares this kind of society with mass society, constituted by communities, organisations, and groups arranged in physical co-presence.

Yet another important definition is from Manuel Castells, a leading theorist on the concept. He defines a Network Society as a “society whose social structure is made up of networks powered by micro-electronics-based information and communications technologies”. Castells, in his book *The Rise of the Network Society* (1996), explains modern society is not defined solely by technology but by the cultural, economic, and political factors that make up a networked society. Castells observes that a network society is a concept related to the social, political, economic, and cultural transformation that has occurred due to the spread of the networks due to the usage of digital and information technologies. The influence can be observed in all fields, including religion, cultural upbringing, political organisation, social status, and any other form of a networked society. He notes that power is dispersed throughout information networks in a network society rather than governed by institutions or symbolic controllers.

Hence, we understand that a network society is one whose social structure is made of networks powered by microelectronics-based information and communication technologies. Castells clarified that culture codes communication within a social structure. A collection of linked nodes is called a network. The point where the curve intersects itself is called a node. Different nodes in the network may be relevant. Nodes become more significant to the network due to their increased ability to process and absorb pertinent data. The ability of a node to further the objectives of the network determines its relative importance rather than any feature.

Nonetheless, a network’s performance depends on every node. Networks tend to rearrange themselves, eliminating some nodes and adding new ones when they become redundant or useless. Nodes are only ever present and serve as parts of networks. A simple example of this could be the interest developed by society members towards a contemporary issue that gradually subsides and loses its importance.

#### **4.4 NETWORK SOCIETY FROM CASTELL’S PERSPECTIVE**

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Manuel Castells is a sociologist involved in information society and communications research. Drawing from Alain Touraine’s ideas, Castells played a pivotal role in

advancing Marxist urban sociology, highlighting the significance of social movements in the turbulent change process. He worked on the role of new technologies in restructuring the society where every member belongs to a network system (for example, the School/College where we study and the profession to which we belong), and all such formed networks need some form of coordination.

Castells, in his study, observes that new technologies have induced disconnectedness among the members. People in contemporary society experience a sense of autonomy (ex, apps to translate, purchase, etc). According to Castells, the contemporary social structure of our societies consists of networks. Deliberating particularly on the changes brought in the communication process, Castell notes “how space and time are being transcended in social practices due to the ability to do everything from everywhere to give rise to a new form of society”. Castells first mentioned the phrase “network society” in his book “The Rise of the Network Society: The Information Age: Economy, Society and Culture”, which was the first part of his Information Age trilogy.

In his books, Castells argues that the formation of organisations using new methods is largely due to communication technologies, such as mobile telephones. “Communication networks are the patterns of contact that are created by flows of messages among communicators through time and space”, observes Castells while talking about how the instantaneous flow and exchange of information, capital, and cultural communication now characterises the global economy. “This means that society’s dependence on these new modes of informational flow can give enormous power to those in a position to control them to control us. Networks have become the predominant organisational form of every domain of human activity,” Observes Castells.

It is useful to revisit Castell’s 1989 work to understand his theory of a network society better. “The Informational City: Information Technology, Economic Restructuring, and the Urban Regional Process”. He discusses the space of flows in this work, which is important to his theory of the network society. In his view, the space of flows is essential to the network society, which is a communications network delineated by the hubs at the intersections of these networks. Societies are rooted in the space of flows rather than a particular location. Castell explains that “while the space of flows can be abstract in social, cultural, and historical terms, places are condensations of human history, culture and matter” As observed by Castells, technologies have shrunk everything, converting the global community to local where the people have surpassed their dependence on geographical links and have adopted technological links. For example, social networking platforms like WhatsApp, Skype, Teams, Zoom, and Facetime can be used to communicate with each other any number of times without geographical limitations.

For Castells, networks are the basic units of modern society. Other aspects that shape society, such as culture, economics, and politics, combined with technology, create a network society. For example, in projects undertaken by different companies, team members working in different parts of the world are brought together until the project is submitted, after which the members are reallocated to a new task, thus forming a new network. This type of work adopted by different companies requires skilled workers to be flexible with their working patterns. The nature of the work also produces a two-pronged process of inclusion and exclusion.

Like most social theorists, Castells has faced criticism on several issues with his network society theory. Dan Schiller argues that “the main economic drive-in network societies is still the desire to gather private capital; the market imperatives of competition and co-modification still dominate, and the social and economic inequalities characteristic of market economies tend to widen rather than close” (Schiller, 2000, 48). Similarly, Professor Martin Kenney opines that “When Castells does conclude, they can be so aphoristic that their precise meaning can be elusive” (Kenney, Internet Galaxy, 2008).

Despite all criticisms, we can observe that Manuel Castells theory of the network society is highly relevant in understanding contemporary forms of social interaction as it permeates most societies in the world belonging to different cultural, geographical, and organisational manifestations. His examination of the institutional, cultural, and technological changes that have caused societies worldwide to become network societies offers insightful information about a rapidly evolving communications landscape. Castells observes that “political institutions are not the site of power any longer and the power in reality rests with the cultural codes, embedded in networks”.

Studying Castells, we understand that restructuring industrial economics to accommodate an open market approach, freedom-oriented movements (e.g., cultural, feminist), and the revolution in information and communication technologies are the three processes that led to the emergence of the Network Society.

### **Check Your Progress: 2**

1. Explain the concept of time and space from Castell's perspective on network society.

Fill in the Blanks:

1. In Network society, social structure is made of networks powered by ..... based information and communication technologies.
2. A collection of links ..... is called a network.

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## **4.5 CHARACTERISTICS OF NETWORK SOCIETY**

We have witnessed the structural transformation of our world during the past few decades, based on the emergence of new information and communication technologies that took shape in the 1970s. We are aware that technology does not determine society; rather, it is a society that shapes technology according to the needs, values, and interests of people who use the technology. However, since information and communication technologies particularly influence the behavioural patterns of society, the influence of technology on society cannot be neglected.

A new type of networking-based social organisation has emerged, and the history of the Internet shows this clearly. This new form of social organisation is based on the spread of networking throughout all spheres of activity that rely on digital communication networks. It can be argued that nowadays, various issues related to life, for example, wealth, power, and knowledge generation, largely depend on the ability to organise society to reap the benefits of the new technological system rooted in microelectronics, computing, and digital communication. Going by the

explanation provided by Van Dijk in his book *The Network Society*' we can understand that modern or contemporary society has already moved to becoming a network society in the true sense.

Manuel Castells's book 'The Network Society' explains, "The network society is global since it is built on global networks, and since networks are the foundation of communication, they can transcend national boundaries. Because of this, it is ubiquitous on Earth, and its logic is transformed and extended to every nation due to the power ingrained in international trade networks for goods and capital. Therefore, another term for the network society is "globalisation," albeit it is more descriptive and less analytical than the term suggests. However, because networks are selective based on their programs and capable of simultaneous communication, the network society spreads worldwide but excludes some people.

With the help of the Internet, different levels of communication, such as interpersonal, organisational, and mass communication, have united. People are connected through various Internet-based communication platforms, providing them with constant access to information and means of communication. The Internet has converted the "whole world" into homes and workplaces. The advances in communication technology have made the media dearer and are utilised by greater percentages of people. Usage of different platforms appears as "normal media".

Castells' insights into the social and economic dynamics in the information age, which experiences constant change, will be highly valued as a key reference source. The theory provides a good understanding of the present-day society. Castells documents and analyses the constant change that society is experiencing and this significant transition of society through his theory of the network society. Knowledge of this theory is essential when our society is undergoing such profound and powerful transformations that it may even transcend the present technology-based era entirely, and this intriguing and novel character of Castells' theory has made the concept of network society popular.

#### 4.5.1 Castells Concepts on Social Structure

Human societies are made from the constant interaction between humans who live in this organised and given social structure. This social structure is formed based on relationships with elements like consumption, experience, and power. The meaning of words is produced and reproduced due to the exchange of symbolic interaction between the actors in this social structure. Meaning is produced from the symbolic identification of the action between people, and consolidating shared meaning through the crystallisation of practices creates culture. We can also understand that meaning is derived from symbolic interaction between brains, which are socially and ecologically constrained simultaneously.

Meaning is also based on the actions of humans, who use experience as a symbol. Experience is the action of humans on themselves, determined by the interplay between their biological and cultural identities. Experience is also structured around relationships between people, organised around any organised structure of the society, including family. There is another layer to the exchange of interaction, and that is due to technology. In his study, Castells explains technology as "the use of scientific knowledge to specify ways of doing things in a reproducible manner". According to him, technology is embodied in technical relationships, which are socially conditioned.

The interaction between people in technical relations is based on the application of knowledge that could be assigned to the process of production, and the relationship between players is also based on technology-based production, which forms the basis for forming a Network Society.

#### **4.5.2 Main features of Transformation According to Castells**

Manuel Castells' theory of the Network Society analyses the impact of information and communication technology on present-day society. The theory analyses the situation, keeping the sociological framework in the background. The key features are:

**New Technological Paradigm:** Today's world is centred around micro-electronics, information/communication technologies, and genetic materials for an exploratory theory of the network society. We must understand that knowledge and information are crucial in all societies. Hence, they are not the only critical characteristic of present society. In present-day society, the Internet has become a universal interactive communication tool as we shift from computer-centred to network-diffused technologies. "What is also characteristic of this technological paradigm is the use of knowledge-based information technologies to enhance and accelerate the production of knowledge and information in a self-expanding, virtuous circle. Because information processing is at the source of life and social action, every domain of our eco-social system is transformed," observes Castells.

**New Economy:** The present-day economy is characterised by three fundamental features. First, it is *informational*. The capacity to generate knowledge and process/manage information determines the productivity and competitiveness of all economic units.

Second, this new economy is *global*. The core activities, for example, financial markets, science and technology, and multinational production, depend on highly skilled speciality labour. Of course, all today's jobs may not fit into global outfits, but all economics are influenced by globalisation. "Globalisation is highly selective. It proceeds by linking up all that, according to dominant interests, has value anywhere on the planet, and discarding anything including human resource which has no value or becomes devalued," marks Castells.

Third, the new economy is *networked*. Castells observes, "At the heart of the global economy's connectivity and the flexibility of informational production, there is a new form of economic organisation, the *network enterprise*. This network is made from either firms or segments of firms and/or from internal segmentation of firms. Large corporations are internally decentralised as networks. Small and medium businesses are connected in networks. These networks connect among themselves on specific business projects and switch to another network after the project is finished. Major corporations work in changing alliances and partnerships specific to a given product, process, time, and space. The new economy, which combines informational, global, and networked, is naturally capitalist."

**Work and employment:** The method of work and employment has substantially transformed the new economy. Induced by globalisation and network enterprise, work and employment are transformed. The most important transformations in employment patterns are flexible work, Part-time work, temporary work, self-

employment, work by contract, informal or semi-formal labour arrangements, and relentless occupational mobility, which are the key features of the new labour market. The work process is interconnected between firms, regions, and countries. In a stepped-up spatial division of labour, networks of locations are more important than hierarchies of places. Labour is fundamentally divided into two categories: self-programmable labour and generic labour.

**Cultural Sphere:** Cultural expressions of all kinds are increasingly enclosed in or shaped by this electronic hypertext. However, the new media system is not characterised by one-way, undifferentiated messages through limited channels that constitute the world of mass media. The media are inclusive by nature and thus bridge each other. Computer-operated digitalised connections provide access to hundreds of channels of interactive communication.

Castells observes that today's world lives in a culture of 'real virtuality'. He explains his opinion: "Our symbolic environment is, by and large, structured by this flexible, inclusive hypertext, in which many people surf each day. The virtuality of this text is a fundamental dimension of reality, providing the symbols and icons from which we think and thus exist".

**Political Sphere:** This growing enclosure of communication also affects politics. Media politics needs to convey simple messages. The simplest message is an image that is obviously of a person. The most effective political weapons are negative messages and character assassination of opponents. In the information age, politics has become a very expensive business; parties and leaders use access to power to obtain resources for their trade. Since character assassination needs some substance from time to time, systemic political corruption provides ample opportunity.

**Time and Space:** Castell's hypotheses that two emergent social forms of time and space are characteristics of network society. These are timeless times and the space of flows. He states, "In contrast to the rhythm of biological time characteristic of most of human existence, and to clock time characterising the industrial age, timeless time is denoted using new information/communication technologies in a relentless effort to annihilate time. The space of flows refers to the technological and organisational possibility of organising the simultaneity of social practices without geographical contiguity. Castells introduces the idea of a "space of flows," emphasising the global and decentralised nature of information exchange in contrast to the localised "space of places" characteristic of traditional societies.

**State the Power Sphere:** The central power-holding institution is the state, and it is also undergoing a dramatic transformation process due to digitalisation. Castells observes in his study that "on the one hand, its sovereignty is questioned by global flows of wealth, communication, and information and on the other hand, its legitimacy is undermined by the politics of scandal and its dependence on media politics. The weakening of its power and credibility can induce people to build their systems of defence and representation around their identities, further de-legitimising the state. However, the state does not disappear. It adapts and transforms itself by building partnerships between nation-states and sharing sovereignty to retain influence". Ex: The European Union. We observe decision shift of power towards multinational and transnational institutions, Ex: NATO, IMF/World Bank, United Nations agencies, World Trade Organization,

- Note:** 1) Use the space provided below for your Answers.  
2) Compare your answers with those given at the end of this Unit.

1. Write briefly about the Technological paradigm.

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2. Write briefly about the New Economy.

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3. Political Sphere.

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## 4.6 FEATURES OF THE NETWORK SOCIETY

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It refers to societies that show two essential features: sophisticated technologies of networked communication and information management/distribution and the formation of new patterns of transnational economics and society.

The advent of the Information Age has given rise to a transformative era known as the Network Society. In this society, we now understand that a social structure emerges from the interplay of technological revolution, particularly affecting information, and technology, which has brought about social change.

The present-day paradigm shift can be observed under some key characteristics:

**Ubiquitous Connectivity:** The prime feature of present-day society's high level of connectivity. The privatisation of Internet services and the development of software have enabled increased capacity of telecommunication systems. The deep penetration of the Internet into society and the possibility of accessing the Internet on a wide range of devices has made Earth a global village. Internet usage, which has increased through mobile phones, has facilitated unending communication between people without any restrictions. Individuals connect globally. The message is transacted between people within seconds, which was unimaginable a few decades ago. Digital networks today have created an expanded sense of time and place.

**Decentralised Communication:** Social media platforms like Facebook, Twitter, and blogs have empowered individuals to share information, express opinions, and engage in dialogue without control. This decentralisation has democratised the dissemination of information and led to the 'Mass–Self Communication' concept, which means communicating or interacting with many other people without depending on traditional mass media.

**Digital Interactions:** The shift towards a Network Society has led to significant human interactions in the digital realm. Today, “spaces of virtual reality” have developed beyond imagination. The digital landscape has become integral to social dynamics, from online socialising to virtual workspaces. Using virtual reality, individuals can lead virtual lives. Along with the digitalisation of interactions that have shaped how people form relationships, collaborate, and express themselves, virtual reality interaction has been hybridised, blurring the distinction between real life and virtual life.

**Information Abundance:** Access to the Internet has facilitated a constant inflow of information. People can access information and acquire a vast repository of knowledge through the Internet. E-Learning possibilities are high.

**Space and Time:** The developments in new communication technologies have resulted in globalisation, which has led to the transformation of space and time in human experience. Castells observes space as intangible and based on experience rather than physical reality. Castells calls physical proximity the Space of Contiguity. For example, a call on WhatsApp or Skype provides a feeling of proximity while communicating. This space is called the Space of Flows.

**Increased Interdependence:** Interconnectedness defines the relationships within the Network Society. Economic, social, and cultural exchanges occur globally, fostering interdependence among individuals and nations. This heightened interconnectivity has positive implications, such as fostering cultural diversity, and challenges, such as the potential for economic dependencies.

**The emergence of Virtual Communities:** The Network Society has witnessed the emergence of virtual communities—groups of individuals connected by shared interests, goals, or identities despite physical separation. Online platforms provide spaces for these communities to thrive, offering a sense of belonging that transcends geographical constraints.

While the characteristics of the Network Society bring numerous advantages, they also raise specific challenges. Privacy concerns, digital inequalities, and cybersecurity threats must be addressed as society navigates this evolving landscape. Striking a balance between the positive aspects of connectivity and addressing the associated challenges will be crucial for shaping a sustainable and inclusive Network Society.

Other characteristics of a network society include Trust between employees, as the players need to communicate and share information; transformation of Labour skills, as the demand for the workforce, is knowledge of ICT; and an innovative approach to being in the field.

#### Check Your Progress: 4

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Write briefly about the characteristics of society.

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## 4.7 CHALLENGES OF NETWORK SOCIETY

Due to its interconnectivity, the field presents several challenges related to privacy, security, and the constantly changing nature of work.

**Privacy Concerns:** Companies often gather information from social media platforms to promote their products through advertising. Procuring personal data in the digital realm frequently violates privacy **ethics**.

**Security Issues:** Ensuring the security of online systems and safeguarding sensitive information is challenging. Interconnected computers have exposed personal and private information to threats due to hacking. Data breaches and ransomware attacks are common challenges and pose serious risks to individuals' and businesses **data**. Organisations and individuals must stay vigilant to keep up with the sophisticated nature of cyber-attacks.

**Evolving Nature of Work:** Changing technology in the digitalisation era has changed working methods. They are working remotely or as a freelancer is more prevalent. Working there offers flexibility and raises concerns related to stability in employment, leave benefits, and many other privileges that a regular employee enjoys. The changing landscape has also blurred the difference between personal and professional life. The situation demands adapting to newer skills and accepting inclusive work environments.

**Digital Inequality:** Despite tremendous progress in digital technology, which has enabled even people living in remote areas to access digital networking facilities, a digital divide exists among people. Access to digital networks is not uniform, as it depends on socioeconomic factors. Additionally, educational disparities and the training received influence job opportunities and quality of life.

Addressing these challenges requires a multidimensional approach, demanding a new regulatory framework and societal awareness.

### Check Your Progress: 5

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

(True or False)

1. The extensive collection and utilisation of personal data in the digital realm has not raised any privacy concerns. (True or False)
2. Ensuring the security of online systems and safeguarding sensitive information has become a pressing challenge. (True or False)
3. The nature of work in the digital era has blurred personal and professional boundaries. (True or False)
4. Access to digital networks is uniform, thus bringing uniformity to all. (True or False)

## 4.8 LET US SUM UP

In the ever-evolving landscape of human civilisation, the Information Age has ushered in a paradigm shift known as the Network Society. This transformative concept

encapsulates the profound impact of information and communication technologies, particularly the Internet, on the fabric of our social, economic, and cultural existence. The Internet works here as the primary catalyst connecting people beyond the limitations of geographical boundaries. It also facilitates instantaneous message exchange between the players.

The defining characteristic of the Network Society is the democratisation of information. In addition to unlimited information, it has provided a platform for self-expression. With various social media platforms like blogs and Facebook, an individual is now empowered with an opportunity to disseminate information without any control. The Network Society has also reshaped the economic landscape. Apart from flexibility in working methods, people are becoming digital entrepreneurs. The digital economy thrives on connectivity, fostering innovation and entrepreneurship on an unprecedented scale. The Network Society has given rise to a globalised exchange of ideas and expressions. Cultural products circulate effortlessly across borders, fostering a shared global cultural experience. Network Society is not without challenges. Digital privacy, cybersecurity, and the digital divide highlight the need for responsible governance and ethical considerations in the digital age.

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## 4.9 FURTHER READINGS

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## **4.10 CHECK YOUR PROGRESS: POSSIBLE ANSWERS**

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### **Check your Progress - 1**

1. Ref to 4.1 and Ref 4.2

### **Check Your Progress - 2**

1. Ref to 4.4
2. Microelectronics
3. Nodes

### **Check your Progress - 3**

1. 4.5.2
2. 4.5.2
3. 4.5.2

### **Check your Progress – 4**

1. Ref 4.6

### **Check your Progress – 5**

1. F, 2. T, 3. T 4. F

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# **UNIT 5 INFORMATION THEORY**

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## **Structure**

- 5.0 Introduction
- 5.1 Learning Outcomes
- 5.2 Historical background
- 5.3 Fundamental Concepts in Information Theory
- 5.4 Classical information theory
- 5.5 Applications of information theory
- 5.6 Let Us Sum Up
- 5.7 Keywords
- 5.8 Further Readings
- 5.9 Check Your Progress: Possible Answers

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## **5.0 INTRODUCTION**

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Merriam-Webster dictionary defines communication (to “make common” or “share”) as a process by which information is exchanged between individuals through a common system of symbols, signs, or behaviour. Over the years, the world has increasingly been characterised by a constant flow of data, with humans deriving relevant information from this data collected, processed, and disseminated. The currently employed digital technologies produce and store a large amount of data through various digital devices like smartphones, tablets, laptops, and smart devices.

Meanwhile, the dictionary defines information as knowledge, the facts provided or learned about something or someone. After reading this definition, some questions immediately come to mind: Does every piece of information convey something? Is there a method of determining which information has richer content than another? Finally, how does one quantify information?

Information theory as a discipline was initially established in the twentieth century by the works of Harry Nyquist and Ralph Hartley in the 1920s and the work of Claude Shannon in the 1940s. Information theory is a topic of applied mathematics, and it is at an intersection of probability theory, statistics, computer science, electrical and information engineering, and statistical mechanics. Information Theory is concerned with quantifying information with related questions: How do we define information? How can we measure it? And How efficiently can we transmit it?

The students of mass communication are reading about information theory despite it being a topic of applied mathematics because the information is the source of all communication systems, whether they are analogue or digital, as well as because one of the applications of the theory is to quantify the information in the news. Today, in this information and information processing revolution, one simply breaks down information into its tiniest bits. As communication relies on information exchange, the theory is a mathematical approach to studying the exchange of this information’s coding, quantification, storage, and communication. For the students, explaining the theory in this Unit is done without using mathematical formulas or engineering explanations.

Much work has been done on the theory, and essential additions have been made since it was formulated, such as its extension into the quantum domain and exploration of the information-theoretic aspects of quantum mechanics. The theory today has implications for practically every field of science, from engineering to biology to medicine and even the social sciences.

## 5.1 LEARNING OUTCOMES

After completing this Unit, you should be able to:

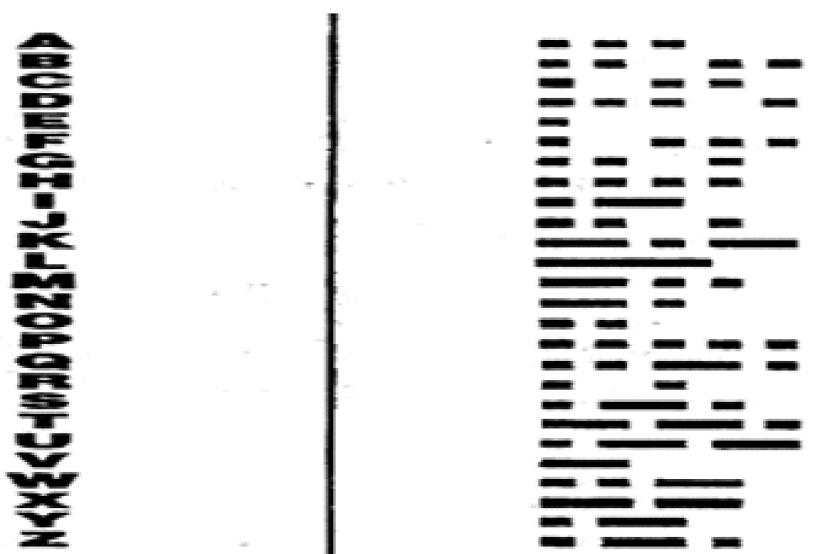
- Understand how information is defined.
- Look at how the information theory was formulated historically.
- Understand the classical information theory as formulated by Shannon.
- Understand the various applications of information theory.

## 5.2 HISTORICAL BACKGROUND

A telegraph is a communication system that sends information by making and breaking an electrical connection. Wright (2022) writes that the telegraph (Greek words *tele*, meaning *at a distance*, and *graphien*, meaning *to write*) was the forerunner of all communication systems. Many principles developed for its working are still used in modern communication and computer networks.

Markowsky (2023) notes that when Samuel F.B. Morse 1844 built a telegraph line between Washington D.C. and Baltimore in the USA; he encountered more electrical problems with the signal transmission when the transmission lines were buried in the ground rather than suspended on poles. Similarly, problems associated with transmitting signals over wires were also noticed in 1875 by Alexander Graham Bell, the telephone inventor. Many physicists analysed these signal transmission problems over the wire as a practical engineering problem of consequence during the era of the Telegraph and Telephone.

Many inventors worked on the Telegraph. Samuel Morse's telegraph worked using a code called the "Morse Code", which encoded letters with simple "on" and "off" signals of two lengths called dots and dashes (an early example of binary code used in computers). Such coded messages could be transmitted over large distances using wires.



The Morse Code: <https://commons.wikimedia.org/wiki/Category:Morsecode#/media/File:CodeMorsedeSamuelMorse1837.jpg>

This was followed by the Meyer telegraph, the first to use paper tape with holes to record telegraph signals. Subsequently, Émile Baudot developed a better code than the Morse code. Eschner (201) writes that Baudot was the first to recognise the importance of a simple five-bit binary code. His fixed-length binary code is a direct predecessor to today's digital codes. All these developments influenced later work on information theory.

Parallel developments were happening in probability (a branch of mathematics concerning events and numerical descriptions of how likely these events were to occur) theory, which laid the groundwork for understanding randomness and uncertainty. Gerolamo Cardano, in the sixteenth century, attempted to analyse “games of chance”, Pierre de Fermat and Blaise Pascal, in the seventeenth century, worked on the “problem of points”, and Pierre Laplace, in the nineteenth century, completed the classical definition of probability.

The formal study of information theory began in 1924 when Harry Nyquist, who was a researcher at Bell Laboratories (a research-and-development arm of the American Telephone and Telegraph Company, AT&T), published a paper entitled “Certain Factors Affecting Telegraph Speed” where Nyquist argued that communication channels had a maximum data transmission rate. He derived a formula for calculating that. In 1928, Nyquist's colleague R.V.L. Hartley wrote a paper, “Transmission of Information”, which established the first mathematical foundations of information theory (Markowsky, 2023).

Vasiloudis (2018) adds Nyquist, in his paper, calculates a formula for the “speed of transmission of intelligence”, which is connected to the bandwidth of the channel. Hartley, meanwhile, first uses the word “information” (information could be words, sounds, etc) to describe the “stuff” of communication. He showed information as a quantity that determined the ability of a receiver of a transmission to determine if a particular sequence was intended by the sender of a transmission, regardless of the message.

In 1948, Claude Shannon, a mathematician and electrical engineer who also worked in Bell Labs, published a paper, “A Mathematical Theory of Communication”, in the *Bell System Technical Journal*, which led to the birth of the modern Information Theory. The paper looked at the theory where information is sent over a noisy (noise being any factor that interferes with or impedes effective communication between a sender and receiver) channel in the form of a set of messages. The goal is to have the receiver reconstruct these messages despite the channel noise with a low error probability.

Markowsky writes that Shannon realised that the common misconception prevalent then was that meaning had an essential role in information. Instead, Shannon felt that communication signals must be treated in isolation from the meaning of the messages they transmit. The second important thing Shannon did was to realise that the amount of information conveyed by a signal was not directly related to the size of the message. Shannon felt that developing a reliable communication system (technical problem) involving sending and receiving messages was more important than questions relating to the meanings of the message (semantic problem).

Besides Shannon's seminal work on information theory, many developments were added to his work, including data compression, error-correcting codes, etc. Huffman, for example, introduced the Huffman coding in 1952. This coding technique

compresses data to reduce the message's size without losing details. The code is employed on data in which there are frequently occurring characters.

Then, there was the development of Error-Correcting Codes. Errors in computer communication typically occur when data bits get corrupted during transmission over the computer network due to noise and network problems. Error-correcting codes (ECC) are numbers generated by specific algorithms for detecting and removing data errors transmitted over noisy channels. Convolution codes are a type of ECC. Peter Elias introduced convolutional codes in 1955, and they are used extensively to achieve reliable data transfer in numerous applications, such as digital video, radio, mobile communications, and satellite communications.

The unit of information, "bit", which stands for binary digit, which most of us know so well today, was coined by John Tukey at IBM. Bit is a measure of difference, measuring the distinction between two possibilities called "0" and "1" or "true" and "false," etc.

The concept of entropy (a measure of uncertainty) was introduced initially by Clausius in 1865 and later used by Boltzmann and Gibbs in their work on statistical mechanics.

The history of information theory also involved Boolean algebra, introduced by George Boole in his first book, *The Mathematical Analysis of Logic*. In Boolean algebra, the variables' values are the truth values, true and false, usually denoted 1 and 0.

Further developments have happened with information theory in the quantum domain and coding theory advancements.

### **Check Your Progress: 1**

**Notes:** 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this Unit.

1. How did the modern Information Theory get conceptualised? What does the theory aim to achieve?

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## **5.3 FUNDAMENTAL CONCEPTS IN INFORMATION THEORY**

Quantifying information is the foundation of the field of information theory. Let's understand this with an example. If we were to make a statement, "It is hot in Delhi today", what does this statement convey regarding the information it provides to a reader? The statement does not convey enough information. Why? Because reading this statement compels one to ask a further question to acquire more knowledge. The question is "Hot" about what? Is it hot about another place, for example, the equator, or about another time frame, for example, yesterday?

Hence, "It is hot in Delhi today" conveys imprecise information. Instead, if we were to define a day as hot when the temperature is greater than or equal to 40 degrees

centigrade and less than or equal to 45 degrees centigrade, a reader would know more about the term “hot”. So now, when one reads “it is hot in Delhi today,” one knows that the temperature in Delhi today is greater than or equal to 40 degrees centigrade and lesser than or equal to 45 degrees Celsius.

However, with this additional information about the temperature range, there is still uncertainty even though our information now seems better than that received earlier. This is because now, when one utters the above statement with the additional piece of information on temperature range, there is still an equal probability of Delhi’s temperature being either 40, 41, 42, 43, 44 or 45-degree centigrade when one claims it is “hot in Delhi today”. Hence, we need to supply additional information, for example, “Yesterday was 41 degrees, and it is hotter today”, to make the initial statement “It is hot in Delhi today” much sharper and provide more knowledge.

Thus, the amount of uncertainty needs to be quantified to measure the information. One approach to defining information content in a message is the Shannon approach, which is the number of bits required to be transmitted to select the correct answer from a list of previously agreed-upon choices. This gives rise to a “decision tree” (a flowchart showing a clear pathway to a decision being made). How many questions need to be asked to arrive at the correct answer?

Just like we have a kilogram as a unit to measure weight and one weighs objects using a weighing scale, information can be measured and compared using an “entropy” measurement. Shannon’s entropy measures the uncertainty in a system, and that is, in essence, its information content. High entropy means more uncertainty in the information provided, while low entropy means less uncertainty in the information provided. Entropy is calculated using probability. (*The mathematical and engineering formulas and calculations are beyond the scope of this Unit*)

Let’s explain this concept of entropy with an example. Suppose there are two people (A and B) with cough and fever who go for a COVID-19 test. The test will yield only two outcomes: they have or don’t have the disease. “A” knows he has a high chance (95%) of the disease and a high chance of positive results as he was moving around without a mask, while B faces a 50/50 chance of the disease even though he had his mask on; he was moving around. With all things equal, who do you think has greater uncertainty between “A” and “B”? While “A” is experiencing little uncertainty with regards to the result of his COVID-19 test as he is quite sure he has it, for “B”, there is a lot of uncertainty as the result could be either way, just like flipping a coin. This is where entropy comes in. Entropy allows one to make precise statements and perform computations on issues: not knowing how things will turn out (a measure of uncertainty).

Then there is the concept of events. The idea behind quantifying information is also the measure of how much surprise there is in an event. Rare events (low probability) are more surprising and, therefore, have more information than common and, hence, high probability. Hence, learning that an unlikely event has occurred is more informative than learning that a likely event has occurred, as rare events are more uncertain and, therefore, surprising, thus requiring more information to represent them than common events.

The basic building block of information is Bits, which can be held in two states: 0 or 1, yes or no and True or False. When bits come together in a specific order, they form patterns representing meaningful information. These patterns create

messages. Here again, entropy is used to measure a message's uncertainty. High entropy denotes more unpredictability.

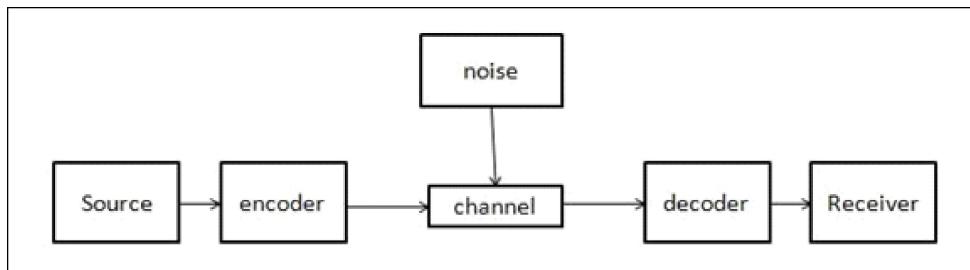
In transmitting signals(messages), compression is a more innovative way to shorten messages without losing important information. It is like using abbreviations and shortcuts in messaging. Besides compression, coding is a way to send messages reliably. Coding is a secret language between two people that ensures messages arrive correctly.

Finally, message channels often have noise and/or interference. Information theory helps design systems, using, for example, Error Correction Codes, that can handle these disturbances and deliver messages accurately.

## 5.3 CLASSICAL INFORMATION THEORY

An excellent way to understand information theory is to begin with Shannon's communication model, as shown in the figure.

Shannon's Communication Model



The message source is an entity creating the message. The source could be a human, animal, computer, or inanimate object. The source is connected to an encoder, which converts the messages into signals, which are then carried by a channel. The channel is a medium for carrying the signals(message). Noise is anything that interferes with the transmission of signals in the channel. This is followed by a decoder, which converts the signals back into a message the receiver can comprehend. Like the source, the receiver can be a person, animal, computer, or inanimate object.

Shannon's information theory focused primarily on the encoder, channel, noise source, and decoder, the communication system, or the technology element of communication, ignoring the meaning of the sender, receiver, and message.

Communication on the channel can be in the presence or absence of noise, referred to as noisy or noiseless communication. Besides the noise in the channel, messages can be transmitted via discrete(digital) or continuous(analogue) signals. Discrete represents a finite number of recognisable states, while continuous signals can vary over infinite values.

Hence, the various ways communication over the channel could be done are discrete noise, discrete noiseless, continuous noise, and continuous noiseless.

Vasiloudis (2018) explains how Shannon, in his paper, proposed a unit for measuring information transmitted on the channel, terming it as "binary digits" or "bits" (A bit is an event with two possible outcomes of equal probability) for short. He then derived a channel capacity formula determining any communication channel's absolute speed limit. Shannon, from that channel limit, showed that it was possible to devise error-correcting codes in a noisy channel that will overcome any level of noise in

the channel so that original signals can be reconstructed irrespective of the presence of noise.

Further, by stating that the entropy connects information to the amount of choice available when constructing messages, it measures the uncertainty involved in the “*selection of an event or how uncertain one is of the outcome*”. Further, Shannon made a fundamental connection between information and probabilities; they were intrinsically connected. That an event carries information related to the probability of observing it, as defined by Shannon’s entropy.

Let’s understand the above more simply. Firstly, information theory is concerned with only the technological element of communication and not the semiotic (anything that communicates intentional and unintentional meaning or feelings) part. Let’s assume one was to send a message to one’s friend. With the help of information theory, one can measure and manage information in the best way possible. This works in the following way:

The bit is the smallest piece of information or the basic unit. Bits are like tiny switches representing two values (yes/no; true/false; 1/0). Messages and patterns are nothing but putting bits together. Bits organised into patterns make meaningful information. For example, a simple message like “Hi” can be represented by a series of bits. Each letter is assigned a pattern of bits that, when combined, create the word “Hi”.

Entropy is an important concept in information theory. If the message is very predictable, it has low entropy, while unpredictability raises entropy.

Uminsky (2023) explains this with a simple scenario of a transmitter, which is the source of a finite number of messages (Remember, these messages’ content or meanings are not considered). The Theory is only concerned with which message is sent out among a group of messages. Thus, the more messages a transmitter can transmit, the more uncertain the receiver is about which message will be sent. The more uncertain the receiver is about which message is sent, the more (Shannon) information there is.

He demonstrates this with a simple example (the mathematical formulas and calculations have been removed as they are beyond the scope of this Unit) where messages are equally likely to be transmitted.

If a message source(transmitter) can send only one possible message, the chance that the receiver will receive that message is 100%. Therefore, the receiver is 100% certain about which message will be received, or the receiver is 0% uncertain about which message will be received. Hence, in this case, one will have 0 bits of “Shannon information,” corresponding to 0 bits of uncertainty or 0 bits of Shannon entropy.

Alternatively, suppose the message source(transmitter) can send two possible messages instead of the one in the above example. In that case, there is an equal likelihood that either of the two messages will be sent. Now, the chance that the receiver will receive one message out of the two is 50%. Thus, the receiver is less certain (or more uncertain compared to the earlier scenario of a single message) about which message will be sent. In this case, one will have 1 bit of Shannon information corresponding to 1 bit of uncertainty or 1 bit of Shannon entropy.

Thus, the number of bits of information (or entropy) increases with the uncertainty of which message will be sent.

Hence, classical information theory is a way to understand how information is measured, optimised, represented, processed, and transmitted in the everyday sending and receiving of messages. (*The mathematical and engineering formulas and calculations are beyond the scope of this Unit.*)

### Check Your Progress: 2

**Notes:** 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this Unit.

1. Explain classical information theory in simple terms.

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## 5.4 APPLICATION OF INFORMATION THEORY

Numerous real-world applications exist across various fields. This is due to Information Theory's ability to quantify, analyse, and manage information. Some of its applications are as follows.

Entropy in mass communication and news content analysis refers to the degree of uncertainty or disorder in a set of information. In news stories, entropy can be used to measure the unpredictability or randomness of the content. The concept is often applied to understanding the diversity, complexity, and variability level in the information presented. News content analysis involves systematically examining and evaluating the content of news stories to identify patterns, themes, and trends. Entropy can be useful in this process, as it helps assess a news narrative's richness or information density. High entropy suggests a greater diversity of topics, viewpoints, or sources, while low entropy indicates a more focused and predictable information environment.

Information value, on the other hand, is related to the significance or importance of the content within news stories. It reflects how the information provided contributes to the audience's understanding of an issue or event. High information value implies that the content is substantial, relevant, and likely to impact the audience's knowledge or opinions. The relationship between entropy and information value can be complex. While high entropy may indicate a broad range of information, it does not necessarily guarantee high information value. Some information may be redundant, trivial, or irrelevant, contributing little to the audience's understanding of the subject. Conversely, a low-entropy news story may have high information value if it effectively communicates essential, impactful details.

Researchers and analysts use various methods, such as content analysis techniques and information theory principles, to quantify entropy and assess information value in news stories. These analyses help media professionals, scholars, and policymakers understand the dynamics of information dissemination, the quality of news content, and its potential impact on public perception and decision-making.

In the same way, detecting misinformation often involves analysing the entropy of information sources or narratives. Misinformation may introduce inconsistencies, contradictions, or a lack of coherence, leading to higher entropy in the information.

The theory is also used in communication systems for applications like data compression algorithms, such as JPEG for images and MP3 for audio, to reduce the amount of data bits needed for transmission or storage without losing essential information. Coding, a branch of information theory, is vital for designing error correction codes used in Wi-Fi, cellular networks, and satellite communications to help correct errors introduced during data transmission.

Information theory principles help design and analyse cryptographic systems to ensure secure communication. They are also applied in image and signal processing to quantify information content, identify patterns, and enhance the quality of signals and images, as well as in Speech Recognition to analyse and model the information in speech signals.

Cybersecurity uses anomaly detection by analysing deviations from expected patterns in network traffic, helping identify potential security threats. Entropy measures assess data randomness and detect anomalies or malicious activities in various cybersecurity applications.

Data Science and Machine Learning use Information theory, for example, in feature selection techniques to identify and select the most relevant features for machine learning models, which helps improve model efficiency and performance. Entropy and mutual information are used in clustering algorithms and pattern recognition to quantify the information shared between variables.

Then there is the field of quantum computing, where Information Theory plays a crucial role in understanding and manipulating quantum states. Quantum information theory is essential for developing quantum algorithms and ensuring the security of quantum communication.

Besides the above applications, information theory is also used in biology, genetics, economics, and finance. Information theory is applied in bioinformatics, particularly in DNA sequencing and analysis. It helps identify patterns in genetic data, discover functional elements, understand the information content encoded in DNA sequences, analyse neural spike patterns, and understand the coding and transmission of information in the nervous system. It is also employed in finance to optimise investment portfolios by quantifying the information content of different assets and assessing their relationships. It is also applied to study market efficiency, information asymmetry, and the flow of information in financial markets.

One of the early commercial applications of this theory was in seismic oil exploration. Information theory and its application in digital signal processing made it possible to strip off and separate unwanted noise from the desired seismic signal, significantly improving resolution and image clarity during oil explorations.

The principles derived from information theory continue to play a crucial role in advancing technology and understanding the fundamental nature of information in different domains.

**Notes:** 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this Unit.

1. Describe some of the applications where information theory is used.

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## 5.5 LET US SUM UP

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Information theory as a discipline was established in the twentieth century by the works of Harry Nyquist and Ralph Hartley in the 1920s and Claude Shannon in the 1940s.

Information theory is an applied mathematics topic at the intersection of probability theory, statistics, computer science, electrical and information engineering, and statistical mechanics. It concerns quantifying information, with related questions: How do we define information? How can we measure it? And how efficiently can we transmit it? Much work has been done on the theory, and significant additions have been made since it was formulated.

The telegraph was the forerunner of all communication systems, and many of the principles developed for its operation are still used in modern communication and computer networks.

In 1948, Claude Shannon, a mathematician and electrical engineer, published a paper, “A Mathematical Theory of Communication”, in the *Bell System Technical Journal*, which led to the birth of the modern Information Theory. Shannon realised that the common misconception prevalent then was that meaning had an essential role in information. Instead, Shannon felt that communication signals must be treated in isolation from the meaning of the messages they transmit. The second important thing Shannon did was to realise that the amount of information conveyed by a signal was not directly related to the size of the message.

Shannon’s information theory focused on the encoder, channel, noise source, and decoder. Shannon, in his paper, proposed a unit for measuring information transmitted on the channel, terming it as “binary digits” or “bits” (A bit is an event with two possible outcomes of equal probability) for short. He then derived a channel capacity formula determining any communication channel’s absolute speed limit.

Clausius introduced the concept of entropy (a measure of uncertainty) in 1865, and Boltzmann and Gibbs later used it in their work on statistical mechanics. Shannon’s entropy connects information to the amount of choice available when constructing messages; it measures the uncertainty involved in “selecting an event or how uncertain one is of the outcome”.

Numerous real-world applications exist across various fields. Entropy, in the context of mass communication and news content analysis, refers to the degree of uncertainty

or disorder in a set of information. High entropy suggests a greater diversity of topics, viewpoints, or sources, while low entropy indicates a more focused and predictable information environment. Information value, on the other hand, is related to the significance or importance of the content within news stories.

Researchers and analysts use various methods, such as content analysis techniques and information theory principles, to quantify entropy and assess information value in news stories. These analyses help media professionals, scholars, and policymakers understand the dynamics of information dissemination, the quality of news content, and its potential impact on public perception and decision-making. Detecting misinformation often involves analysing the entropy of information sources or narratives.

The theory is also used in communication systems for applications like data compression algorithms, for example, JPEG for images and MP3 for audio; designing error correction codes used in Wi-Fi, cellular networks, and satellite communications to help correct errors introduced during data transmission; and helping to design and analyse cryptographic systems to ensure secure communication.

Cybersecurity uses anomaly detection by analysing deviations from expected patterns in network traffic, helping identify potential security threats. Data Science and Machine Learning use Information theory, for example, in feature selection techniques to identify and select the most relevant features for machine learning models.

Besides the above applications, information theory is also used in biology, genetics, economics, and finance. One of the early commercial applications of this theory was seismic oil exploration, which was made possible by information theory and its application in digital signal processing.

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## 5.6 KEYWORDS

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**Channel Noise** : In communication systems, noise is an error or undesired random disturbance of a useful information signal. Noise is, however, typically distinguished from interference,

**Coding:** In computer terminology, it is transforming computer instructions into a form a computer can understand. It can also mean the act or process of expressing a message in words, images, sounds, or any other set of symbols or signs that two parties communicating can mutually understand.

**Decision Tree** : A type of flowchart that shows a clear pathway to how a decision has been made. A decision tree starts at a single point (or ‘node’) and then branches (or ‘splits’) in two or more directions. Each branch offers different possible outcomes, incorporating a variety of decisions and chance events until an outcome is achieved. Their appearance is tree-like when shown visually, which is how this name was given. Decision trees are extremely useful for data analytics and machine learning because they break down complex data into more manageable parts.

**Noise** : Any factor that interferes with or impedes effective communications between a sender and receiver.

Probability is the branch of mathematics concerning events and numerical descriptions of how likely they are to occur. The probability of an event is a number between 0 and 1; the larger the probability, the more likely an event is to occur.

## 5.7 FURTHER READINGS

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## 5.8 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

### Check Your Progress: 1

1. The formal study of information theory began in 1924 when Harry Nyquist, a researcher at Bell Laboratories, published a paper entitled “Certain Factors Affecting Telegraph Speed”, where Nyquist argued that communication channels had a maximum data transmission rate. He derived a formula for calculating that. In 1928, Nyquist’s colleague R.V.L. Hartley wrote a paper, “Transmission of Information”, which established the first mathematical foundations of information theory.

In 1948, Claude Shannon, a mathematician and electrical engineer who also worked in Bell Labs, published a paper titled “A Mathematical Theory of Communication”, leading to modern Information Theory’s birth. Quantifying information is the foundation of information theory, which answers questions related to the definition, measurement, and efficient transmission of information.

### Check Your Progress: 2

1. Classical Information Theory can be explained by looking at Shannon’s communication model. The message source is an entity creating the message. The source is connected to an encoder, which converts the messages into signals, which are then carried by a channel. Noise is anything that interferes with the transmission of signals in the channel. This is followed by a decoder, which converts the signals back into a message the receiver can comprehend.

Shannon’s information theory focused primarily on the encoder, channel, noise source, and decoder, the communication system, or the technology

element of communication, ignoring the message's sender, receiver and meaning. Discrete units measuring information transmitted on the channel were termed "binary digits" or "bits."

Shannon then derived a channel capacity formula to determine any communication channel's absolute speed limit. From that channel limit, he showed that it was possible to devise error-correcting codes in a noisy channel that will overcome any level of noise in the channel so that original signals can be reconstructed irrespective of the presence of noise.

Further, by stating that entropy connects information to the amount of choice available when constructing messages, it measures the uncertainty involved in the "selection of an event or how uncertain one is of the outcome". An event carries information related to the probability of observing it.

Hence, classical information theory is a way to understand how information is measured, optimised, represented, processed, and transmitted in the everyday sending and receiving of messages.

### **Check Your Progress: 3**

1. News content analysis involves systematically examining and evaluating the content of news stories to identify patterns, themes, and trends. Entropy can be useful in this process, as it helps assess a news narrative's richness or information density. High entropy suggests a greater diversity of topics, viewpoints, or sources, while low entropy indicates a more focused and predictable information environment. Similarly, detecting misinformation often involves analysing the entropy of information sources or narratives.

Other applications where the theory is used include communication systems for applications like data compression algorithms, for example, JPEG for images and MP3 for audio, for designing error correction codes used in Wi-Fi, cellular networks and satellite communications to help correct errors introduced during data transmission, design and analyse cryptographic systems to ensure secure communication, image and signal processing to quantify information content, identify patterns, and enhance the quality of signals, cybersecurity uses anomaly detection by analysing deviations from expected patterns in network traffic, helping identify potential security threats, data science and machine learning use in feature selection techniques to identify and select the most relevant features for machine learning models and in quantum computing to understanding and manipulating quantum states.

Information theory is also used in biology, genetics, economics, and finance. It is applied in bioinformatics, particularly in DNA sequencing and analysis, while in finance, it optimises investment portfolios by quantifying the information content of different assets and assessing their relationship.

**Block-2**

**Critiques of Cyberspace**



## **BLOCK 2 CRITIQUES OF CYBERSPACE**

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After having a broad understanding of human communication through cyberspace in Block 1, you will learn some of the important critical aspects of cyberspace in Block 2. The vast networks of digital space challenge the offline perspectives and provide a platform for interested-minded people to gather for purpose. Through common community spaces or individual spaces, someone can work independently or with a group. For all these activities, cyberspaces break the barriers of time and space. You will learn these concepts in detail through the Units of Block 2.

**Unit 6: Post-Humanism and Cyborg Manifesto.** This Unit explores the realms of Post-humanism and the Cyborg Manifesto, where traditional notions of humanity are challenged, and the fusion of biology and technology reshapes our understanding of existence. This Unit explores into this modern theoretical framework and unravels the intricate web of human-technology-nature dynamics, exploring the evolution of concepts and their profound cultural impacts. From philosophical ponderings to real-world applications, prepare to transcend conventional boundaries and embrace the dawn of a new era.

**Unit 7: Identities and Communities Online** explore online identities and communities. This Unit critically examines our virtual selves, from discerning online versus offline personas to understanding community dynamics. We will navigate the complexities of identity management and participation etiquette in the digital sphere.

**Unit 8: Pop Culture and Online Expression.** In this Unit, we explore the dynamic world of popular culture and its manifestation in the digital sphere. We begin by understanding the essence of pop culture, distinguishing it from high and low culture, and exploring its transmission through mass media. Through discussions on cultural values and consumption patterns, we unravel the rise of pop culture alongside the surge of digital media, leading to cultural convergence. Furthermore, we dissect online expression, from creation to consumption, while addressing pertinent concerns such as privacy issues and cyberbullying.

**Unit 9: Online Communication and Collaborations.** This Unit explores the dynamic realm of online interaction and teamwork facilitated by digital technology. Understanding how communication and collaboration operate within this digital sphere becomes crucial as the Internet continues to shape our global landscape. We will explore the evolution, tools, platforms, benefits, challenges, and ethical considerations of online communication and collaborations.

Online interactions have become more complex with viral shorts, reels, or social media posts/handles. These Units will give you an adequate understanding of the ongoing media transformation.



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# **UNIT 6 POST-HUMANISM AND CYBORG MANIFESTO**

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## **Structure**

- 6.0 Introduction
- 6.1 Learning Outcomes
- 6.2 Introduction to Post-humanism
  - 6.2.1 Definition and Origins
  - 6.2.2 Evolution of the Concept
  - 6.2.3 Key Theoretical Foundations
- 6.3 Media Technologies and Post-human Experiences
  - 6.3.1 Virtual Reality and Augmented Reality
  - 6.3.2 Digital Dualism Reconsidered
  - 6.3.3 Mediated Perception and Experience
- 6.4 Introduction to “A Cyborg Manifesto”
  - 6.4.1 Overview of Donna Haraway’s Work
  - 6.4.2 Context and Influences
- 6.5 Cyborg Identity and Politics
  - 6.5.1 Intersectionality in Cyborg Politics
  - 6.5.2 Critique of Essentialism
- 6.6 Technological Hybridity
  - 6.6.1 Integration of Biological and Technological Components
  - 6.6.2 The Cyborg as a Fusion of Nature and Culture
  - 6.6.3 Scope in Cyborg Technological Development
- 6.7 Cyborgs and Feminism
  - 6.7.1 Critique of Traditional Feminism
  - 6.7.2 The Cyborg as a Feminist Figure
  - 6.7.3 Gender and Technology in Haraway’s Framework
- 6.8 Cyborgs in Popular Culture
  - 6.8.1 Representation of Cyborgs in Film, Literature, and Media
  - 6.8.2 Cultural Impact of Haraway’s Cyborg Concept
- 6.9 Relevance of the Cyborg Manifesto Today
  - 6.9.1 Contemporary Applications of Haraway’s Ideas
  - 6.9.3 Challenges and Opportunities
- 6.10 Let Us Sum Up
- 6.11 Keywords
- 6.12 Further Readings
- 6.13 Check Your Progress: Possible Answers

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## 6.0 INTRODUCTION

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Post-humanism, a modern theoretical framework, challenges fundamental ideas in Western culture. Emerging from diverse disciplines like philosophy, science, literature, and communication studies, it questions how humans relate to the natural world. Gaining prominence in the late 20th and 21st centuries, especially amid growing ecological awareness, post-humanism redefines the human subject's connection to the Earth. Coined by Ihab Hassan in 1977, post-humanism explores intersections between humans, non-humans, and technology. Simultaneously, the concept of "cyborgs" (cybernetic organisms) arises, denoting living beings with both biological and mechanical elements. Originating in 1960, the term distinguishes itself from bionic or android, representing organisms whose functions are restored or enhanced by integrating artificial components. Once confined to fiction, cyborgs are now experimented with as people insert circuits into their bodies, sparking debates on creating augmented humans.

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### 6.1 LEARNING OUTCOMES

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After completing this Unit, you should be able to:

- Develop a comprehensive understanding of post-humanism and cyborg theories and concepts;
- Gain in-depth knowledge of the historical context and basics of post-humanist and cyborg discourses;
- Understand the cultural implications of post-humanism and cyborg concepts;
- Explore principles of integrating post-humanism and cyborg perspectives in various fields;
- Recognize the application of post-humanist and cyborg theories in media professions and beyond; and
- Envision future trends and developments in post-humanism and cyborg discourses within the evolving technological landscape.

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### 6.2 INTRODUCTION TO POST-HUMANISM

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Post-humanism, a prevalent mode of thought in the late twentieth and twenty-first centuries, emerges at the intersection of human, non-human, and technological realms, gaining prominence amidst ecological consciousness and environmental activism questioning humanity's role in shaping Earth's destiny. It combines philosophical, literary, and artistic reactions to technological progress, globalisation, and mass extinction in the Anthropocene era. It is crucial to differentiate post-humanism from transhumanism. On the one hand, post-humanism involves a deconstructionist critique of humanist values; on the other, transhumanism advocates using technology to surpass human biological limitations, maintaining a connection to traditional humanist beliefs. The "post-human condition" often evokes the image of the cyborg, emphasising the implications of human interaction with new technologies. In essence, post-humanism challenges conventional ontologies, recognizing the complex interaction between humans, the environment, and evolving technologies in shaping the future.

### 6.2.1 Definition and Origins

Post-humanism is like a newer version of an old way of thinking called humanism, and it involves a bunch of different ideas from various smart people in areas like philosophy, science, literature, and communication studies. These ideas challenge the old belief that humans are super special and can do whatever they want, suggesting that we should blur the lines between humans, animals, and technology. This post-humanist thing has been around since the 1990s and says that in our future, we won't be the only ones in charge of what's right or wrong. Some people, called transhumanists, even think we can change our bodies a lot with technology, like placing implants or making our brains super smart. Philosopher Donna Haraway says this won't make us superheroes. Still, it might help us see that we're all connected, breaking down old ideas about differences between men and women or between humans and everything else.

### 6.2.2 Evolution of the Concept

The idea behind the post-human condition is that living things have a complex structure beyond our usual explanations. Post-humanism explores how nature and culture interact and challenges our usual ideas about human nature. It raises questions about improving our bodies, facing ethical issues, and advancing genetics and the brain. With technological progress, we're forced to rethink what it means to be human. This challenges traditional views and creates a crisis in understanding human nature. While post-humanist ideas have been around for a while, they've gained much attention in recent years, especially in academic discussions. It has become its study area, giving us new perspectives on who we are and what we can become.

### 6.2.3 Key Theoretical Foundations

The concept of the post-human shift represents a profound re-evaluation of traditional understandings of humanity and human identity. It challenges the Eurocentric notions that have historically dominated discussions of what it means to be human. Eurocentric ideals are often based on a particular vision of 'Man' that reflects European cultures' values, perspectives, and experiences. This perspective has historically positioned 'Man' as the universal standard against which all other forms of humanity are measured. However, the post-human shift destabilised this concept by emphasising the diversity of human experiences and challenging the notion of a singular, universal 'Man'.

Post-humanism draws from poststructuralist theories that deconstruct stable categories like 'Man' or 'humanity.' The concept of the post-human shift challenges traditional notions of humanity and the centrality of human identity. It emerges from a complex philosophical, technological, and cultural interchange. Jacques Derrida and Michel Foucault question that identity and power are always fixed. They suggest that we can think about people and their power in new ways, going beyond what we're used to. Post-humanism builds upon this deconstructive impulse by destabilising anthropocentric assumptions.

Nietzsche highlighted the consequences of valuing humanity to a great extreme. This led to the development of a model different from humanism and antihumanism. Post-humanism emerges as an evaluation of humanist theory without embracing antihumanism.

The roots of post-humanism theory can be traced back to the Macy conferences on cybernetics (1946-1953), where scholars aimed to revise humanism by removing the human species' unique privileges compared to animals, the environment, and machines.

## 6.3 MEDIA TECHNOLOGIES AND POST-HUMAN EXPERIENCES

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Media technologies, like virtual reality, augmented reality, social media networks, etc., are important in how we experience things as post-human beings. Nowadays, we deal with various technologies that change how we see and interact with the world. Virtual reality, social media, and augmented reality are like superheroes in this, helping us connect and talk with others in ways different from the usual face-to-face talks. These tech tools are now part of our everyday lives, creating new ways to talk, express ourselves, and figure out who we are. As we use these tools, the idea of being post-human, where technology and humans mix, becomes more considerable. This blend challenges what we usually think about being human, bringing in a time of even better connections, cool AR (Augmented Reality) and VR (Virtual Reality) stuff, and changes in how we show who we are.

### 6.3.1 Virtual Reality and Augmented Reality

Virtual Reality is like a super cool computer-made world that feels real, and you can jump in using a VR headset. You're not just watching stuff – you're right there, part of the action, whether in a movie, a video game, or something educational like learning surgeries or getting better at sports. Even though VR seems all futuristic now, it started in the 1950s with something called Sensorama. Picture this: a cool seat with 3D movies, scents, and vibrations to make it feel real. VR got even cooler with better devices and software as time went on. VR has different types.

**One is Non-Immersive VR**, where you control things on a computer, like in video games, but the game world doesn't react to you. Then there's **Fully Immersive VR** – the real deal. You wear special gear like helmets and gloves connected to a powerful computer, making you feel like you're totally inside the game. Imagine playing a shooting game in a room all set up for it! **Semi-immersive VR** is a mix of both. You can walk around a 3D world using a computer or a VR headset, but you're not doing all the superphysical stuff. And there's **Collaborative VR**, where people from different places can hang out in a virtual world, chat, and team up on different tasks. So, VR is not just a game; it's a whole bunch of experiences you can dive into, each with its coolness level. It's like bringing your imagination to life!

#### Augmented Reality

Augmented Reality (AR) is an enhanced depiction of the physical world using digital elements derived from technology. Unlike virtual reality, which puts users into fully immersive environments using headsets, augmented reality adds digital elements to what you see in the real world but with fewer ways to interact with them. It enriches the real environment by incorporating computer-generated visuals, sounds, and other stimuli, providing users with a heightened, immersive experience. Commercially, AR proves valuable for increasing brand awareness and driving sales.

AR applications are commonly accessible through smartphones. They utilise the device's camera to display the real world on the screen. Users then activate AR applications to enhance their surroundings through digital overlays, such as superimposed images, 3D models, real-time directions, labels, colour changes, and appearance alterations using filters on platforms like Instagram and Snapchat. AR is compatible with various devices, including screens, glasses, handheld and mobile devices, and head-mounted displays, with the technology's versatility continuing to expand.

### 6.3.2 Digital Dualism Reconsidered

Digital dualism, the idea that online and offline realities are separate, is becoming less popular with the rise of social media. Earlier, people thought digital content belonged to a virtual world distinct from the physical one. Nowadays, platforms like Twitter and Facebook connect people both online and offline. People make friends online on networking sites and then meet them in person, strengthening their relationships. As technology becomes part of daily life, the line between virtual and physical blurs, and many see the virtual world as a real part of life. Jurgenson, who introduced "digital dualism," argues against this, saying the virtual world reflects the real one. Scholars challenging digital dualism want a nuanced view, understanding how digital and physical experiences are interconnected, influencing each other. They aim for a holistic approach, recognizing how digital technologies shape identities and relationships in everyday life.

### 6.3.3 Mediated Perception and Experience

Perception is how our minds process sensory input to respond appropriately, turning raw data into meaningful information. "Mediated perception and experience" refer to how media and technology influence our view of the world. Today, people interact with their surroundings through mediated channels like TV, social media, and virtual reality. Imagine a small wearable device for augmented reality games worn on the head. It uses dual cameras to capture visual data, record and filter it, and then display it on a built-in LCD screen. With its own system and graphics card, this device enhances the augmented reality experience. Observation can be direct, experiencing events first-hand, or mediated, involving tools like cameras. Understanding mediated perception shows how technology impacts how we experience the world.

## 6.4 INTRODUCTION TO "A CYBORG MANIFESTO"

The cyborg idea is often used in literature and cultural discussions to mix organic and technological elements and challenge fixed identity categories like gender, race, and ability. According to Donna Haraway in 'The Cyborg Manifesto', cyborgs represent hybrid objects that break down fixed identities and open up possibilities for new, diverse forms. Unlike robots, cyborgs, conceptualised by NASA scientists Nathan Kline and Manfred Clynes in the 1960s, aim to overcome physical and mental limitations, especially in extra-terrestrial environments. The Cyborg Foundation, started by Neil Harbisson and Moon Ribas in 2010, works to help humans change into cyborgs, enhancing senses and abilities through cybernetic extensions. Cyborgs are divided into Convenient and Conditional types. **Convenient Cyborgs** often use exoskeletons to accommodate human preferences, allowing alterations based on personal needs. **Conditional Cyborgs** focus on

replacing designed or injured body parts with bionic implants to restore normal functionality.

The cyborg is explored in the literature to question identity categories, especially gender. Examples like the English novelist Mary Shelley's Frankenstein depict the monster as a cyborg created from human and animal parts, raising questions of identity. Ursula K. Le Guin's The Left Hand of Darkness features androgynous inhabitants who can become either male or female, blurring the lines between them. The cyborg concept is a powerful lens for examining identity boundaries in diverse narratives.

### 6.4.1 Overview of Donna Haraway's Work

Born in 1944, Donna Haraway questions unquestioning acceptance of oppositions in science, focusing on biology, like human–animal, mind–body, and male–female distinctions. She is known for reactivating the term ‘cyborg,’ blending cybernetic, non-organic, and organic qualities, aligning with socialist- and eco-feminism. Haraway argues that the current political, social, and economic system relies on constructed narratives, not essential scientific truths. Haraway's manifesto asserts that “we are cyborgs,” both machine and organism, shaping our ontology and politics. With more females than males, the cyborg lays the foundation for a new feminist relationship with technology.

### 6.4.2 Context and Influences

In 1984, Donna Haraway wrote the Cyborg Manifesto during postmodernist thought, feminist discussions in the 1980s, and the rise of cybernetic technologies. With a background in biology and philosophy, Haraway explored how technology impacts society and questioned fixed identity categories. Her manifesto, responding to essentialist feminist views, became influential in feminist theory, technology studies, and critical discussions. It emerged in a dynamic era of political activism and technological progress, breaking down normative binaries and impacting discussions about identity and technology.

#### Check Your Progress: 1

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

- 1) Explain the significance of post-humanism and cyborg concepts in shaping cultural narratives and redefining human experience.

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- 2) Analyse how the cultural representations and perceptions of cyborgs have evolved, reflecting changing attitudes toward technology and humanity.

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- 3) Identify a specific instance of a cyborg or post-humanist concept in popular culture and explore its cultural implications. Share insights on how it challenges or reinforces cultural norms.
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- 4) Explore how post-humanism and cyborg concepts influence cultural storytelling and artistic expression.
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## **6.5 CYBORG IDENTITY AND POLITICS**

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In her 1981 essay, feminist technology theorist Donna Haraway advocated using cyborgs to reshape politics. She proposed dismantling mythical origin stories that perpetuate divisions based on race, class, gender, and other societal lines. By altering how these stories are told, especially by amplifying women's and people of colour's voices, Haraway envisioned new possibilities for freedom and justice. Her cyborg politics embraced cutting-edge technologies as liberating tools, avoiding blanket blame or unwarranted celebration of technology. These politics centred on human questions of belonging, difference, production, consumption, waste, and renewal, impacting humans and non-human planetary companions. Haraway emphasised an expanded sense of empathy while cautioning against accelerating toxic waste from discarded implants, stressing the interconnected stories involving cyborgs, humans, and non-humans in our complex political landscape.

### **6.5.1 Intersectionality in Cyborg Politics**

Looking at cyborg politics through intersectionality means examining how the mix of technology, identity, and power dynamics shapes people's experiences. Intersectionality focuses on recognizing inequalities in technology access based on social categories, creating uneven opportunities that can worsen existing disparities tied to race, class, gender, and more. Identity aspects like gender, race, and disability intersect with technology use, affecting individuals in different ways. For instance, a disabled person's experience with assistive technology differs from that of an able-bodied person. In cyborg politics discussions, especially regarding body modification and augmentation, gender identity intersects. Transgender experiences may vary from cisgender experiences in the realm of body modification technologies. Gender, race, and class intersect in conversations about reproductive technologies and cyborg politics, influencing access based on socio-economic factors and cultural contexts. An intersectional approach to understanding cyborg politics is vital for promoting inclusivity, recognizing diverse experiences, and addressing technology's potential to reinforce power imbalances. It encourages a thorough analysis considering the complex interplay of various social factors in human-technology interactions.

## 6.5.2 Critique of Essentialism

Essentialism, a philosophical idea, suggests that certain unchanging qualities define the essence of a category or identity. Despite its influence, essentialism is criticised for oversimplifying and reducing individuals to fixed characteristics, promoting stereotypes, and ignoring diversity within categories. Critics argue that it neglects Intersectionality, which acknowledges individuals' multiple intersecting identities like gender, race, and class. Ignoring these intersections leads to a narrow understanding of identity. Essentialism assumes fixed characteristics, overlooking identities' dynamic nature and potential evolution. This can reinforce biases, perpetuate stereotypes, and result in discrimination. In policymaking, essentialist views may lead to inequitable outcomes by overlooking diverse needs within groups, impacting justice and fairness.

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## 6.6 TECHNOLOGICAL HYBRIDITY

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Hybridity, originating in biology and extending to linguistics and racial theory in the 19th century, now finds use across academic disciplines and popular culture. In biology, it signifies blending different species to form new ones, like the mule, the offspring of a donkey and a horse. In social sciences and cultural studies, hybridity denotes merging separate practices or structures to create novel entities. Technological hybridity, relevant in various fields, involves integrating diverse technologies to form unified systems, emphasising the dynamic interaction between technological components. This can occur through hardware-software integration, digital and physical systems convergence, or blending traditional and emerging technologies. In identity and culture, technological hybridity involves integrating technology into the human experience, as seen in Donna Haraway's cyborg concept, symbolising the fusion of organic and technological elements. This blending challenges traditional boundaries, fostering a nuanced understanding of the human-machine relationship. Cultural practices also exhibit technological hybridity, combining traditional and digital forms to create new modes of expression and communication, influencing how individuals interact with their surroundings and construct their identities. Additionally, technological hybridity extends to integrating different technological platforms, forming complex socio-technical systems impacting society in healthcare, entertainment, education, and the workplace.

### 6.6.1 Integration of Biological and Technological Components

Cyborg technology, a recent scientific breakthrough, propels humanity to new heights by combining machinery with living tissue. Cyborgs possess an inner metallic endoskeleton enveloped in outer living tissue. Originating in 1960, NASA scientists Nathan Kline and Manfred Clynes coined the term "Cyborg" to enhance human survival in extra-terrestrial environments. Cyborgs are categorised into convenient cyborgs, catering to human preferences through exoskeletons, and conditional cyborgs, aiming to replace or repair injured body parts with bionic implants. Distinguishing them from robots, cyborgs integrate with living beings. Cyborg technology includes hearing colour, the Luke arm, visualising light, hand gripping, and artificial eyes, offering prosthetic solutions for touch sensation and daily activities. The scope of cyborg development spans computer-controlled smart limbs, nanomedicine, brain uploading, and invisibility technology. While presenting advantages and disadvantages, the hope is for a quiet technological revolution, elevating humans to the next level.

## 6.6.2 The Cyborg as a Fusion of Nature and Culture

The word “cyborg” comes from “cybernetic organism” and represents a blend of nature and culture. Scientists Manfred Clynes and Nathan Kline coined it in the 1960s to describe using technology to enhance human abilities. This idea has evolved and is now explored in science fiction, philosophy, and cultural studies.

### Technological Integration with the Human Body

Cyborgs integrate technology into the human body, from basic prosthetics to advanced enhancements like neural implants. This blurs the line between natural and artificial, creating a hybrid entity.

### Biotic and Technological Symbiosis

Cyborgs symbolise a symbiotic link between biological and technological elements, enhancing human abilities, addressing disabilities, and extending lifespan. This interplay challenges traditional ideas of pure natural or artificial distinctions.

### Cultural Context and Identity

The cyborg concept sparks inquiries about identity and cultural impact as technology integrates into bodies. Questions arise about how these changes influence self-perception, identity, and cultural belonging. Cyborgs challenge norms, urging a reassessment of societal views on body modification and augmentation. The cyborg symbolises the changing connection between nature and culture, challenging what it means to be human. Integrating technology into the body prompts questions about identity, ethics, and the future.

## 6.6.3 Scope in Cyborg Technological Development

Thanks to technological advancements, neural implants connecting the mind with a computer are now a reality. Examples include cochlear implants for hearing and retinal implants for vision, both with advanced features.

**Computer-controlled Smart Limbs:** Prosthetic technology, like Touch Bionics' I-limb, allows control through a smartphone app and offers advanced features such as rotating thumbs and movable wrists. Future developments may enhance natural limbs with computer-controlled prosthetics.

**Nanomedicine:** Nanotechnology is a medical breakthrough that uses tiny particles to target specific body areas. In an experiment for lung cancer, inhaled nanoparticles were sent to affected lung areas. These particles were heated using a magnet outside the body to eliminate diseased cells.

**Uploading the Brain:** Futurist Ray Kurzweil predicts that by 2040 to 2045, humans could upload their consciousness into a computer. Russian billionaire Dmitry Itskov plans to achieve potential immortality by 2045 through brain processing. He envisions using cyborg technology to live in a holographic body, allowing remote operation of different bodies through neural interfaces.

**Invisibility Technology:** Researchers are working on creating a real-life invisibility cloak inspired by Harry Potter. Recent experiments use small antennas to generate an electromagnetic field, cancelling out visible light waves and achieving the cloaking effect.

## 6.7 CYBORG AND FEMINISM

In cybernetics, feminist concerns revolve around how technology challenges and reshapes traditional views of gender roles. The term “natural,” often used to describe specific roles, reflects a worldview implying that these roles are unchangeable. Cybernetics, as advocated by Donna Haraway, challenges and erases gender boundaries that have traditionally confined women to roles dictated by perceived “natural” attributes like weakness or submission.

Haraway argues that if the human concept is socially constructed, devoid of inherent “natural” traits, then gender roles are also social constructs. Cybernetics introduces a paradigm where roles aren’t determined by sex or race but allow individuals to construct their identities freely. The cyborg, embodying a hybrid of machine and organism, blurs the lines between nature and culture, challenging essentialist views of human nature.

This paradigm shift challenges claims about specific social roles based on biological differences between sexes. Haraway’s notion of the cyborg advocates for a new feminism that embraces technology’s transformative impact on our bodies while rejecting binary thinking perpetuated by patriarchy. In essence, technology becomes a means to erase boundaries between identities, offering a pathway beyond restrictive norms and fostering openness, pluralism, and indefiniteness.

Donna Haraway’s Cyborg Manifesto critiques patriarchal society while recognizing cybernetics’ power to change human relations. She imagines a society built on harmony, not similarity, breaking free from stereotypes. Technology, a tool, erases boundaries between identities. Cyborgs, as hybrids, go beyond gender binaries, promoting openness and allowing individuals to shape their identities beyond norms. Haraway’s ideas highlight technology’s ability to expand possibilities and empower people. This simplified version aims to make these complex concepts accessible to beginners.

### 6.7.1 Critique of Traditional Feminism

Examining gender through technologies of embodiment allows for an analysis of how gender operates in our complex world. Despite multiple scholars engaging with gender and embodiment, some fall short by erasing or imposing heavy boundaries around gendered embodiment. Scholars, including Donna Haraway, Judith Butler, Elizabeth Grosz, Robert McRuer, Irene Dankelman, and Chandra Mohanty, highlight how gender and gender technologies shape our understanding. While Haraway and Butler tend to erase physical bodies to subvert normativity, scholars like Grosz, McRuer, Dankelman, and Mohanty delve into gendered embodiment’s complexities, localizations, and materialities. They resist oppressive societal norms, ideologies, and practices, emphasising embodiment’s resistance and physical aspects. Haraway and Butler, aiming to eliminate normative boundaries, inadvertently overlook the rich complexity of embodiment. In contrast, Grosz, McRuer, Dankelman, and Mohanty underline embodiment’s physicality and contingent positionality in society, offering a more nuanced perspective on the intricate nature of gendered experiences.

### 6.7.2 The Cyborg as a Feminist Figure

Donna Haraway’s idea of the cyborg is a revolutionary feminist symbol challenging traditional views of identity, gender, and power dynamics. In her important work

“A Cyborg Manifesto,” Haraway introduces the cyborg as a figure breaking down dualisms like nature/culture and human/machine, offering a more flexible understanding of identity beyond fixed categories. The cyborg actively rejects fixed qualities assigned to genders, promoting diverse and intersectional feminist perspectives. Haraway sees the cyborg as a symbol of empowerment for women through technology, countering the idea that technology is only oppressive and emphasising its potential to enhance agency and autonomy. Representing a post gender future, the cyborg challenges traditional gender roles, advocating inclusivity in feminism. Through its hybrid nature, the cyborg celebrates the dynamic essence of identity, confronting narratives depicting women as passive victims and emphasising agency. Haraway’s cyborg supports an intersectional outlook, recognizing the interconnectedness of gender, race, and class. In Haraway’s vision, the cyborg becomes a feminist icon, prompting the exploration of new paradigms for identity, agency, and liberation in the face of advancing technologies.

### 6.7.3 Gender and Technology in Haraway’s Framework

Gender, seen as a flexible identity, is influenced by cultural and socio-economic factors shaped through the social construction of gender and race. In her important essay “A Cyborg Manifesto,” Donna Haraway explores the intricate relationship between gender and technology, challenging traditional views. Using the cyborg as a metaphor, she disrupts fixed distinctions between nature, culture, and human-machine dynamics, viewing technology as an empowering tool. Haraway envisions a future that challenges normative gender roles, encouraging diverse feminist discussions. Her work opens paths for redefining gender roles and promoting inclusivity by examining how technology interacts with gender, incorporating race, class, and other social factors.

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## 6.8 CYBORGS IN POPULAR CULTURE

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Cyborgs, often shown as body machines in movies and stories, represent the extreme possibilities of human technology. Think of mice with human ears, titanium knee joints, and enhancements for looks, blending science fiction with real-world progress. Cyborgs, short for cybernetic organisms, are a big part of literature, movies, TV, and video games, becoming iconic figures. In these made-up stories, they explore themes like what it means to be human, identity, and how technology affects society. For example, the Terminator character (played by Arnold Schwarzenegger) is a famous cyborg in James Cameron’s Terminator movies. It’s a robot from the future covered in living tissue, travelling through time to change history. These cultural portrayals dig into how humans and technology interact, making us think about the effects of these advancements on our lives.

### 6.8.1 Representation of Cyborgs in Film, Literature, and Media

The depiction of cyborgs in literature and film explores the intricate relationship between humanity and technology. This exploration prompts profound reflections on identity, ethics, and the consequences of technological progress. In literature, cyborgs challenge conventional binary concepts by embodying hybridity and fluidity, symbolising a metaphor for challenging dominant power structures and envisioning new forms of identity and social order. Early instances, like Edgar Allan Poe’s 1843 short story “The Man That Was Used Up,” and the Tin Man in the 1939 classic “The Wizard

of Oz,” represent literary and filmic cyborgs, respectively, embodying transformations that echo numerous narratives exploring the essence of humanity.

### **Cyborgs in Film: From Tin Man to the Winter Soldier**

Movies like “Ghost in the Shell” (1995 and 2017) and the “Blade Runner” series explore a world where people use cybernetic enhancements. Characters like the Major, a cyborg cop, and replicants in “Blade Runner” deal with questions about identity. In superhero stories, figures like Doctor Octopus and Iron Man have cybernetic upgrades, and the Winter Soldier raises moral dilemmas with a robotic arm. These films continue the legacy of characters like the Tin Man from “The Wizard of Oz,” who sought love, acceptance, and purpose.

### **Cyborgs in Literature: Philip K. Dick and Donna Haraway’s Influence**

Philip K. Dick’s book “Do Androids Dream of Electric Sheep?” inspired “Blade Runner,” exploring the boundary between humans and androids and raising questions about empathy and morality. Donna Haraway’s non-fiction work, “The Cyborg Manifesto,” significantly influences how we think about cyborgs, challenging traditional ideas about gender, identity, and the relationship between humans and machines and promoting a more flexible understanding. Her ideas have influenced discussions across various media, shaping how we talk about cyborgs today.

### **Cyborgs in Media: Deus Ex and Westworld**

The video game series “Deus Ex” explores a cyberpunk world where characters, including protagonist Adam Jensen, are augmented with cybernetic enhancements. These games delve into themes of conspiracy, transhumanism, and the societal impacts of augmentation. In the TV series “Westworld” (2016), inspired by Michael Crichton’s film, hosts—androids indistinguishable from humans—narrate a compelling story exploring consciousness, free will, and ethical considerations.

## **6.8.2 Cultural Impact of Haraway’s Cyborg Concept**

Culture is how a specific group sees things at a certain time, different from society, which is a group of interacting organisms. Cultures involve learned behaviours, while societies are groups of interacting entities. Cyborg anthropology examines how modern human life mixes human and non-human elements, especially with technology. It studies how humans, in interconnected systems, change their surroundings using technology. Some scholars suggest focusing on cyborgs in anthropology due to big technological changes. Looking at cyborgs through cybernetics, which started with control and communication, now includes various fields like robotics, intelligence, genetics, and neuroscience. This broader view helps us better understand the complex relationship between humans and technology.

Cyborg anthropology stands out by keeping up with fast-changing technology, allowing a detailed look at changes over time. It uses the metaphor of a rhizome, a dynamic and adaptable network, to replace static structures. Cyborgs are morally neutral, but how they are used can be very good or harmful. Cyborg anthropologists need to be careful because their studies can impact different groups. This risk is common in anthropology but is more significant in technology-focused fields. In simple terms, cyborg anthropology explores how technology interacts with humanity and culture in a rapidly advancing world.

## 6.9 RELEVANCE OF THE CYBORG MANIFESTO TODAY

The Manifesto talks about a different way of looking at knowledge. Instead of trying to find one big truth, it suggests having a “knowledge ecology,” where many different ideas and truths can coexist without fitting into one idea. At the start, the manifesto wants to change politics by using irony, humour, and playful seriousness instead of sticking to one way of thinking. It aims to replace being overly correct with being ironic, which means accepting differences without forcing everyone to be the same. Throughout history, humans improved by farming, making tools, and creating language. Now, things like artificial organs, smartphones, GPS, and communication tools make us stronger and smarter, helping us go beyond the limits of time and space.

This idea of a cyborg isn’t just for the future; it’s happening now. According to Haraway, being a cyborg doesn’t mean having chips or metal parts in you. It’s about how technology improves our lives, like living longer or staying fit with exercise machines and special clothes. Cybernetics, which is about how machines and living things work together, is a normal part of our lives. Even how we keep fit is like cybernetics – treating our bodies like machines that can get better over time. Haraway also says the cyborg is both real and imaginary. The Internet and virtual reality affect how we think and feel, creating different identities in online places like games and social media. These identities can be as different as the places they’re in.

### 6.9.1 Contemporary Applications of Haraway’s Ideas

Donna Haraway’s ‘A Cyborg Manifesto’ continues to inspire contemporary discussions across various fields due to its insightful reflections on the intersections of technology, society, and identity. It contributes to post-humanist and transhumanist thought discussions, challenging the dualistic distinctions between humans and machines, and emphasising the entanglements between biological and technological systems. In contemporary debates about artificial intelligence, biotechnology, and cybernetics, the cyborg emerges as a potent symbol for exploring the boundaries between humans and non-humans. Contemporary feminists draw on cyborg theory to critique essentialist notions of gender and explore the complexities of identity in the digital age. The cyborg offers a framework for understanding the fluidity of gender, embodiment, and subjectivity in a technologically mediated world. The cyborg’s hybridity reflects the complex intersections of race, class, gender, sexuality, and disability. Intersectional activists and scholars draw on cyborg theory to advocate for more inclusive and equitable social and political systems. Contemporary eco-feminists draw on cyborg theory to critique anthropocentrism and to advocate for more sustainable and reciprocal relationships with the natural world.

### 6.9.2 Challenges and Opportunities

The realm of cyborg interaction has progressed significantly, with cyborgs increasingly integrated into our lives. Cyborg Human Interaction (CHI) is crucial for maximising its potential, focusing on creating seamless interfaces for effective collaboration. Bridging the Communication Gap: CHI faces challenges bridging the communication gap between humans and cyborgs. Developing intelligent interfaces using technologies like natural language processing and neural interfaces is essential. Ensuring Safety and Trust: Safety and trust between humans and cyborgs are paramount. Cybernetic

safety mechanisms and transparent decision-making processes build trust, ensuring confident interaction. Designing Intuitive User Interfaces: User-friendly interfaces incorporating neural interfaces and augmented reality enhance CHI experiences for users of all technical levels. Collaboration and Task Allocation: Effective collaboration requires understanding human and cyborg capabilities.

Dynamic task allocation algorithms optimise productivity and leverage complementary abilities. Empowering Human-Cyborg Partnerships: Cyborgs should augment, not replace, humans. Automating tasks frees humans from higher-level activities, enhancing overall capabilities. Human-cyborg interaction is a frontier with vast potential. Addressing challenges and embracing opportunities can transform industries and improve lives. Let's develop intuitive interfaces, ensure safety, and foster meaningful partnerships. Together, we'll revolutionise cyborg interaction and unlock limitless possibilities. Join the conversation and embrace the future of human-cyborg collaboration.

### Check Your Progress: 2

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. Highlight the cultural impact of post-humanist and cyborg themes in media representations.

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2. Emphasise the role of these concepts in shaping cultural narratives and challenging traditional perspectives on identity and humanity.

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3. Discuss potential cultural challenges in integrating post-humanist and cyborg ideas, considering ethical considerations and societal implications.

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4. Share your reflections on how cultural histories are transformed and understood in the context of post-humanism and cyborg concepts.

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## 6.10 LET US SUM UP

Post-humanism, a prevailing concept in the late 20th and 21st centuries, intersects human, non-human, and technological domains, gaining prominence amidst environmental concerns. Diverging from transhumanism, it critiques humanist values, embracing a deconstructionist approach. Donna Haraway's Cyborg Manifesto challenges fixed identities, advocating a fluid understanding of gender and human-machine relationships. In media technologies, virtual, social, and augmented reality shape post-human experiences, blurring online and offline realities. Responsive to technological evolution, Cyborg anthropology explores human existence's fusion with technology and its cultural implications.

Haraway's cyborg, embodying a fusion of nature and culture, questions gender norms and essentialist views. Cyborg politics, embedded in intersectionality, examines how technology intersects with gender, race, and class, emphasising inclusivity. Technological hybridity blends diverse technologies, influencing identity, culture, and societal systems.

Cyborgs in popular culture, from literature to films like "Ghost in the Shell" and "Blade Runner," explore human-technology dynamics and challenge traditional notions. Haraway's cyborg becomes a feminist symbol, challenging fixed gender roles. In essence, post-humanism reshapes human perspectives, emphasising the intricate interplay of technology, identity, and culture in an evolving world. Haraway's cyborg paradigm offers a lens for understanding the transformative potential of technology in shaping humanity's future.

## 6.11 KEYWORDS

- Post-humanism** : is a theoretical paradigm challenging foundational assumptions about the human subject in modern Western culture. It emphasises the intersections of humans, non-humans, and technology.
- Virtual Reality** : (VR) immerses users in computer-generated environments, presenting scenes and objects that closely resemble reality. This technology allows users to experience a profound sense of presence in their surroundings.
- Augmented Reality** : Augmented Reality (AR) enriches the real world by integrating computer-generated information, enhancing user experiences. This technology utilises software, applications, and hardware, such as AR glasses, to overlay digital content seamlessly onto physical environments and objects.
- Digital Dualism** : is the belief that the physical world is 'real' and the digital world is 'virtual'. These two worlds are viewed as separate and diverse realities in physical space.
- A Cyborg Manifesto** : In "A Cyborg Manifesto," Haraway delves into the historical dynamics between humans and machines, asserting that pivotal boundaries have been disrupted over time.

<b>Essentialism</b>	: Essentialism is the idea that people and things have ‘natural’ inherent and unchanging characteristics.
<b>Technological Hybridity</b>	: Hybrid technology systems integrate multiple technologies to enhance overall efficiency. The goal is to create synergies between different technologies and optimise their functionalities within a unified system.

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## 6.13 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

### Check Your Progress: 1

1. Post-humanism and cyborg concepts hold profound significance in contemporary cultural discourse, challenging conventional understandings of humanity and technology. By questioning the boundaries between the organic and the artificial, these concepts provoke critical reflections on identity, embodiment, and the ethics of technological integration. They invite us to reconsider entrenched notions of what it means to be human and how technology shapes our experiences and perceptions of the world.
2. The evolution of cultural representations of cyborgs reflects broader shifts in societal attitudes toward technology and its relationship with humanity. Initially

portrayed as menacing or alien, cyborgs have gradually been depicted with greater nuance and complexity, embodying the ambivalence and fascination that accompany technological advancements. These representations mirror society's evolving understanding of the potential benefits and risks associated with merging human and machine.

3. One compelling instance of a cyborg in popular culture is the character of Major Motoko Kusanagi from the acclaimed anime and manga series Ghost in the Shell. As a cyborg with a human brain, Kusanagi challenges conventional notions of identity and agency, blurring the lines between human and machine. Her existence prompts profound questions about consciousness, embodiment, and the nature of selfhood, inviting audiences to contemplate the implications of a post-human future.
4. Post-humanism and cyborg concepts serve as fertile ground for exploration in cultural storytelling and artistic expression, offering rich thematic material for creators to delve into. Through various mediums such as literature, film, and visual art, artists and storytellers explore themes of transhumanism, identity politics, and the ethical implications of technological augmentation. These narratives often highlight the tensions between individuality and conformity, autonomy, and control, inviting audiences to critically engage with the complexities of a technologically mediated world.

### **Check Your Progress: 2**

1. Post-humanist and cyborg themes in media reshape cultural norms by blurring human-machine boundaries, fostering discussions on identity and technology's role in society. Through literature and film, these representations challenge perceptions of what it means to be human, inviting reflection on ethics and societal values amidst technological progress.
2. Post-humanist and cyborg concepts redefine cultural narratives by questioning traditional notions of identity and humanity. Through media, they explore human-machine interactions, prompting debates on consciousness and societal structures. These narratives encourage inclusivity and empathy, challenging power dynamics and fostering diversity in cultural discourse.
3. Integrating post-humanist and cyborg ideas raises ethical dilemmas and societal tensions. Concerns about privacy, autonomy, and social justice emerge alongside fears of inequality and discrimination. Ethical discussions spanning disciplines are essential for navigating these challenges and shaping a more equitable future amidst technological advancements.
4. Cultural histories are re-examined through post-humanist and cyborg lenses, highlighting the impact of technology on human evolution. These perspectives prompt reflections on historical narratives and the preservation of cultural heritage in a digital age. By acknowledging technology's influence, we gain insight into past, present, and future cultural trajectories.

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## **UNIT 7 IDENTITIES AND COMMUNITIES ONLINE**

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### **Structure**

- 7.0 Introduction
- 7.1 Learning Outcomes
- 7.2 Online Identities
  - 7.2.1 Features of Identity
  - 7.2.2 Online vs Offline Identities
  - 7.2.3 Online Modes of Representation
- 7.3 Management of Digital Personas
  - 7.3.1 Online Identity Management
  - 7.3.2 Online Impression Management
  - 7.3.3 Implications and Concerns
- 7.4 Online Communities
  - 7.4.1 Community Cycle
  - 7.4.2 Features and Purposes
  - 7.4.3 Categories
- 7.5 Online Participation
  - 7.5.1 Types of Participants
  - 7.5.2 Participation Cycle
  - 7.5.3 Netiquette
- 7.6 Issues and Concerns
- 7.7 Let Us Sum Up
- 7.8 Keywords
- 7.9 Further Readings
- 7.10 Check Your Progress: Possible Answers

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### **7.0 INTRODUCTION**

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Do you have an account on any social media platform? How often do you use it to connect with your friends or distant family members? Have you joined any groups or communities? This Unit will open up a familiar world of online identity creation for you, albeit with a more critical approach. From covering online identity generation methods to forming various types of communities, we will discuss how individuals participate in the virtual world. We will also go through a new concept called identity and impression management and discuss its relevance in today's time. By the end of the Unit, you will be well-versed in the etiquette required for functioning in the web world.

## 7.1 LEARNING OUTCOMES

After completing this Unit, you should be able to:

- Identify various features of online and offline identities;
- Elaborate on identity and image management;
- Differentiate between multiple types of online communities; and
- Associate features of the participation cycle pertinent to online communities.

## 7.2 ONLINE IDENTITIES

You would have an ID Card, an Aadhar card, a voter ID, or an ID card from your school or College. Look at it closely; what does it say? It would contain certain markers of your identity, starting with your name, address, phone number, and, at times, your blood group, social caste, and religion. These markers are a few attributes that define us and make us different from other human beings. These attributes, put together, create our identities. Our identities shape our social interactions and carve out our purpose in the world.

### 7.2.1 Features of Identity

You have met many individuals in your life and found each one different from others in some unique way. Our identities are also crafted by many factors, from biological to conditioned, or the ones we learn subconsciously. Some traits are acquired over time, while others are influenced by society. We may control or uncontrolled these factors voluntarily.

Following are a few of the defining factors of identity formulation:

1. Biological or Genetic factors - Skin, eye and hair colour, height, etc.
2. Conditioned or acquired - Personal characteristics, behavioural patterns, gender attributes
3. Learnt - Interests and hobbies, values and political beliefs
4. Socio-cultural influences - Cultural background, religious bent, social class
5. Psychological - Self-concept, mental health, emotion management
6. Experiential aspects - life experiences, education & work, relationships

While these factors create our unique identity, they are also instrumental in bonding with other humans. We seek out other human beings who have similar traits as ours.

### 7.2.2 Online vs Offline Identities

The online world or digital world is the network of websites on the Internet that allows individuals to interact, share information, and engage in social activities. Technology enables and platforms this digital world, which is also known as the ‘virtual world’ because of its dynamic and transient nature.

Online identity is how a person represents themselves on a digital platform. It amalgamates the individual's offline personality and a carefully curated online persona. The offline personality includes the person's values and experiences, while the curated persona is a crafted version designed for a specific context and purpose.

There can be many differences between an individual's online and offline personalities. While we cannot choose many aspects of our online personality, the offline persona can be devoid of the information one may not want to include. A few of the factors that can create differences in both types of personalities are:

1. **Representation**: In the physical world, an individual's offline identity is first defined by their physical appearance, including the clothes they wear or the body language they acquire. On the other hand, in the online space, usernames, avatars, and profile pictures are the individual's visual representations.
2. **Anonymity**: On online platforms, a person may choose to have anonymous or multiple profiles for several reasons and opt out of giving out personal information. On the other hand, in real life, anonymity is not just difficult but impossible.
3. **Communication style**: Offline spaces thrive on face-to-face communication between people and include a lot of nonverbal cues such as body language, the intonation of voice, etc. On the other hand, in the case of online communication, one may use text, visuals and multimedia elements to communicate without physical presence. But you would have experienced cases where a text has been unable to convey what you wanted or has been misinterpreted by the reader.
4. **Content creation**: Offline communication is difficult to keep track of and replicate again. Think of performing a play again and again for different audience groups. Not only would you get tired, but there would be a lot of differences between the first and the last performances. On the other hand, online communication is archived, and thus, record-keeping is better. We can access videos uploaded on YouTube even after a decade of their existence there. Also, an email sent to an individual and forwarded repeatedly would remain the same.
5. **Peer group**: In an online setting, an individual's social circle may extend beyond the boundaries of their classroom or immediate geographical neighbourhood. It becomes easier to keep in touch with childhood friends even after relocating to a different city or initiating interaction with strangers. Offline, one may be unable to keep up with acquaintances due to distance issues.

These were a few differences in an individual's online and offline identities. Many issues and concerns arise from them, which will be discussed further in this Unit.

### 7.2.3 Online Modes of Representation

Online identities are explored using Social Media Platforms on the Internet. Social media platforms are websites that allow users to create their accounts and interact with each other. The accounts may post text-based content, images, or videos to initiate the conversation. You may upload pictures from your birthday party, share

your views on the latest film or post a reel of yourself following the latest trend. Other users may react and respond to the content publicly or privately, depending on the platform settings. This can be in the shape of likes and comments.

This interaction may be responded to, taking the conversation further. The more popular an individual is, the more traction their profile and content posted gather. This is why celebrities' profiles have more followers than yours or mine. On the other hand, some people have become popular due to their online profiles, attaining the status of Social Media Influencers.

Social media platforms offer several tools that help create a unique online identity. A few of these are:

1. **Username**: A username acts as the individual's name on the digital platform, albeit self-given. You may choose something as simple as a combination of your initials, date of birth, or characteristics you associate with yourself. Usernames are unique to all profiles.
2. **Profile information**: The amount of information you give in your profile may vary, but it helps protect your identity. For example, you may want to mention your political views on the profile or the sports club you are a fan of.
3. **Profile picture**: This is the first visual identifier of an online identity and usually appears alongside the username. The choice of picture communicates a lot about the individual. While some may choose to post their images with their family, others post photos of celebrities affirming societal beauty standards. Some may choose to use a professional mugshot, while others may post candid images of themselves looking carefreely away from the camera. In any case, each image speaks a thousand words about the person.
4. **Content sharing**: As discussed earlier, these profiles become vehicles for posting content online. In this case, the sort of content you watch, post, and interact with may act as a window into your personality. For example, suppose I post videos of a Korean pop band. In that case, they reflect my music tastes, or if I frequently post pictures from vacations, they may reflect differently on my online identity.
5. **Online relationships**: Compared to offline spaces, online platforms make it easy to observe how I interact with my peer group online. The way you may interact with your social circle online, the celebrities you follow, or even the number of followers you have says something about your social popularity.

These are a few ways you can carve out your unique online identity. All online activity associated with your profile adds up to your digital footprint. Whether bank transactions or video calling your family, all communication is mere data on the web and open to scrutiny. The pressure to create an online persona and keep posting to the profile may differ from person to person. On the other hand, seeing profiles that garner great reactions may also teach a desire to seek validation. As a result, individuals may feel pressure to post frequently and make their profiles more engaging.

**Activity - 1** List the features of your identity based on the knowledge acquired in this section. Compare and contrast how these features are transferred in your online social media profiles.

**Check Your Progress: 1**

- Note:** 1) Use the space below for your answers.
- 2) Compare your answers with those given at the end of this Unit.

1. What are the different features of identity?

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2. What is the difference between online and offline identities?

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## 7.3 MANAGEMENT OF DIGITAL PERSONAS

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As discussed earlier, an individual may have multiple accounts online on various social media platforms. One may use YouTube to watch videos, Quora to access information, Snapchat to share images with friends, and WhatsApp to interact with the family. As all these profiles are curated, one must spend time on each platform to manage their digital persona. This process becomes even more important when one is a public figure and must always be in the limelight.

### 7.3.1 Online Identity Management

OIM, or online identity management, establishes and maintains an individual's positive online persona. From creating a web presence, posting choice content, and solving problems related to online reputation, online identity management works to improve the quality and quantity of traffic that one's profile gathers. For example, for a politician, an online presence means being accessible; on the other hand, for a sportsperson, an online presence would mean giving a glimpse into his/her fans' lives. It is a complex planned process that needs a systemized approach to building this persona, establishing it across platforms and maintaining cordial relationships with all stakeholders.

### 7.3.2 Online Impression Management

Online Impression Management is attempting to influence other individuals' perception of themselves in an online space. It includes deliberately choosing the content posted or managing the interactions with others in online public spaces. In today's time, when the most basic human relationships are transacting online, from hiring for a job to looking for a matrimonial match, online personas must cater to the expectations of those who chance upon your profile.

Corporations also use Online Impression Management to create a favourable public image. It requires content creation based on different platforms' features and target audiences. Building social capital over the usage of digital platforms, individuals may

post content to appease peer groups, seek validation, or establish themselves as a brand. It is an extended arm of Public Relations management; only the scrutiny and limelight in this case is 24\*7, 365 days a year, facilitated by social media platforms.

### 7.3.3 Implications and Concerns

Online identities are nothing, but a set of data generated in online space. This data is curated and archived for easy access. With the entire persona being accessible online, there are also privacy risks due to the possibility of data theft. One may also face negative backlash for voicing opinions different from the mainstream.

Individuals with limited technological skills may also struggle to create and maintain this online presence, which is imperative today. The pressure of being distinctly visible online and continuously perceived positively can add a lot of stress. The process requires energy and deliberate thought and can be draining for many people. Constant comparison can also yield low self-esteem and anxiety in individuals.

**Activity - 2** Create an online profile on a social media platform of your choice. Check what details you require to create it. Fill in these details and explore the platform to find individuals similar to you. You will find that although similar, each profile would have something different from yours.

## 7.4 ONLINE COMMUNITIES

You might be a part of some family WhatsApp Group, or might be following an influencer on Instagram, or would have subscribed to some YouTube Channel. All these groups are forms of Online Communities. These communities are platforms where individuals or users can gather to interact and engage with each other using digital tools. These users could be united by common interests, peer groups, or involved in similar activities. These groups may be discussion forums or collaborative groups dedicated to specific issues.

Like offline groups of people, these online communities are not bound by any geographical boundaries but help bring people from diverse geographical, social, and economic backgrounds together. They bind the individuals together based on their opinions and beliefs. These communities act as a vehicle for knowledge sharing across users' expertise and experience. They also help unite like-minded individuals and sometimes have tools to facilitate collaboration.

### 7.4.1 Community Cycle

Do you remember Orkut or Myspace? These were among the first Social Media Platforms that became popular in the Indian subcontinent in the early 2000s before being phased out by Facebook. Then came Instagram, and now Snapchat is leading the market share. It will inevitably be replaced by some other platform in a few months.

One common thing to all of these is that they followed a similar trajectory from inception to decline. Being a dynamic body, online communities display different characteristics at different times of evolution. This trajectory is known as the community lifecycle. Some of these life cycles are steep, resulting in a quick rise and fall, and some are more gradual in their approach.

The cycle can be broken down into five stages:

1. Acquisition—At this stage, the community identifies and invites potential members. These members are identified based on the community's goals and purpose. Members may be invited individually through mailing lists or advertising on different media platforms.
2. Onboarding - This is the introductory stage of the community, where users are introduced to its features and encouraged to explore the tools to get the most out of the community.
3. Engagement and retention—At this stage, the focus is on how to keep users engaged by introducing new features or starting more meaningful conversations. Constant engagement is necessary to make users come back again and again to the experience.
4. Departure—Despite trying to retain users, there will come a time when they want to leave the community. At this time, community managers can do two things: first, learn why the users are departing, and second, evaluate and upgrade the community's goals to retain the departing batch.
5. Reactivation—A community can be reactivated in two scenarios: if the goals and pursuits are upgraded or altered or the target audience is changed. Very few communities can reactivate themselves without changing anything major about them. If this stage is successfully crossed, the community returns to the first stage, the acquisition stage.

#### **7.4.2 Features and Purposes**

A few of the common features of these communities are as follows:

1. User profile: All members have individual user profiles that differentiate them from each other. Text-based handles or image-based profile pictures can denote these profiles. Online platforms also allow users to create and maintain anonymous profiles.
2. Discussion threads: These are usually comments on content posted by users listed chronologically. Many platforms also have the option of disabling these comments. These threads allow users to start a discussion on the post. Most of the time, these communities also have space for private one-to-one conversations, known as Chat Box or Direct Messenger.
3. Moderation: These communities also have moderators who govern the content shared in public space. These moderators ensure that the interaction remains respectful and does not breach any laws online.

These communities help in information and knowledge exchange. One may also professionally network on these platforms for project collaboration and management. At times, these communities also act to support and empower certain groups. Few communities work as a marketplace to sell products and, at times, for entertainment.

#### **7.4.3 Categories**

The online platforms facilitating these communities have been advancing with the advent of technology. Many communities range from discussion forums, such as

Reddit or Quora, to social media groups, such as LinkedIn Groups or WhatsApp groups. Then there are Niche communities, such as Good Reads for book enthusiasts and IMDB or Internet Movie Database for film buffs.

A few gaming communities where players worldwide join to play together have also enabled voice calling to discuss strategies live. Lastly, these platforms can also be divided by content. For example, YouTube and Vimeo are video-sharing platforms, while Instagram and Snapchat are images and short video-based platforms. On the other hand, Blogspot is a text-based platform.

Online communities allow individuals to bond, express and engage with each other like offline communities, albeit with the help of digital tools.

### Check Your Progress: 2

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. What is OIM or Online Identity Management?

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2. What are the different types of online communities?

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**Activity : 3** Join an online community based on a hobby you have. It could be a Facebook group or a Reddit thread. Observe the communication within the community. Check how the digital tools offered by the platform enable this conversation. Also, try to check the platform's Moderation policy. Lastly, compare it with a classroom and ponder how it differs from an offline learning space.

## 7.5 ONLINE PARTICIPATION

As discussed in the previous section, there is a considerable difference between online and offline communities. Thus, the participation would also differ comparatively. While serving as a social gathering, online communities offer the participants various levels or degrees of participation without discrimination. The digital tools also enable customization of the experience, making it unique for each user.

There are two main types of participation in online communities: Public participation and Private participation. Public participants are openly vocal about their opinions and post in public spaces regularly. They actively interact with the content and increase the traffic on the posts. On the other hand, the private participants are passive in their interaction. They would silently gather the information and would selectively react to the content. They may also communicate with other users by contacting

them on personal chat boxes, if at all. Due to its discrete nature, private participation is also known as lurking. Lurking allows users to observe and learn from the community without communicating.

### 7.5.1 Types of Participants

All online communities have set roles for the users or participants. These roles are like those involved in establishing offline communities. These can be listed as follows:

1. Community Architect: This is the first and foremost user who envisions a goal and builds a community around it, using digital tools in the case of an online community. Think of Mark Zuckerberg, who designed and programmed Facebook.
2. Manager: This is the second most important user. He runs the community and sets the rules and guidelines for better functioning.
3. Flag Bearers: These are the members who are invited to join first and act as the user ambassadors or endorsers of the community. Usually, celebrities or people of public standing act as opinion leaders.
4. Content creators: These members join to create content for the community and increase the platform's traffic. If the community is public, they are the users responsible for attracting advertisers.
5. Lurkers: As discussed earlier in this section, lurkers are the users who feed on the existing content and increase the advertising numbers.
6. Researchers: Lastly, a small group of users have joined the community to study the conversation and the platform for various purposes, ranging from technology to assessing marketing avenues.

These six broad categories also have subcategories and overlap, but they comprehensively summarize the virtual population of digital communities.

### 7.5.2 Participation Cycle

The interest of the users may ebb, and rise based on multiple factors. And that affects their participation style in these online communities. A pattern can be observed in the participation style of the user, in which they cross five of the following stages:

- Peripheral or Lurker—The participants begin by entering and observing the content and community practices. If comfortable, they become regulars.
- Inbound or Novice - Regular visitors start engaging with the community and begin with their attempts at content creation.
- Insider or Regular: After their content attracts traction, the users become more confident and experiment with their content-making styles. The community becomes a major part of their day.
- Boundary or Leader - An experienced content creator may start collaborating with other content creators or monetizing their presence. By this time, the user has emerged as an opinion leader for the community.

- Outbound or Elder—The users are preparing to leave the community at this stage. They would have extracted the maximum benefit from it and evolved as people. However, they may not have time to maintain a presence in the community.

### 7.5.3 Netiquette

All the communities create a code of conduct or rules to run effectively. A word made by joining ‘net’ and ‘etiquette’, these rules are necessary to facilitate interaction using technology. Although applicable to all forms of communication, be it over email or writing blogs, netiquette defines acceptable behaviour online. A few golden rules are:

1. Be polite and kind to all the participants, even when disagreeing with their opinions.
2. Be aware of other’s privacy, and make sure you never give out information about others.
3. Check facts before posting anything. The Internet makes background checks easy, and misinformation has spread faster than correct information.
4. Respond to messages regularly.
5. Update your online profile regularly with the latest information.
6. Language skills - Proper language and grammar are a basic need when communicating online. Using a lot of emojis, all capitals, or without spelling checks, are looked down upon.
7. Avoid trolling, spamming and cyber bullies.
8. Report anything that you feel is not abiding by the guidelines.

While the rules are not very different from those offline, one needs to stay alert to stay safe despite the promises of anonymity in virtual space.

#### Check Your Progress: 3

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. What are the different stages of the participation cycle?

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2. What is netiquette? Why do we need to learn it?

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## 7.6 ISSUES AND CONCERNS

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The virtual world offers multiple platforms and avenues to facilitate communication. However, online spaces also address several issues and concerns, such as offline spaces. And like the offline space, these issues also affect an individual's mental health.

First and foremost, the raging concern is Cyberbullying and online harassment. The aggregation of individuals voicing their opinions in public spaces always leads to the side-tracking of alternate viewpoints by those in the mainstream. When encountering individuals from diverse backgrounds, one needs to respect their diversity and adopt an approach of inclusivity in all communication. Some communities where online harassment is not monitored may experience negativity and toxicity.

Another major concern is the spread of misinformation and fake news over these platforms. In the era of information spreading at a click, one must be very careful while passing information. One may also become a victim of an online scam if not vigilant. While most of the issues can be addressed by effective moderation and community leadership, every user has a responsibility and must be vigilant to keep the communities safe for everyone. Lastly, addiction in these communities may lead to psychological issues within individuals, resulting in ill effects on their mental as well as physical health.

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## 7.7 LET US SUM UP

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In this Unit, you learnt the features of online identities and discovered how they are represented online. You also explored the concepts of online identity and impression management and learned their applications in today's era. You also encountered various online communities and overlooked the steps of their participation cycle. Lastly, you were taken through the issues and concerns arising from individuals' online presence and the importance of following etiquette relevant to the digital world.

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## 7.8 KEYWORDS

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<b>Attribute</b>	: A factor associated with an individual that can act as an identifier. For example, Date of birth.
<b>Authentication</b>	: verification of attributes associated with the individual through a process
<b>Biometrics</b>	: Information related to the persona of an individual. E.g., height.
<b>Digital identity</b>	: A set of attributes associated with an entity in the online sphere.
<b>Facial recognition technology</b>	: is a set of digital tools that can identify a human face and determine whether that face is present in an image.
<b>KYC (Know Your Customer)</b>	: a process through which companies gather data related to their customers.

<b>NFC (Near Field Communication)</b>	: A method of wireless communication between devices.
<b>OCR (Optical Character Recognition)</b>	: A tool to identify text from an image
<b>OIM (Online Identity Management)</b>	: OIM or Online Identity Management is establishing and maintaining an individual's positive online persona.
<b>Influencers</b>	: A person who is regarded as an expert in their field and has a considerable following.

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## 7.10 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress: 1

1. Different features of identity are:
  - Biological or Genetic factors - Skin, eye and hair colour, height, etc.
  - Conditioned - Personal characteristics, behavioural patterns, gender attributes
  - Learnt - Interests and hobbies, values, and political beliefs.
  - Socio-cultural influences - Cultural background, religious bent, social class
  - Psychological - Self-concept, mental health, emotion management
  - Experiential aspects - life experiences, education & work, relationships
2. Online identity is the way a person represents themselves on a digital platform. Online identities are an amalgamation of the offline personality of the individual and a curated online persona. The offline personality includes the values and experiences of the person, while the curated persona is the carefully crafted version designed for specific contexts.

**Check Your Progress: 2**

1. OIM, or Online Image Management, establishes and maintains an individual's positive online persona. It is a complex process that requires a systemized approach to building this persona, establishing it across platforms, and maintaining cordial relationships with all stakeholders.
2. There are many types of communities, ranging from discussion forums to niche communities to gaming communities. These platforms can also be divided by content. For example, YouTube and Vimeo are video-sharing platforms, while Instagram and Snapchat are image- and short-video-based platforms. On the other hand, Blogspot is a text-based platform.

**Check Your Progress: 3**

1. Different stages of the participation cycle are:
  - Peripheral or Lurker
  - Inbound or Novice
  - Insider or Regular
  - Boundary or Leader
  - Outbound or Elder
2. Netiquette is a word made by joining 'net' and 'etiquette'. 'It refers to rules necessary to facilitate interaction using technology. Although applicable to all forms of communication, be it email or blogging, netiquette defines acceptable behaviour online.'

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# **UNIT 8 POP CULTURE AND ONLINE EXPRESSION**

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## **Structure**

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## **8.0 INTRODUCTION**

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Pop culture is discussed much, but do we know what it means? Pop culture refers to a culture aimed at the younger generation and transmitted through the mass media. Popular culture is a set of beliefs, values, actions, objects, or goods and practices that are popular at any given time and space. It refers to things like art, literature, fashion, dance, film, television, magazines, and ways of living. “Popular culture is intimately connected with education, mass communication, production, and a society’s ability to access knowledge” (Campbell).

This Unit will discuss different aspects of popular culture and online expression. In doing so, we would define different terms related to culture (pop culture, mass culture, high culture, and low culture). Further, we will describe the rise of pop culture. In doing so, we will discuss the concepts of cultural values and pop culture, consumption of pop culture, pop culture as mass expression, digital media, and pop culture. We would also describe the rise of digital media and its popularity leading to cultural convergence. In this Unit, we will also define online expression and its concept of creation and consumption (prosumers). We would differentiate between different types of online expression. We would also analyse different concerns related to online expression, viz., Real vs Virtual, Privacy Issues, fake news, deep fake, Trolls, Cyber Bullying, Identity Theft and Freedom of expression or toxic. Broadly, all these topics will be discussed to provide a better understanding of popular culture and online expression.

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## **8.1 LEARNING OUTCOMES**

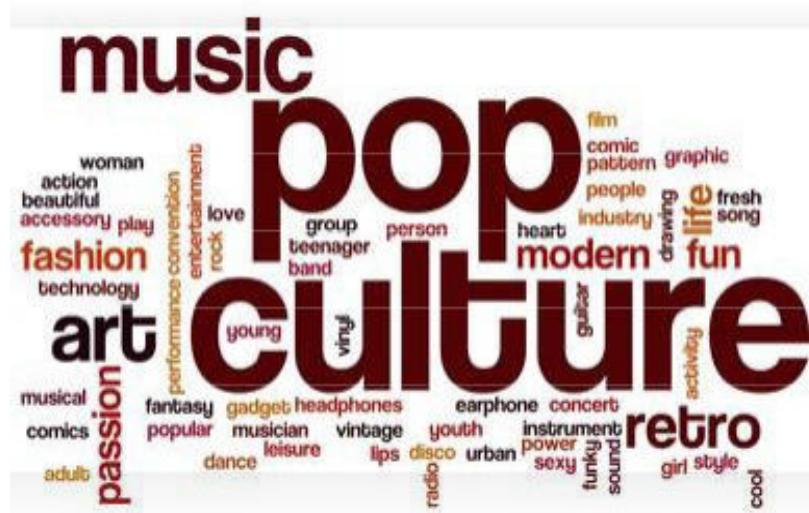
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After completing this Unit, you should be able to:

- Define different terms related to culture (like Pop Culture, Mass Culture, High Culture, Low Culture);
- Describe the rise of pop culture. In doing so, discuss the Cultural Values and Pop Culture, Consumption of Pop Culture, Pop Culture as Mass Expression, Digital Media, and Pop Culture;
- Describe the rise of digital media and its popularity leading to cultural convergence;
- Define online expression and its concept of creation and consumption (prosumers);
- Differentiate between different types of online expression; and
- Analyse different concerns related to online expression (viz., Real vs Virtual, Privacy Issues, fake news, deep fake, Trolls, Cyber Bullying, Identity Theft and Freedom of expression or toxic).

## 8.2 UNDERSTANDING POP CULTURE

Popular culture has different meanings based on its varied definitions in different contexts. Generally, it is recognised as the people's culture predominating in a society at a given time. Barry Brummett (1991) explains that pop culture involves the aspects of social life most actively involved by the public. As the 'culture of the people', popular culture is determined by the interactions between people in everyday activities: styles of dress, slang, greeting rituals and the foods people eat are all examples of popular culture. The mass media also inform popular culture. Popular culture encompasses the most immediate and contemporary aspects of our lives, subject to rapid change in the present highly technological world where people come closer in a global village due to media. Because of its commonality, pop culture reflects and influences people's everyday lives. Also, brands like Nike, Adidas, Maggie, and Amul can attain iconic status in pop.



Source: Adobe Stock, <https://stock.adobe.com/search?k=%22pop+culture%22>

"Popular culture consists of the aspects of attitudes, behaviours, beliefs, customs, and tastes that define the people of any society. So, in the historical term, one can say that popular culture is the culture of the people." (Ray Browne, in his essay 'Folklore to Populore') Thus, popular culture may be defined as the products and forms of expression and identity that are frequently encountered or widely accepted, commonly liked, or approved, and characteristic of a particular society at a given time.

Popular culture is a lens to view other cultural groups (Martin & Nakayama, 2011). Popular culture helps people learn about other cultures, reaffirm their identities, and reinforce stereotypes. One can sort the world into regions based on cultural attributes. We can also sort the material artefacts of culture into three general attribute areas: popular, high, and folk culture. Pop culture is a phenomenon in which many people in different places adopt the same or similar cultural practices due to globalisation. Seemingly timeless yet elite aristocratic expressions of culture are known as high culture.

From an intercultural communication perspective, popular culture is usually our first exposure to other cultures.

We can also see that pop culture has several positive impacts on our society:

- Promotion of Unity in Diversity: Pop culture celebrates diversity, breaks down stereotypes, and promotes inclusivity. Through various forms of media, pop culture showcases characters and stories from different backgrounds, encouraging tolerance and understanding among different groups.
- Social Awareness: Pop culture raises awareness regarding relevant social issues. TV shows, movies, and music often address topics like discrimination, mental health, and environmental concerns. It sparks discussion and encourages positive change.
- Inspiration and Aspiration: Pop culture inspires individuals to pursue their passions and dreams. When one sees successful people in the entertainment industry or other fields, it can motivate them to strive for success and personal growth.
- Community Building: Pop culture provides a sense of community and belongingness. Fan communities are formed around popular books, movies, TV series, and video games. This allows people to connect, share their interests, and build supportive networks.
- Creativity and Innovation: Pop culture encourages creativity and innovation. It inspires artists, writers, musicians, and designers to create new works and push the boundaries.
- Economic Growth: The entertainment industry contributes to economic growth by providing jobs, tourism, and revenue. It supports countless careers in different creative and technical fields.
- Cultural Exchange: Pop culture fosters cultural exchange. It allows people from different cultures to learn and appreciate each other's traditions, customs, and art forms.
- Entertainment and Stress Relief: Pop culture serves as a source of entertainment and relieves stress. It provides an escape from the demands and pressures of everyday life, offering comfort and relaxation.
- Charitable Initiatives: Celebrities mostly use their popularity to support charitable causes, raising funds and awareness for various social issues.
- Education and Learning: Educational programmes and documentaries inspired by pop culture can make learning engaging and more accessible.

### **8.2.1 Pop Culture as Mass Culture**

The concept of culture as something that can be manufactured and consumed at a mass level comes from the modern industrial society. The capitalist interest in having economic gains drives the process of cultural production and signification. Thus, cultural artefacts and phenomena of this sort are described as 'mass culture'. This culture is perceived to have negative connotations of assembly-line uniformity and lack of originality, taste, and refinement, which is considered a mark of true culture. So, popular culture has a huge appeal and connects many people to one unified cultural identity.

The distinction between popular and mass culture is of recent origin. This distinction comes from the assumption that the mass-scale production, distribution, and consumption of cultural commodities/artefacts in industrial societies turn the audience into passive targets. Horkheimer and Adorno brought up the concept of ‘culture industry’. In the culture industry, culture is defined as a universal homogenised product based on public preference to make economic gains. In this kind of construct of cultural signification, it is seen that there is almost no room for any individual or collective role or agency as it is assumed that the audience is the unquestioning recipient of the industrially pre-determined meanings attached to the commodities. From this perspective, ‘culture’ in an industrial society means whatever the owners of the means of production assign a meaning to it. So, it is clear that the notion of mass culture is producer-centric. It does not refer to consumers integrating cultural commodities into their lives in different ways and contexts. This integration often deviates from its intended meaning.

Pop culture, also known as Low culture, is described as commercially successful, self-sustaining, and self-perpetuating (Stott, 2004). One such example is social media’s video challenges and reel culture. In pop culture, there is always an urge to look for “new” news. This news often comes from previous generations, other cultures, or folk cultures and is often considered an unintentional revolutionary.

Pop culture originated during the late 18th-century American Industrial Revolution. During this time, rural people migrated to big cities in large numbers (McAdams, 2014). This made the cities densely populated, and news of cultural items spread rapidly. The mass production and the rise of the middle class made consumption of cultural items less expensive. After World War II, innovations in mass media technology led to significant cultural and social changes. This mass media broadcasts about the cultural products/artefacts accessible to all. Pop culture celebrates the people who experience it.

### 8.2.2 High Culture

Learners, when we talk about High Culture, it is not meant for mass consumption. It is not even easily available to everyone. Consumers of high culture need training or education to appreciate its benefits fully. It is also seen that consumers of high culture would have to purchase costly equipment and memberships to participate in their activities. Thus, the high culture belongs to social or economic elites. It does not move into the realm of the masses. In Western society, examples of high culture could be opera, ballet, classical music, an appreciation of fine wine, or horse polo matches. This is a “sophisticated” taste. In Indian society, one can consider classical music, dance, old paintings, sculpture, and classical drama/theatre. The items of high culture seldom cross over to pop culture. Many times, popular culture is looked down upon. It is considered superficial and cheap compared to the sophistication of high culture.



Source: PNG Wing, <https://www.pngwing.com/en/free-png-vuwou>



Source: iStock, <https://www.istockphoto.com/vector/vienna-court-opera-giovanni-varrone-court-opera-gm1411809750-461484496>

### 8.2.3 Low Culture

Low Culture refers to the masses' habits, tastes, hobbies, and interests. It contrasts with high culture, which, as discussed above, is the culture of the upper-class elite. The terms 'low culture' and 'lowbrow' are derogatory. These terms highlight the lack of sophistication and the tastes of people who are not elite. Low culture examples come from food, entertainment, sports, and shopping. It includes fast food, football/ cricket culture, cheap beverages/ cold drinks, fast fashion, and trashy television content.



Source: 123RF, [https://www.123rf.com/photo\\_17148800\\_abstract-word-cloud-for-low-culture-with-related-tags-and-terms.html](https://www.123rf.com/photo_17148800_abstract-word-cloud-for-low-culture-with-related-tags-and-terms.html)

### 8.2.4 Mass Culture

Under Mass Culture come the widely consumed cultural products and practices disseminated through mass media. John Storey (1994) defines mass culture as "culture produced for, by, and within the institutions of mass society: the media, the entertainment industries, and the education system" One can see that this definition highlights the industrial production and widespread distribution of cultural products. Toby Miller (2008) emphasises the audience aspect, viewing mass culture as "a range of cultural products that are produced for a relatively large and undifferentiated audience".

In the Indian context, mass culture transcends regional and social divides. Let us take the example of Bollywood films. These films, with their elaborate song-and-dance routines, melodramatic storylines, and larger-than-life characters, epitomise mass culture's appeal to a broad audience (Nicholas, 1990). Similarly, the rise of reality TV shows and social media trends often transcend regional and social barriers; it creates a shared cultural experience for millions of Indians. However, the dominance of mass culture raises concerns about the potential homogenisation of diverse regional art forms. Also, the influence of Western media leads to questions of cultural imperialism (Appadurai, 2000).

### Check Your Progress: 1

- Note:** 1) Use the space provided below for your Answers.  
2) Compare your answers with those given at the end of this Unit.

1. Define Popular Culture.

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## 8.3 RISE OF POP CULTURE

Learners, let us discuss the rise of popular culture. When one examines human history, one can observe that the masses were influenced by dogmatic rules and traditions dictated by local folk culture. Most people were spread throughout small cities and rural areas. With the beginning of the Industrial Revolution (late eighteenth century), rural people began to migrate to cities, leading to the urbanisation of most Western societies.

Urbanisation is a necessary element in the formation of popular culture. People who were earlier living in homogeneous small villages found themselves in crowded cities with great cultural diversity. These diverse people would see themselves as a 'collectivity' resulting from common or popular forms of expression. So, many scholars trace the beginning of the popular culture phenomenon to the rise of the middle class brought on by the Industrial Revolution.

With the mass production of Industrialization also came:

- The developments in transportation (steam locomotive and the steamship);
- Advancements in building technology;
- Increased literacy;
- Improvements in education and public health, and
- The emergence of efficient forms of commercial printing (ex, the penny press, magazines, and pamphlets). This began the mass media revolution.

All the above factors contributed to the development of popular culture. By the start of the twentieth century, the print industry mass-produced content for consumption. The print industry includes illustrated newspapers and periodicals,

serialised novels, and detective stories. The ideas expressed in print media provided a starting point for popular discourse on different topics. Films, broadcast radio, television, and digital media profoundly influenced culture.

We can conclude that industrialisation, urbanisation, the mass media, and the continuous growth in technology since the Industrial Revolution have contributed to the formation of popular culture.

### 8.3.1 Cultural Values and Pop Culture

Learners, let us discuss how cultural values and pop culture are related. Exposure to popular culture leads to the formation of certain cultural values. What cultural values are promoted through popular culture products, and how do they shape a society's value system? Let us discuss the impact of pop culture in shaping experience, learning, value systems, and decisions through specific research.

Daniel and Musgrave (2017) illustrate that the "synthetic experiences" of pop culture and social media (films, novels, television, video games) can change beliefs, reinforce pre-existing views, or even displace knowledge gained through more traditional ways of learning about other cultures. Forex, Tom Clancy's book influenced US relations with the Soviet Union and 9/11.

Abdullah (2019) studied the correlation between the willingness to learn English and exposure to pop culture and social media. The correlation was high, so the author encouraged teachers to allocate as much time as possible to using pop culture to help students learn English.

Chen Guo Ming (2012) states that pop culture and social media "not only influence the form and content of information/messages, but they also affect how people understand each other in the process of human communication, especially for those from different cultural or ethnic groups." He explores changes in e-communication, cultural identity, intercultural relationships, adaptation, and intercultural conflict.

### 8.3.2 Consumption of Pop Culture

People negotiate their relationship with pop culture in interesting and complex ways. People resist and actively consume popular culture to maintain or reshape their identities. Individuals also feel they should participate if a social group participates in any form of pop culture. Moreover, if a social group shows concern about pop culture, individuals will refuse to engage with that form.

The phenomenon mentioned above can be seen in the case of Facebook. As per Statista.com (2019), seventy-nine (79 %) per cent of 18-49-year-olds in the United States used Facebook, while only forty per cent (40%) of the 65 and older age group were using the same. According to the Pew Research Center (2019), 18-24-year-olds embrace a variety of platforms (YouTube 94%, Snapchat 78%, Instagram 71%, and Twitter 45%) by visiting those platforms multiple times (71%) in a day. Thus, popular culture does not need to win over the majority to be considered 'popular.' With the usage of approximately one-fourth of the global population, Meta (Facebook) can be considered one of the epitomes of pop culture.

Kathryn Sorrells (2013) has put three ways which can make a person informed consumers of popular culture.

- i. First, people should increase their awareness of the role of the media in forming views, normalising ideas, and spreading stereotypes.
- ii. Second, we need to understand that there is a choice in what media we consume and what we do not.
- iii. Third, there is no need to accept everything that mass media promotes.

So, an aware consumer would use these cultural products for their benefit rather than becoming a crash representative of this culture.

### 8.3.3 Pop Culture as Mass Expression

Pop Culture influences mass expression, whether social, political, economic, or cultural. Through this pop culture, the tastes, likes and dislikes of the masses are expressed. This can take the form of adopting a new cultural artefact, raising a voice in favour of or against an issue, or organising online social or political activism.

The centrality of social media as a space for self-expression and identity negotiation for young people (Boyd, 2014) allows for the study of youth social and political expression. Social media provides a distinct view into youth (political) expression in naturally occurring contexts, where young people interact according to their preferred way of expression.

Jenkins et al. (2016) reveal that youth activist groups aimed to achieve change “by any media necessary,” while heavily relying on references and content from popular culture. Jenkins et al. (2016) introduced the term “civic imagination”. This term describes the ways young people employ popular culture and imaginary worlds as they “identify and frame political issues in language that speaks to themselves and their peers.” Popular culture references are particularly important for young people who are not yet politically engaged but rather are negotiating their relationship to the political realm (Kligler-Vilenchik, 2016).

Social media provides a platform for “collective political expression” for youth. It allows them to deliberately connect to an assumed like-minded audience through shared symbolic resources (Literat & Kligler-Vilenchik, 2019). The collective mass (social, political, cultural) expression is a hybrid between interpersonal communication (with known people) and broadcasting the content to a large (unknown) audience. In working towards a collective political expression, youth communicate with an imagined audience (Litt & Hargittai, 2016). The youth may imagine their audience as similar or dissimilar to themselves, socially, politically, culturally and in terms of other variables (age, gender, interests, etc.).

Popular culture plays a role in the potential bridge by bringing together socially, politically, economically, and culturally heterogeneous audiences. It also provides shared symbolic resources for collective political expression (Kligler-Vilenchik & Literat, 2018; Literat & Kligler-Vilenchik, 2018, 2019). Thus, popular culture becomes a means for mass expression on issues of common interest to the masses.

### 8.3.4 Digital Media and Pop Culture

In the present times, digital media has become an undeniable force in shaping and disseminating popular culture. This convergence transcends traditional media channels

and fosters a participatory and interactive environment. Social media allow for the rapid spread of memes, viral trends, and fan communities dedicated to specific pop culture phenomena. Content creators use platforms like Instagram, Facebook, WhatsApp Channels, YouTube and TikTok to showcase their talents and achieve viral fame. This blurs the line between professional production and amateur creativity. Also, digital media empowers consumers to become active participants, engaging with content through comments, reactions, and discussions, fostering a sense of community and influencing the evolution of pop culture trends. This dynamic interplay between creation, consumption, and interaction has redefined the landscape of popular culture in the digital age.

In the social media age, we can get an immediate response to any trend or pop culture event. The audience has the power to shun a trend or make it relevant. Social media has also been instrumental in reviving a pop culture trend from the 1950s and amplifying its presence in present times. At the same time, mass consumption has also shortened a trend's shelf life. In pursuing a celeb's style, we also look like their copy and lose our originality.

Email and text messages are increasingly used to directly transmit information about vital news events. Barack Obama announced his selection of Joe Biden as his vice-presidential running mate in the 2008 election via text message to 2.9 million people.

Due to all these, the Internet has become a pop culture force. It is a source of amateur talent and amateur promotion. However, traditional media outlets still maintain much control and influence over pop culture. Many singers or writers who first make their mark on the Internet quickly transition to traditional media and new media stars are quickly absorbed into the old media landscape.

The Internet and social media allow little-known individuals to reach a huge audience through their art, opinions, or creations. It allows content creators to reach fans directly. The established pop culture/mass media circles turned down many examples of projects and became hit through digital media. Daniel Suarez and Amish Tripathi became famous as writers through social media. These are fascinating times as they allow everyone to participate in this pop culture as a consumer and creator.

### **Check Your Progress: 2**

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Write three ways which can make a person informed consumer of popular culture.

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## **8.4 DIGITAL MEDIA**

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The 21st century has significantly changed how humans communicate, share information, and consume entertainment. This transformation has happened due to

the rise of digital media. Digital media is a vast and ever-evolving domain that encompasses text, images, audio, video, and interactive experiences. This digital revolution reached its height with the rise of online and social media platforms, which are altering the social connections of the world.



Source: Flaticon, [https://www.flaticon.com/free-icon/social-media\\_902765](https://www.flaticon.com/free-icon/social-media_902765)

#### 8.4.1 Rise of Digital Media

The invention of the Internet can be attributed to the beginning of digital Media. As a global network of interconnected computers, the Internet laid the groundwork for disseminating digital content on a large scale. Significant computing devices turning into small smartphones/ watches and tablets further advanced the digital media revolution. These portable devices allow users to access and create content anywhere and anytime.

Also, the lower technology prices and the huge growth in storage capacity revolutionised the whole digital media and online communication scenario. All these developments created a fertile ground for the emergence of online and social media platforms. The online and social media platforms made the concept of the information age and the global village a reality. The geographical barriers became virtual non-entities, and people could share information and ideas effortlessly in real-time. As discussed above, the ability to create and share user-generated content (blog posts, photographs, videos, or even music) empowered individuals to become active participants in the digital landscape. Due to social media platforms, there is a constant stream of entertainment content, news feeds, funny videos, and live broadcasts. These contents captivated users and fostered a sense of endless engagement.

Learners, let us briefly discuss key points of how digital media developed and rose to its present-day stature. The seeds of digital media were sown in the 1960s and 1970s. The invention of mainframe computers and the initial Internet, pioneered by projects like ARPANET, laid the foundation for the interconnected exchange of digital information. In the 1970s and 1980s, personal computing began with the Apple II. This machine empowered individuals to create and share information through rudimentary forms of digital communication, such as Bulletin Board Systems (BBS). However, the real development of the Internet happened with the arrival of the World Wide Web in the 1990s. The web browsers (Mosaic and Netscape) made accessing online information more user-friendly. Also, email became the initial communication tool of the present digital age.

This digital revolution accelerated in the 2000s. Broadband Internet has become affordable in an era of hyper-connectivity, and smartphones have become ubiquitous. Social media platforms, with pioneers like Facebook, YouTube, and Twitter, redefined how we connect, share, and consume information. Today, as we navigate the 2020s, Artificial Intelligence, Virtual Reality (VR), and Augmented Reality (AR) are emerging as the next frontiers of digital media, blurring the lines between the physical and virtual worlds.

In India, digital media rose almost simultaneously with the world. India's first computer centre was established in the 1960s. In 1975, the Satellite Instructional Television Experiment (SITE) was launched. In the late 1990s, Videsh Sanchar Nigam Limited, India's first Internet service provider, brought the dial-up Internet. In the 2000s, the real digital boom happened in India. Internet penetration increased, and the costs of mobile phones declined. Social media platforms fostered digital communities. The mobile-first Internet era came with Reliance Jio's 4G services launch in 2016. WhatsApp, Instagram, and Twitter have changed all online interactions.

Indian government launched the "Digital India" programme to bridge the digital divide and empower citizens. Artificial intelligence, Big Data, and the rise of indigenous social media platforms like ShareChat and Chingari are shaping the future of India's digital landscape.

#### **8.4.2 Popularity of Online and Social Media**

Social media is a major element of Internet culture, significantly impacting our interactions. For instance, reel-making and video challenges are necessary pastimes of Internet users. Social media helps nurture how we communicate online, which differs from how we communicate in face-to-face conversations. Sentences can take on different shades of meaning, depending on grammar.

Several factors contributed to the phenomenal popularity of online and social media. Convenience is the supreme reason for its growth. These platforms are readily accessible on any connected device, a significant advantage in our fast-paced world. Interactivity and engagement are other aspects which make this medium popular. The users can actively participate through comments, shares, and discussions and develop a sense of community/ belonging with others with similar interests. The constant influx of updates and information keeps users engaged and informed. This creates a Fear Of Missing Out (FOMO) that fuels the continued participation of the users.

Recent data from Datareportal (January 2024) reveals that over half of the world's population (62.3%) now uses social media. This translates to a staggering 5.04 billion people actively engaging with these platforms. India also reflects this global trend. According to Forbes Advisor (2023), social media penetration in India has reached 33.4%, with 40.2% of the population aged 18 and above actively using social networks. Instagram is the most popular platform in India, with a user base exceeding 516.92 million.

#### **8.4.3 Cultural Convergence**

Learners first need to understand what convergence is. Convergence means bringing together different ideas and values to make one entity. The same is the case with cultural convergence, where different cultures come together to become multitudes

and form a unique culture accompanying the attributes of all those cultures. One culture influences the other, and thus, both cultures converge.



Source: PNG Wing <https://www.pngwing.com/en/free-png-zqsij>

Global convergence is the process of geographically distant cultures influencing one another despite the geographic obstacles that separate them. Nigeria's "Nollywood" cinema takes its cues from India's "Bollywood," which comes from Hollywood.

The advantage of global convergence is worldwide access to a wealth of cultural influence. Its negative effect can be the threat of cultural imperialism. Cultural imperialism is how developing countries are "attracted, pressured, forced, and sometimes bribed into shaping social institutions to correspond to, or even promote, the values and structures of the dominating centre of the system. (Schiller, 1969). In other words, less powerful nations lose their cultural traditions as more powerful nations spread their culture through their media and popular culture. Cultural imperialism can be a formal policy, or it can happen more subtly, as with the spread of the outside influences of popular culture.

When culture becomes a commercial commodity, the fear of the homogenisation of cultures rises. People worldwide learn to dress, eat, consume, and communicate similarly. Like Jeans have become universal clothing worldwide, localised cultural diversity could become endangered as a dominant, globalised culture becomes the norm. Martin & Nakayama (2011) state, "There is no easy way to measure the impact of popular culture, but we need to be sensitive to its influences on intercultural communication because, for so many of us, the world exists through popular culture."

Cultural diffusion is about the geographical and social spread of different aspects of one or more cultures. Global convergence is more about the import of a cultural product from one place to another. Cultural diffusion is about the creative processes and adaptation of cultural traditions/ideas. There are many types of cultural diffusion, but some examples would be the US-originated fast-food restaurant McDonald's, which has developed different menu items for different parts of the world. For example, they developed the concept of McAlloo Tikki in India.

**Check Your Progress: 3**

- Note:** 1) Use the space provided below for your Answers.
- 2) Compare your answers with those given at the end of this Unit.
1. Briefly describe the beginning of Digital Media.

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## 8.5 WHAT IS ONLINE EXPRESSION?

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Pop culture provides youth many avenues to explore and express their identity better. Youth are attracted to pop culture as it makes them stand against the crowd. Many people who cannot figure out their own identity express themselves in terms of a character or icon they relate to. Social media is full of people who have spoken about pop culture icons and characters that helped them to accept themselves. Many even come out of the closet. Thus, pop culture helps people grow and become more accepting due to the vast representation of various pop culture genres.



*Source: Shutter Stock, <https://www.shutterstock.com/search/political-commentator>*

Youth express themselves openly and naturally on social media. Many types of research confirm the role of social media as a significant space for youth's social connections (Boyd, 2014) and political expressions (Lane et al., 2019; Literat & Kligler-Vilenchik, 2019).

Online expression means creating and reacting to content online. This can be done through blogs, videos, podcasts, images and even communications (comments and interactions). Online expression can also be seen as how individuals and groups use digital platforms to create, share, and experience information and ideas. It is an ecosystem where users consume content and actively participate in its creation and circulation. Thus, it is called prosumers, and this phenomenon is mass self-communication. Boyd (2014) defines online expression as "how people use the affordances of online and networked communication to construct, project and manage their identities and relationships with others". Hargittai and Papacharissi (2009) view online expression as "the creation and circulation of messages through the Internet and associated digital technologies."

Online expression operates on a spectrum between creation and consumption. On one hand, users actively generate original content like blog posts, photos, videos,

and online art. On the other hand, they engage with existing content by reading articles, watching videos, or listening to music. It is important to note that even consumption can be interactive. Through commenting, sharing, and reacting, users influence the reach and meaning of existing content. Let us briefly discuss both these concepts of creation and consumption.



Source: Freepik, [https://www.freepik.com/premium-vector/refer-friend-concept-your-own-benefit\\_5516278.htm](https://www.freepik.com/premium-vector/refer-friend-concept-your-own-benefit_5516278.htm)

out expression where it occurs.

Naturally, most prominently, it is on social media. Recent research confirms the role of social media as a salient space for young people's social connections (e.g., Boyd, 2014) and political expression (e.g., Lane et al., 2019; Literat & Kligler-Vilenchik, 2019).

### 8.5.1 Creation

Learners, as put above, online expression, thrive on a dynamic interplay between creation and consumption. There is an active generation of original content for digital platforms in the online creation. This includes a textual dimension, where users write blog posts, articles, or social media updates, often weaving them with their narratives and viewpoints. Creating and sharing photographs, digital art, and infographics come in the visual sphere. In the auditory and video sphere, podcasts, music, vlogs, and live streams are mostly uploaded. Online games, simulations, and other engaging experiences are developed through interactive creation. So, the online creation is characterised by originality. It demands active user participation and tailoring content to the specific requirements of a platform.

### 8.5.2 Consumption

Online consumption focuses on the process of accessing and engaging with existing content. The consumption happens in various forms, including reading articles, news stories, and social media updates, often accompanied by comments and discussions. The visual dimension encompasses viewing images, videos, live streams, and online courses. The auditory aspect of online consumption thrives on podcasts, music, audiobooks, and webinars. Online platforms utilise algorithms to curate content for users based on their past activity, thus facilitating the discovery of content that the user might be interested in. Consumption can be seen as passive, with user/s simply absorbing content. However, it often needs a degree of interaction. Liking, commenting, sharing, and reacting contribute to the online discourse.

Platforms often enable user-generated comments and reactions, which act as a form of micro-creation in response to existing content. Similarly, some consumption activities, like writing reviews or curating playlists, involve selection and organisation. This blurs the line between passive consumption and active participation in the online environment.

#### Check Your Progress: 4

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. What is Online Expression?

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## 8.6 TYPES OF ONLINE EXPRESSION

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There are multiple ways in which people can express their ideas, views, opinions, and creativity on online platforms. These expressions can take different forms depending on the medium and form of expression. Thus, certain types of online expressions are identified and discussed below.



Source: iStock, <https://www.istockphoto.com/search/2/image?mediatype=illustration&phrase=social+media+influencer>

### 8.6.1 Blog

A blog is an online diary where people write what they feel and think about. It is like a personal expression in the form of this online space. Blogspot and WordPress provide space for writing blogs. Blogbasics (2017) defines a blog as a ‘frequently updated online personal journal or diary’. Blogs mostly allow readers to comment on the blog posts. A typical blog will feature text, images, videos and links to related blogs and websites. A blog is a website where entries are displayed in reverse chronological order.

Blogs allow anyone with Internet access to reach millions of audiences. The celebrity gossip chronicler Perez Hilton had no formal journalism training when he started

his blog, PerezHilton.com, in 2005. However, within a few years, he had reached millions of readers.

### 8.6.2 Vlog

A vlog is a form of blog where the medium of expression is primarily video. Vloggers mainly document their lives, experiences, or expertise through video content. Vlogging is a form of online expression where individuals or content creators share their thoughts, experiences, or expertise through video content. Vlogs often provide a personal and authentic glimpse into the creator's life, interests, or expertise. It fosters a sense of connection and engagement with the audience. Vloggers typically use platforms like YouTube, Facebook, and Instagram to upload their videos. The viewers can subscribe to their channels, like, comment, and share their content.

Vlogs can come in different formats, such as daily, travel, educational, and more. Content creators may use storytelling, humour, or informative narration to convey messages to their audience effectively. Vlogs are a versatile medium for showcasing creativity and sharing the creator's passion. They also help build a loyal online following. People also do vlogging to earn money.

### 8.6.3 Social Media Posts

Social media posts are short-form content shared on social networking platforms such as Facebook, Twitter, Instagram, and LinkedIn. They can include text, images, videos, links, polls, etc. Social media allows users to express themselves, share information, and engage with their network of people.

Social media posts serve diverse purposes. They can share personal updates, news articles, opinions, memes, promotional content, and more. Users and their network can interact with posts by liking, reacting, commenting, sharing, facilitating conversations, and fostering community engagement.

Let us discuss some examples. A tweet on Twitter sharing a breaking news story with a brief comment expressing the user's opinion or reaction is a common example of a social media post. One can also share achievements or losses in one's personal life through social media posts.

Another form of social media post is memes. Memes are a way to express emotions, whether from frustration or sadness or to make others laugh. They have an immense effect and influence on pop culture. Owing to their viral nature, Internet memes reach millions of online users. They touch on various topics like politics, mental health, or satire.

### 8.6.4 Reels

Reels are short-form video content typically found on social media platforms like Instagram, Facebook, TikTok (banned in India), and YouTube Shorts. They are usually 15 to 90 seconds long and feature quick cuts, music, special effects, and creative editing techniques to capture viewers' attention.

Reels provide an engaging and entertaining way for users to share snippets of their lives, showcase their talents, participate in trending challenges, or promote products and services. The users often use popular music tracks, viral trends, and creative

storytelling to appeal to a wide audience and increase engagement. Let us discuss an example. A dance challenge video posted on Instagram reels featuring catchy music, choreographed dance moves, and creative editing techniques is a typical example of a reel.

### 8.6.5 Web Journal

A web journal, also known as a blog, is an online platform where individuals, organisations, or businesses publish articles, essays, or personal reflections on various topics of interest. Blogs, as discussed above, allow writers to share their thoughts, insights, expertise, and experiences with a global audience through written content.

Blogs can cover many topics, including lifestyle, fashion, travel, technology, health, business, politics, and more. They provide a platform for writers to express themselves, educate their audience, share valuable information, and establish themselves as thought leaders in their respective fields. For example, The Huffington Post is a prominent web journal which features articles and opinion pieces on politics, culture, entertainment, and current events. A diverse team of writers and contributors authors these posts.

### 8.6.6 Podcasting

A podcast is a digital radio or video programme which can be downloaded from the Internet. Subscribing to a podcast is like a blog. One can listen to a whole range of programmes and voices on podcasts. In the same way, as blogs have allowed users to become writers without having to deal with an editor in a media organisation, podcasting has allowed people to be interested in becoming a broadcaster. Many traditional radio shows are now available in a podcast format. Users see podcasts as the “Netflix for radio”.

‘Podcatching’ software allows users to download the latest edition of any podcast to which they subscribe automatically. Most people use iTunes; go to [www.apple.com/iTunes/store](http://www.apple.com/iTunes/store) for information on podcasting and a huge list of available podcasts. One can listen to the file on their computer or transfer it to an iPod or MP3 player. Podcasts are usually free; the most successful ones have high-quality content and production value.

Podcasts are usually recorded and edited using home equipment. Specialised podcasting software such as Apple’s Garage Band or QuickTime Pro is available. These packages make it simple to record, mix and format the audio files correctly. Just like bloggers and vloggers, many podcasters are attempting to figure out ways to turn listeners into revenue.

Twenty-one per cent of Americans have listened to a monthly podcast, the same number of Americans that use Twitter. In addition, 75% of podcast listeners act on a sponsored message, which creates a vast potential audience for marketing messages (Main, 2016). Podcasts, thus, offer an immense opportunity for marketers. The bottom line is that the users can now get content to their target markets. In doing so, they need not persuade a media channel to carry it or to pay substantial advertising rates.

### 8.6.7 Web Radio

Web radio, or Internet radio, refers to radio stations broadcasting their content over the Internet rather than traditional FM or AM frequencies. Web radio offers listeners

various programming options, including music, talk shows, podcasts, news, etc. These programs are accessible from any Internet-connected device.

Web radio stations cater to diverse interests and preferences, offering niche programming, curated playlists, and live broadcasts tailored for specific audiences. Listeners can tune in to their favourite stations, discover new music, and engage with hosts and fellow listeners through interactive features like live chats and social media integration.

For Example, NPR (National et al.) streams its radio programs online. Listeners can access live broadcasts, on-demand shows, and podcasts from their website or mobile app, which provides a comprehensive and convenient listening experience.

### 8.6.8 Web TV

Web TV, also known as Internet television, refers to television content streamed over the Internet rather than broadcast through traditional television networks. Web TV platforms offer a wide range of programming options, including TV shows, movies, documentaries, news, and original series, accessible on-demand, or live streaming.

Web TV platforms like Netflix, Amazon Prime Video, Hulu, and Disney+ provide subscribers with a vast library of content that caters to diverse interests and preferences. Viewers can binge-watch their favourite shows, discover new content, and enjoy high-quality entertainment from the comfort of their homes or while travelling.

#### Check Your Progress: 5

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Define a Blog and mention its characteristics.

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## 8.7 SOME CONCERNS

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Online expression has many benefits, including expressing your feelings and thoughts, sharing opinions, bringing people together for a cause, and even shaping political engagements. However, there are many concerns related to this medium. Some of the concerns discussed in this section are real vs. virtual, privacy issues, fake news and deep fake, trolls, cyberbullying, identity theft, and freedom of expression or toxins. Let us discuss these concepts one by one.

### 8.7.1 Real Vs. Virtual

There is a difference between the real-world experiences where we live and the created online universe in which we indulge and interact, which we put as virtual. The two have a stark boundary, but the lines are blurring. Due to this blurring of

lines, there is social isolation and a distorted sense of self-worth among the users who heavily invest time and create a virtual identity in online spaces. A study by the Loneliness and Isolation Lab at the University of Chicago (2020) shows that more than 30% of Indian youth feel lonely ‘often’ or ‘always’. Social media use was identified as a potential contributing factor in those cases. More engaging in online interaction leads to neglecting real-world relationships, which results in a sense of disconnection.

The created/curated presentation of lives on social media creates unrealistic expectations among the youth and many mental health issues like OCD (Obsessive et al.), FOMO (Fear of Missing Out) and many more. In a survey (2023) by the National Institute of Mental Health and Neurosciences (NIMHANS), it was found that over 40% of teenagers in India are struggling with body image issues and social media comparisons of lifestyles leading to mental health issues. Thus, this blurring between real and virtual must be adequately understood to reduce its impact on society.

### **8.7.2 Privacy Issues**

Privacy Issue is another concern related to online activities. Social media and online services/ apps collect users’ personal information for their benefit. This may lead to potential misuse of user data/information. In India, no comprehensive data protection law raises concerns about the vast amount of personal data collected through online applications and services. A report (2022) by the Internet Freedom Foundation (IFF) found that almost all social media platforms collect user data, viz., their location, browsing history, and online activities. Targeted advertising and data breaches create many issues that demand strong regulations and user awareness. Celebrity culture and reality TV are contributing to a voyeuristic culture and unnecessary attention and intrusion into the private lives of people. This may lead to severe mental health and well-being issues in those people. Due to the rise in the impact of social media and reality TV, there are concerns about privacy and surveillance. People often willingly share personal information online, leading to privacy breaches and potential exploitation. You all have come across the issues raised by the online availability of Aadhaar (Unique ID) information of each citizen of India.



Source: <https://economictimes.indiatimes.com/prime/technology-and-startups/popular-apps-have-vulnerabilities-in-how-they-connect-to-the-cloud-at-risk-is-users-personal-data-primearticleshow/82780550.cms?from=mdr>

### **8.7.3 Fakes: Fake News, Deep Fake**

The rise in online activities and multiplicity of online platforms has led to the spread

of misinformation and disinformation. The news circulated online is often disguised as legitimate news but negatively impacts public discourse and decision-making. The deep fakes are hyper-realistic manipulated videos of a person or a scenario that complicate the issue. It distorts the view, and one cannot discern truth from fiction. One must have seen many fake videos of celebrities and politicians speaking something controversial. The deepfake technology is still in a nascent stage in India. It can be potentially misused for political manipulation or social disruption.

Since the Internet is an open space where anyone can write anything and share, anyone can set up a credible-sounding website and disseminate false information. These days, IT cells of political parties are intentionally peddling fake/ distorted news for their benefit or bringing the opponent down. This problem is mainly w.r.t intent and interest; anyone knowingly or unknowingly may publish unreliable or outright false information. There is an information explosion on the Internet, which creates a dilemma for information seekers in identifying the correct information. The problem aggravates given that much of the information on the Internet is not the work of professional authors. These works are put in by amateurs with questionable expertise in a particular area. The idea of self-publishing on the Internet without any editorial review leads to the peddling of fake information/ news. Also, not stringent IT laws cause a rise in deepfakes and fake news for vested interests.

#### **8.7.4 Trolls**

Many times, users misuse the anonymity provided by online platforms to engage in toxic online behaviour. One such behaviour is trolling, where people use cuss/ derogatory/abusive words for other people whom they do not like or agree with to get a reaction from them. Thus, trolling is an act of deliberately provoking others online. A report by Pratham Books (2021) reveals that many journalists and activists face online harassment and trolling campaigns. These acts were mainly intended to silence dissent, which is also bad for a healthy democracy. Online media, which was supposed to democratise the communication flow, has now become a tool for cyberbullying for many.



Source: [https://www.usatechblog.com/blog/the-impact-of-social-media-on-criminal-defense-strategies/#google\\_vignette](https://www.usatechblog.com/blog/the-impact-of-social-media-on-criminal-defense-strategies/#google_vignette)

#### **8.7.5 Cyber Bullying**

Another behaviour is cyberbullying, where electronic communication is used to bully a person (particularly young people) and bring them down by tarnishing their image. It can have severe psychological consequences. A survey by UNICEF (2022) found that over 42% of Indian children aged 15-19 have experienced some form of cyberbullying. Among them, girls are disproportionately targeted.

### 8.7.6 Identity Theft

Digital media platforms are also a breeding ground for identity theft. Criminals often steal personal information to impersonate individuals for financial gain or other malicious purposes. A report (2023) by the Reserve Bank of India (RBI) has found that identity theft-related cyber frauds have increased by over 200% in the past three years. Identities are stolen for malicious purposes, such as spreading misinformation or damaging reputations. You must have heard about Jamtara in Jharkhand, where most of the cyber frauds in India happen.



Source: <https://twitter.com/aiplexdigital>

### 8.7.7 Freedom of Expression or Toxic Behaviour

The Indian constitution allows freedom of expression to each citizen. However, in the age of social media, there is a need to balance freedom of expression with preventing the spread of hate speech, harassment, and other forms of toxic online behaviour. Online platforms struggle to define acceptable expression boundaries while safeguarding the user's right to protection from harm. Pop culture reinforces stereotypes and develops desensitisation to violence.

**Reinforcement of Stereotypes:** Pop culture promotes stereotypes based on caste, race, gender, religion, sexuality, and other characteristics. These stereotypes lead to discrimination, bias, and a lack of understanding among different groups within society.

**Desensitisation to Violence:** There is an excessive availability of violent content in pop culture in terms of movies, video games, and music. Exposure to such content can desensitise people to real-world violence and may lead to a more tolerant attitude toward aggression and harmful activities.

#### Check Your Progress: 6

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Discuss privacy issues w.r.t online expression.

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## 8.8 LET US SUM UP

Learners, here we have come to the end of this Unit. Let us sum up what exactly we have discussed till now. First, we began by defining various terms related to culture, such as pop culture, mass culture, high culture, and low culture. Popular culture constantly evolves and is unique to its time and place. Societal influences and institutions merge to appeal to a broad cross-section of people within a culture. According to Internet Live Stats (2018), there are 3.5 billion daily Google searches. Whether we embrace or resist it, popular culture serves important cultural functions. Those functions are connected to cultural identities, both personal and national. Pop culture is also an economic force that influences how we get information about and understand other cultural groups.

Further, we described the rise of pop culture in the world, as well as in India. We discussed different examples. In doing so, we further elaborated on the cultural values shaping the pop culture and, in turn, pop culture shaping the cultural values. We also discussed ideas like how the consumption of pop culture happens and how pop culture becomes a tool for mass expression concerning social, political, economic, and cultural aspects. We further elaborated on the coming of digital media and the rise of pop culture. We also described the rise of digital media and its popularity leading to cultural convergence. Cultural convergence is an idea where different cultures come together to form a new understanding or a product of a new culture. In this Unit, we also defined online expression and its concept of creation and consumption.

Further, we differentiated between different types of online expression. We discussed blogs, vlogs, social media posts, reels, web journals, podcasts, radio, and web TV. Towards the end of this Unit, we analysed different concerns related to online expression. We discussed the idea of Real vs Virtual, Privacy Issues, Fake News, Deep Fake, Trolls, Cyber Bullying, Identity Theft and Freedom of expression. This freedom of expression in the content of social media, viral content and pop culture is a true positive expression or a toxic one. So, overall, we discussed the whole development of online media and how, in that context, pop culture is shaped throughout the world.

## 8.9 KEYWORDS

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|------------------------|--|
| <b>Popular Culture</b> | <p>: Popular culture refers to the entirety of ideas, perspectives, attitudes, images, and phenomena that are within the mainstream of a given culture. It is often influenced by mass media and encompasses elements such as entertainment, fashion, technology trends, and slang.</p>                        |
| <b>Mass Culture</b>    | <p>: Mass culture refers to the cultural products (such as music, movies, literature, and art) that are created for and consumed by large audiences, typically through mass media channels. It is characterised by its broad appeal and its tendency to reflect and shape the values and norms of society.</p> |

**Digital Media**

: Digital media encompasses all forms of media content that are stored and transmitted electronically. This includes text, images, audio, and video content that is created, distributed, and accessed through digital platforms such as the Internet, social media, mobile devices, and digital television.

**Social Media**

: Social media refers to online platforms and technologies that enable users to create, share, and exchange content and engage in social networking. These platforms facilitate communication and interaction among individuals and groups, allowing users to connect, collaborate, and share information in real-time.

**Cultural Convergence**

: Cultural convergence refers to the blending or merging of different cultural elements, often facilitated by advances in technology and globalisation. It involves the exchange and integration of ideas, values, practices, and artefacts from diverse cultural traditions, leading to the emergence of hybrid cultural forms and expressions.

**Online Expression**

: Online expression refers to the act of communicating, sharing ideas, opinions, emotions, and experiences through digital platforms and technologies. It encompasses various forms of expression, including writing, blogging, vlogging, posting photos and videos, commenting, and engaging in discussions on the Internet.

**Prosumers**

: Prosumers are individuals who both consume and produce content, particularly in the context of digital media and online communities. They actively participate in the creation and distribution of content, blurring the traditional distinction between producers and consumers of media.

**Fake News**

: Fake news refers to false or misleading information presented as news, often spread intentionally to deceive, or manipulate audiences. It can be generated and disseminated through various media channels, including social media, websites, and traditional news outlets.

**Deep Fake**

: Deep fake refers to synthetic media, such as videos or images, that have been manipulated or generated using advanced artificial intelligence techniques. Deep fake technology can convincingly depict individuals saying or doing things that they never actually did, raising concerns about misinformation and manipulation.

<b>Trolls</b>	: Trolls are individuals who intentionally disrupt online communities and provoke emotional or hostile responses from others by posting inflammatory, off-topic, or offensive content. They often seek attention or amusement through their disruptive behaviour.
<b>Cyber Bullying</b>	: Cyberbullying refers to the use of digital communication technologies, such as social media, text messages, or online forums, to harass, intimidate, or threaten others. It involves repeated and deliberate aggression, often targeting individuals based on their perceived vulnerabilities or differences.
<b>Identity Theft</b>	: Identity theft is the unauthorised use of someone else's personal information, such as their name, Social Security number, or financial details, to commit fraud or other criminal activities. It can occur through various means, including phishing scams, data breaches, and hacking.

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## 8.11 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress 1

1. “Popular culture consists of the aspects of attitudes, behaviours, beliefs, customs, and tastes that define the people of any society. So, in the historic term, one can say that popular culture is the culture of the people.”

### Check Your Progress 2

- First, people should increase their awareness of the role of the media in forming views, normalising ideas, and spreading stereotypes.
- Second, we need to understand that there is a choice in what media we consume and what we do not.
- Third, there is no need to accept everything that mass media promotes.

### Check Your Progress 3

1. The seeds of digital media were sown in the 1960s and 1970s. The invention of mainframe computers and the initial Internet, pioneered by projects like ARPANET, laid the foundation for the interconnected exchange of digital information. In the 1970s and 1980s, personal computing began with the Apple II. This machine empowered individuals to create and share information through rudimentary forms of digital communication, such as Bulletin Board Systems (BBS). However, the real development of the Internet happened with the arrival of the World Wide Web in the 1990s. The web browsers (Mosaic and Netscape) made accessing online information more user-friendly. Also, email became the initial communication tool of the present digital age.

#### Check Your Progress 4

1. Online expression means creating and reacting to content online. This can be done through blogs, videos, podcasts, images and even communications (comments and interactions). Online expression can also be seen as how individuals and groups use digital platforms to create, share, and experience information and ideas. It is an ecosystem where users consume content and actively participate in its creation and circulation. Thus, it is called prosumers, and this phenomenon is mass self-communication. Boyd (2014) defines online expression as “how people use the affordances of online and networked communication to construct, project and manage their identities and relationships with others”. Hargittai & Papacharissi (2009) view online expression as “the creation and circulation of messages through the Internet and associated digital technologies”.

#### Check Your Progress 5

1. A blog is an online diary where people write what they feel and think about. It is like a personal expression in the form of this online space. Blogspot and WordPress provide space for writing blogs. Blogbasics (2017) defines a blog as a ‘frequently updated online personal journal or diary’. Blogs mostly allow readers to comment on the blog posts. A typical blog will feature text, images, videos and links to related blogs and websites. A blog is a website where entries are displayed in reverse chronological order.

#### Check Your Progress 6

1. Privacy issues are another concern related to online activities. Social media and online services/ apps collect users’ personal information for their benefit. This may lead to potential misuse of user data/information. In India, no comprehensive data protection law raises concerns about the vast amount of personal data collected through online applications and services. A report (2022) by the Internet Freedom Foundation (IFF) found that almost all social media platforms collect user data, viz., their location, browsing history, and online activities. Targeted advertising and data breaches create many issues that demand strong regulations and user awareness. Celebrity culture and reality TV are contributing to a voyeuristic culture and unnecessary attention and intrusion into the private lives of people. This may lead to severe mental health and well-being issues in those people. Due to the rise in the impact of social media and reality TV, there are concerns about privacy and surveillance. People often willingly share personal information online, leading to privacy breaches and potential exploitation. You all have come across the issues raised by the online availability of Aadhaar (Unique ID) information of each citizen of India.

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# **UNIT 9 ONLINE COMMUNICATION AND COLLABORATIONS**

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## **Structure**

- 9.0 Introduction
- 9.1 Learning Outcomes
- 9.2 Evolution of Online Communication
- 9.3 Communication Styles in Online Environments
- 9.4 Tools and Platforms
- 9.5 Role of Social Media
- 9.6 Benefits and Challenges
- 9.7 Ethical considerations
- 9.8 Case Studies
- 9.9 Let Us Sum Up
- 9.10 Keywords
- 9.11 Further Readings
- 9.12 Check Your Progress: Possible Answers

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## **9.0 INTRODUCTION**

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While communication is defined as the process whereby information is exchanged between individuals/organisations, this is achieved through a commonly agreed system of symbols, signs, or behaviour. Online communication is the process of communication over a computer network, and in today's context, it is understood as communication over the Internet.

Similarly, while collaboration is when two or more people work together to create or achieve the same objective, online collaboration refers to working over the Internet using various tools and platforms. It is assumed that any collaboration requires communication, so the terms communication and collaboration are being used together.

With digital technology and its advancements, online communication and collaborations have become increasingly significant, transforming how individuals, organisations, businesses, and societies interact. These digital technologies foster faster and real-time connectivity, increase efficiency and enhance innovation. They do so in the following ways:

**Global Connectivity and Knowledge Sharing:** Online communications allow individuals, organisations, and businesses to connect globally, transcending geographical boundaries and time zones. This leads to a more interconnected world and fosters collaborations among people with diverse cultures, backgrounds, and perspectives, leading to knowledge sharing across diverse fields.

**Efficiency and Speed Leading to Cost Savings and Enhanced Productivity:** Digital communication tools allow real-time communication. This facilitates quicker responses, helps with faster decision-making and project completion, and increases efficiency

in various aspects of personal and professional life. Online communication and collaborations also save costs by reducing physical presence and associated costs.

**Flexibility and Remote Work:** Digital tools have ushered in remote and flexible schedules, allowing for better work-life balance, and opening a larger talent pool, enhancing creativity. Online collaboration tools enable teams to share ideas and iterate in real time, leading to innovation.

**Networking and Relationship Building:** Online communication using social media and peer-to-peer messaging apps enables individuals and businesses to maintain relationships with peers, clients, partners, and the public, leading to new opportunities for collaboration.

Besides the above, digital technologies in online communication and collaboration generate vast amounts of data, which help gain insights into user behaviour, preferences, and trends. This assists businesses in making informed decisions and helping them cater to audience/customer needs.

This Unit will explore how online communication evolved and the various tools and platforms used in online collaborations. We will then examine social media's role in online communications and collaborations. With benefits come challenges, and we shall explore the benefits and challenges of online communication and collaboration along with the ethics of online communication. We will end the Unit with a few case studies demonstrating online communication and collaboration.

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## 9.1 LEARNING OUTCOMES

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After completing this Unit, you should be able to:

- Define and explain online communication and online collaboration;
- Understand how digital technologies have changed communication and collaboration for individuals, organisations, and businesses;
- Discuss about the various tools and platforms for online communication and collaborations;
- Explain how social media has changed online communications and collaborations; and
- Enumerate the online communication and collaboration's benefits, challenges, and ethical considerations.

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## 9.2 EVOLUTION OF ONLINE COMMUNICATION

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Online communication can be traced back to developments in computer and communication network technology and advances in communications technology.

The first transatlantic telegraph cable was laid in 1858. The telegraph was the start of electronic communication. The first commercial communications satellite was Telstar 1, which the USA launched in July 1962.

The ARPANET, launched in 1966 by the US Department of Defence, laid the foundation for the Internet. In 1971, Ray Tomlinson sent the first email, heralding electronic messaging and starting online communication.

The 1980s saw the start of BBS or the Bulletin Board System. A computer server running software allows users to connect to the system using a terminal program. Usenet was a global discussion system organised into newsgroups. It allowed users to post and read messages on various topics.

World Wide Web (WWW) became publicly accessible in 1990, leading to expansion in online communication. The introduction of web browsers led by Mosaic (subsequently named Netscape) led to the popularity of the Web. Meanwhile, instant messaging (IM) gained popularity with the launch of services like ICQ in 1996 (AOL acquired in 1998) and AOL Instant Messenger (AIM) in 1997. These platforms allowed real-time text communication between users.

The late 1990s also saw the emergence of blogs (a truncation of “weblog”) written in the form of discrete, often informal diary-style text entries (posts). This was facilitated by the advent of web publishing tools that non-technical users could use. The late 1990s also saw the start of live streaming, with the Internet company “RealNetworks” developing the first media player capable of live streaming — RealPlayer. On November 8, 1999, the first-ever presidential webcast was held at George Washington University in Washington, DC.

The 2000s saw the rise of Web 2.0, which emphasised user-generated content, interactivity, and collaborations. It also brought social media platforms like Friendster in 2002, Myspace in 2003, and Facebook in 2004. YouTube brought the live-streaming industry mainstream. In 2008, YouTube hosted its first live event, YouTube Live. In 2011, Twitch TV (formerly known as Justin TV) launched a new streaming platform designed for video games.

Mobile communication and smartphone technology in the 2010s transformed online communication. With mobile messaging apps like WhatsApp (2009) and WeChat (2011), online communication became real-time. Instagram (2010) and Snapchat (2011) platforms’ emphasis on multimedia content changed how people shared experiences online. In 2013, four satellites were launched into medium Earth orbit (MEO) to provide Internet access to the “three billion” people without stable Internet access.

The pandemic of 2020 accelerated the use of video conferencing platforms and introduced the concept of virtual meetings and remote working using video conferencing tools like Zoom, Teams, and Meet. Emerging technologies of Virtual (VR) and Augmented reality (AR) are expected to play a significant role in online communications.

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### 9.3 COMMUNICATION STYLES IN ONLINE ENVIRONMENTS

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Online Communication styles change based on the context, nature of interaction, and platform on which communication is attempted. Some of these styles are very similar to those in real-world communication.

Verbal and Nonverbal: Verbal communication can be oral or written. Oral communication relies on visual communication and uses platforms like Instagram, TikTok, and Pinterest, as well as video calls on messaging platforms. Written communication can be done using messaging apps, Twitter, and discussion forums.

Nonverbal communication in textual online communication is also done through emoticons, emojis, GIFs, memes, and reaction buttons.

Formal and Informal: While formal follows the rules, informal is casual and relaxed. Formal is used in academic and professional settings and is common in email communication, formal messaging, and professional forums. Informal communication has a conversational tone, includes abbreviations, emojis, etc., and is common in social media, chats, and blogs.

Synchronous and Asynchronous: Synchronous communication happens through live chats and video or audio calls and helps in dynamic exchanges and quick decision-making. Asynchronous communication includes emails and messages where participants determine their own time to respond based on either geographical and time separation or for detailed responses.

Broadcast and Narrowcast: Social media platforms and webinars broadcast information while meeting and collaborating with apps like Google Meet, Messaging groups, or Slack narrowcast information to select people or teams.

Online communication can be interactive, empathetic, or aggressive, like real-world communication. Understanding and adapting to different communication styles, platforms, and community norms can make it effective.

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## 9.4 TOOLS AND PLATFORMS

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These digital collaborative tools and platforms enable individuals and teams to work together irrespective of whether they are separated by geography or time zones. These can be further subdivided by their functionality, i.e. project management, document collaboration, etc. The choice of tools or platforms depends on the individual's or team's specific needs and preferences. Some of these platforms and tools based on functionality are:

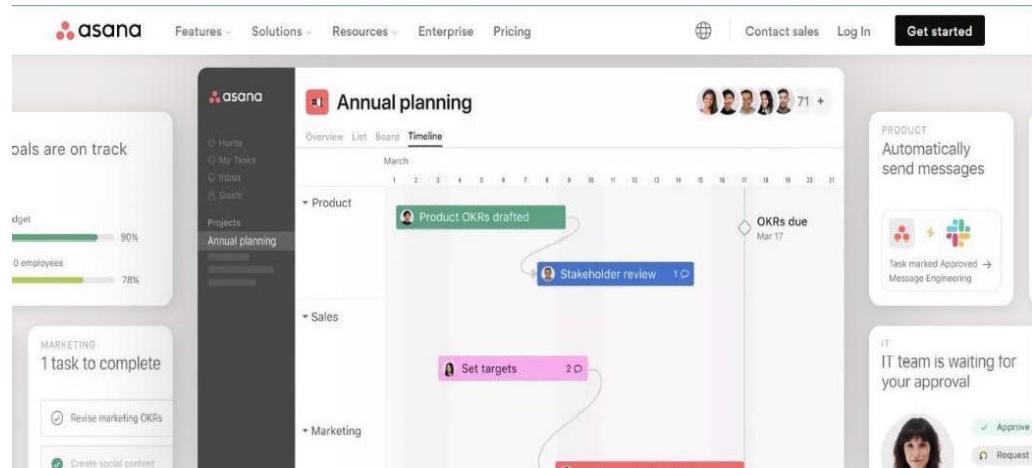
Document Collaboration: Google offers a workspace that includes Docs, Sheets, Slides, and Drive for real-time collaborations on documents, spreadsheets, and presentations. Similarly, Microsoft offers the Microsoft 365 suite with Word, Excel, PowerPoint, and OneDrive for document creation and sharing.

File Storage and Sharing: These applications allow individuals and teams to collaborate on content from anywhere and anytime securely. Microsoft OneDrive, Google Drive, Dropbox, ProtonDrive, etc., are some of the best cloud-based file storages and sharing services.

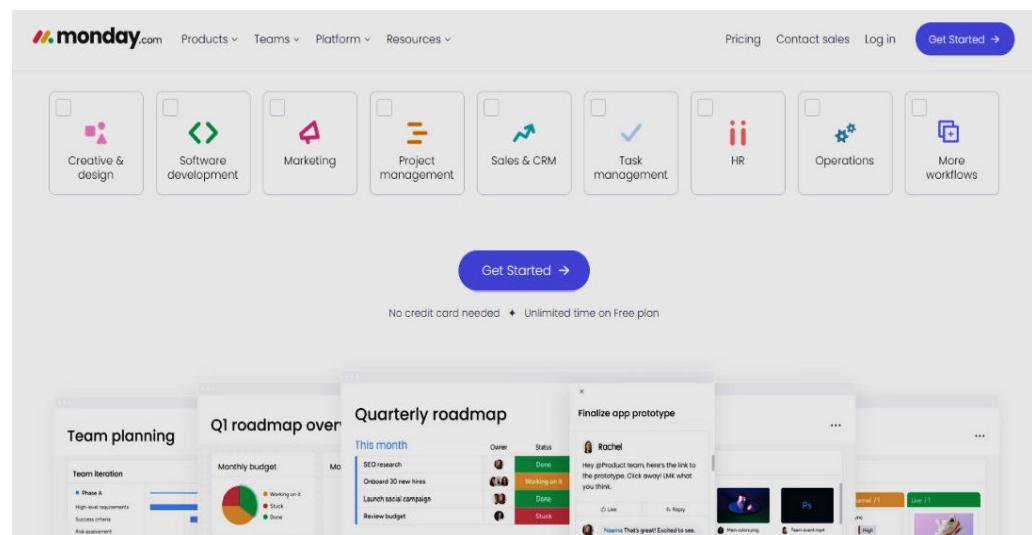
Video Conferencing: These tools allow for virtual meetings in real-time and have become important tools for online communication and collaboration. Their importance increased manifold during the pandemic lockdown. Zoom, Microsoft Teams, and Google Meet allow online meetings, screen sharing, and more.

Communication and Messaging: These platforms integrate team communication and collaboration. For example, Slack is a cloud-based, free, cross-platform team communication tool in which teams can communicate through text messages, file and media sharing, and voice and video calls, both private and workspace communication. Slack also integrates with other software. Similarly, Microsoft Teams and Google Workspace integrate various communication and collaboration elements.

**Project Management:** This software tool helps business teams organise, track, and execute projects. It also prevents work duplication and time wasted in searching for material. Some project management tools available include Asana, Trello, Jira, Monday, Clickup, etc.



Screenshot of the Asana project management tool (<https://asana.com/>)



Screenshot of the Monday project management tool (<https://monday.com/>)

Besides the above, there are niche platforms and tools, for example, GitHub, a platform and cloud-based service for software development and version control that allows software developers to store and manage their code; Salesforce, a Customer Relationship Management (CRM) platform that helps businesses manage customer relationships, sales, and support.

## 9.5 ROLE OF SOCIAL MEDIA

Social media consists of various web-based tools that enable users to distribute and share new ideas, thoughts, and information in a more interactive and virtual environment (Esam & Hashim, 2016; Joosten, 2012). With the rapid growth of mobile technology and mobile phones becoming the primary mode of Internet access in large parts of the world, social media applications offer an extremely efficient way to communicate, collaborate and build social networks among their users. Social Media has played a significant role in altering the online

communication and collaboration landscape. It has been able to do so in the following ways:

**Real-Time Communication:** Social media enables real-time communication through comments, updates, and messaging, which leads to quick information sharing and responses. Users can share a wide range of content, including text, audio, video, and more.

**Global Connectivity and Collaborative Content Creation:** Social Media breaks geographical barriers and allows individuals and teams to connect across spaces and time zones. Facebook Groups, Twitter Spaces, etc., are discussion forums of shared content. This fosters a sense of community of common interests, causes, goals, and shared knowledge, allowing crowdsourcing ideas and information.

**Professional Networking:** Platforms like LinkedIn allow professional networking, allowing individuals to connect with peers and potential collaborators.

Okonkwo and Awad, in their 2023 study “The Role of Social Media in Enhancing Communication and Collaboration in Business”, highlighted the role of social media as a vital tool to connect with customers, employees and other stakeholders in innovative ways, thus becoming an important and effective tool for online communication and collaboration. They write that social media does this role in the following ways:

**Positive Network Externalities:** Network externalities are the advantages derived from products or services when people using that product or services increase the value of those products or services for others. For example, the formation of virtual “environment” communities on social media generates positive network externalities to its members where the communities communicate and collaborate with information, ideas, and experiences on a better “environment”, leading to members even acting like reducing carbon footprint, based on this sharing towards a better world.

**Business Capital Growth:** Social media makes it easy to obtain information about customers and their preferences, competitors, industry trends, and market conditions. It is also a fast way to collect product feedback and new product concepts before launching, reducing the risk of failure. In addition, social media increases customer engagement and loyalty.

In education, Al-Brahmi, Othman, and Yusuf (2015) found that collaborative learning with the assistance of social media encourages learning and knowledge sharing among students as social media tools support collaborative activities. Social media helps establish virtual relationships, allowing students to see diverse information from multiple sources. Also, social media tools enable users to interact socially and create interpersonal relationships with peers and their guides, allowing them to cope with an unfamiliar social environment (Dholakia, 2004; Zhou et al., 2010).

Hence, social media is a great tool for online communication and collaboration, which is why it is increasingly integrated with platforms for customer relationship management, event management, and other related activities.

**Check Your Progress - 1**

- Note:** 1) Use the space below for your answers.
- 2) Compare your answers with those given at the end of this Unit.
1. What do you mean by online communication and collaboration? What are the various communication styles online?

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2. What are Online Communication and Collaboration Tools, and how are they subdivided? Answer by giving some examples.

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## 9.6 BENEFITS AND CHALLENGES

The above section shows students the tremendous benefits of online communication and collaboration. Before discussing the challenges, let us list the benefits again.

Global Connectivity and Real-Time Communications allow individuals and businesses to connect in real-time and asynchronously, fostering collaborations, increasing flexibility, and enabling remote work.

**Increased Efficiency and Cost Saving:** The above speeds up communication and collaboration, leading to quicker turnaround and decision-making. Remote and flexible working saves cost on workforce movement, and with an increased talent pool, enhances production and makes the process efficient.

However, there are various challenges to online communication and collaboration. Some of them are:

**Technical Issues:** As online communication and collaboration are mediated by computers and computer networks, Internet connectivity issues, including Internet shutdowns, software glitches, and hardware failures, can disrupt them. For example, a dropped call during video conferencing or a computer crash during remote work can disrupt team meetings and real-time information sharing.

**Security Challenges:** Protecting data is always a challenge in online communication and collaborations as the transactions are done over the Internet, a public computer network. Securing the data, ensuring it is authentic, and ensuring no man-in-the-middle attack happens on sensitive data are huge challenges. For example, a story in Fortune, “Leaked Slack all-hands meeting reveals a ‘strong culture clash’ and a growing rift with parent company Salesforce” (<https://fortune.com/2023/01/05/leaked-slack-all-hands-meeting-reveals-a-strong-culture-clash-and-growing-rift-with-parent-company-salesforce/>) is about leaked Slack communication of the company “Salesforce”. Such stories raise suspicions about security in online communications

and bring a bad name to brands and companies whose internal communications are leaked in the eyes of customers.

**Social Challenges:** Mental health is a significant consequence of virtual connections. For example, studies on young adults show that social media is associated with increased levels of anxiety, depression, and loneliness due to the pressure to curate a refined image of oneself online, fostering a culture of comparison and competition. There is an intense competition for likes and virality of content. This is especially hard on vulnerable individuals, especially ones with pre-existing mental health conditions. Online also have issues of Cyberbullying and other cybercrimes which play out worst for the vulnerable and the minorities.

**Communication Misinterpretations:** Technologically mediated communication, such as chats, online messages, and emails, lacks nonverbal cues, which can lead to misinterpretations.

**Digital Fatigue:** The abundance of communication channels and online information leads to information overload and a challenge to filter and prioritise communication and work. With digital technology allowing connectivity anywhere and anytime, work-life balance can lead to fatigue and burnout.

**Team Dynamics:** Overdependence on technology reduces team rapport building and affects group/company dynamics, affecting team cohesion and team spirit.

Hence, effective communication and collaboration strategies are required, along with the right technology infrastructure, including online security protocols, to build a collaborative and inclusive work culture in companies that take advantage of online communication and collaboration.

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## 9.7 ETHICAL CONSIDERATIONS

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There are various ethical considerations in online communications. O'Neill (2022), writing in her blog, mentions how online technologies have indeed made it easier to inflict and spread a great variety of harms like being used to distribute pornography, incite violence, promote anorexia, denigrate others, defraud, and deceive. However, the link between specific online activities and resulting harms varies depending on many factors. For example, she mentions how telling the truth in an online community may benefit many cases but may cause distress in others. She adds that online communication may harm the vulnerable or the immature; joking, lying, and false claims can be mistakenly taken as accurate or evidenced, resulting in serious harm. For example, the case of falsehood, like drinking bleach as a cure for COVID-19, resulted in serious harm to many people. Hence, according to O'Neill, the discussion on acceptable and unacceptable online communication must also focus on norms and standards that online communication respects or flouts. (Note: One of the ethical considerations in journalism is the minimisation of harm caused to individuals or communities by the journalist).

Another important ethical consideration is protecting privacy. Digital technologies make protecting privacy challenging. Due to excessive data generated in digital interactions and with the Internet as a globally connected medium, it is easier to obtain, organise, redistribute, link, suppress and sell data linked to personal information. In the online world, insignificant data about an individual can make her

identifiable to those with access to other information about the individual. For example, in online collaborations between organisations and businesses, the privacy of individuals becomes compromised if the business and organisations' data security practices are lax. This is made worse often by minimum consent requirements on digital platforms for data processing and selling data. O'Neill writes that digital technology has expanded the ease with which information, including personal, is spread without informed agreements by users as the consent procedures by platforms, applications, and websites, due to the lure of data monetisation, fail to put adequate safeguards to control the leakage of personal information putting individual privacy at risk.

O'Neill then writes about anonymity and power in the online world. Unlike in the real world, anonymous and pseudonymous actors have transformed the range and power of anonymity through misinformation, conspiracies, the sale of personal data, etc.

Ethical considerations in the online world also include plagiarism and copyright infringement. With a large amount of information, including online research and digital technology allowing easy copy and paste, concerns about Plagiarism and Copyright Infringement are relevant ethical issues. Using somebody else's content and passing it under a business or organisation name without citing the source is plagiarism. At the same time, Copyright Infringement happens when an intellectual work is copied, modified, or distributed without the creator's permission.

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## 9.8 CASE STUDIES

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The following case studies explain how digital technology and the Internet are used for online communication and collaboration.

### Case Study 1: IBM

IBM, or International Business Machines Corporation, is an American multinational technology corporation headquartered in New York, USA. It is present in over 175 countries and has over 3.5 lac employees worldwide. Its suite of products includes computer hardware and software as well as hosting and consulting services. It is also the largest industrial research organisation in the world, with 19 research facilities across a dozen countries.

In 2020, IBM deployed the workplace chat app Slack to all 350,000 employees worldwide. Before the company's formal deployment, the employees and teams had used the application for over six years.

IBM teams use Slack channels (for example, #development-team) whereby team members can openly discuss issues while experts from other teams can add inputs by joining these channels. This is done in the following way, as detailed by Lawless, a senior software engineer at IBM,

*Team channels contain messages from people and system alerts from their numerous applications. For example, a developer submits a user story in the source code for review. The system triggers a notification in the team's Slack channel, letting everyone know the new code is up for review. The reviewer can then go into the system to review the code directly from that Slack message.*

This online communication and collaboration are much more efficient because before Slack communication and collaboration were introduced, a developer would need to find an expert to review the code, then open a one-to-one communication and wait for the person to respond. With Slack communication, the developer reaches the desired expert and gets notified of the changes without leaving work or chasing resources. In addition to internal communication, with a product called “Slack Connect,” IBM collaborates and connects with external organisations.

Giving examples of popular channels and conversational examples at IBM, Lawless writes:

```
# Help services collect notifications to facilitate automated peer code reviews and alert the team when the request has been approved. Team members use #help-deployments to get notified of failed deployments as code changes make their way through test automation. #help-tasks is used to post notifications when there is a failure in batch processing jobs.
```

Hence, these channels serve as audit trails, and resolving problems with this history of process flow is easier and more efficient.

Besides Slack for communication, IBM also uses other Salesforce products, Such as Sales Cloud, a customer relationship management (CRM) product; Service Cloud for service delivery teams; and Partner Management for IBM business partners. As per Quinlan, these optimised solutions, with Watson AI-powered integrations, are speeding up problem resolution, improving insights, and increasing business outcomes at IBM.

### Case Study 2: Airbnb

Airbnb, Inc., is an American online marketplace based in San Francisco, USA, for short- and long-term homestays. “Airbnb” is a shortened version of its original name, “AirBedandBreakfast,” and is the most well-known company for short-term housing rentals. As of June 2023, it operated in 100,000 cities and towns, over 220 countries, and over 1.5 billion guests arriving at 4 million hosts. The online company acts as a broker, and its revenue is based on the commissions it charges for each booking.

Airbnb has two primary customers: the guests who booked a homestay and the owners who rented out their properties for this homestay. Airbnb (Note: An online company) uses customer relationship management (CRM) to establish a strong connection with the guests. It is not a hotel chain but a platform, so it does not provide the hosts with a centralised CRM system. It relies on a combination of third-party tools integrated into its online communication and collaboration platform that allows hosts to manage their guest relationships effectively. For example:

Messaging system: A built-in feature that enables hosts to communicate with guests right from a guest query during and after their stay. Reviews: Allows guests to leave feedback after a stay, allowing other prospective guests to evaluate properties. Host and Super host tools: Include price tips, availability calendars, and messaging templates to help hosts manage their listings. Super hosts (exceptional hosts) receive a badge on their profile, increased visibility, and exclusive features. Third-party CRM: Hosts can use their own CRM from

Salesforce, Zoho, etc, which is integrated with Airbnb CRM and provides advanced analytics for enhancing guest experience. Airbnb CRM software can help hosts track and analyse their guests' behaviour, from data history of booking, preferences, and feedback, helping them decide on renting their properties.

This way, Airbnb, a platform-based delivery of short- and long-term homestays, uses online communication and collaboration and will attain a revenue of US\$8.40 billion in 2022.

### **Case Study 3: Online collaborative learning**

Education is one of the best examples of online communication and collaboration, and the Internet has revolutionised them. When the COVID-19 pandemic hit the world, online communication and collaboration allowed students not to miss education and life to continue. From using message apps like WhatsApp/ Telegram/Signal and email to communicate and share class links and timetables to using video conferencing apps like Zoom/Google Meet/Microsoft Teams to conduct online classes.

This trend has been around for some time now. As Tapscott (2008) stated, in education research, the net generations converge on a learner-focused pedagogy model based on collaboration rather than traditional teacher-focused pedagogical approaches. For example, social networking sites provide users with new ways to access, socialise, communicate, and co-create with other users on those sites. These web-based tools serve as a critical mechanism for communication and collaboration among students (Al-Khalifa & Garcia, 2013) and thus also promote the feedback process as a significant part of collaborative learning (Ricoy & Feliz, 2016).

Lock and Redmond (2021) did a study on the affordance of online communication and collaboration technology, which has provided a forum for preservice and practising teachers and educators to engage in an authentic discourse where multiple perspectives can be shared. Quoting Fowler & Mayes (1999), who identified the shift in learning from 'what' students learn to 'who' they learn from, they felt that the online environment provides a rich learning space where students can learn with and from each other. They felt that in an online collaborative learning space, the student is active rather than passive ... It is the individual learner's interpretation and processing of what is received through the senses that creates knowledge (Ally, 2008).

Ally further goes on to list the advantages of online learning and collaboration, i.e.

No time zones and location or distance limitations; Asynchronous allows online material to be accessed anytime while synchronous allows for real-time interaction between students and instructors; Use of the Internet to access up-to-date and relevant learning material and sharing it with fellow students; Multiplexing of learning with jobs can contextualise learning; Tutors can be tutoring for anytime, anywhere while online material updated in real-time as well guide students to appropriate reading material based on needs and Online learning systems can be tailored to individual learners, their expertise and learning outcomes.

## **Check Your Progress - 2**

## **Online Communication and Collaborations**

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. How has social media changed online communication and collaboration?

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2. What are the various challenges of online communication and collaboration?

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3. Are there any ethical challenges in online communication and collaboration?

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## **9.9 LET US SUM UP**

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Communication is the information exchange process between individuals through a common agreed system of symbols, signs, or behaviour; online communication is the process of communication over a computer network. In today's context, the term is understood as communication over the Internet.

Collaboration is a situation where two or more people working together create or achieve the same objective; online collaboration refers to them working over the Internet using various tools and platforms.

Digital technologies foster faster and real-time connectivity, increase efficiency, and enhance innovation. They do so in Global Connectivity and Knowledge Sharing, Efficiency and Speed, leading to Cost Savings and Enhanced Productivity, Flexibility and Remote Work, and Networking and Relationship Building.

Online communication can be traced back to computer and communication network technology developments. It all started with the ARPANET by the US Department of Defence, which laid the foundation for the Internet. The 2000s saw the rise of Web 2.0, which emphasised user-generated content (UGC), interactivity, and collaborations. Social media platforms like Facebook emerged in 2004. Emerging technologies of Virtual (VR) and Augmented reality (AR) are expected to play a significant role in online communications.

Digital collaborative tools and platforms enable individuals and teams to work together regardless of whether they are separated by geography or time zones. Their functionality can be subdivided into Document Collaboration, File Storage and Sharing,

Video Conferencing, Communication and Messaging, and Project Management. The choice of tools depends on the specific needs and preferences of the individuals or teams using them.

Social media consists of various web-based tools that enable users to distribute and share new ideas, thoughts, and information in a more interactive and virtual environment. Social Media has significantly altered online communication and collaboration through Real-Time Communication, Global Connectivity, Collaborative Content Creation, and Professional Networking.

The benefits of online communication and collaboration include global connectivity, real-time communication for individuals and businesses, increased efficiency, and cost savings. Challenges include Technical Issues, Security Challenges, Communication Misinterpretations, Digital Fatigue, and Team Dynamics. Besides the benefits and challenges, there are various ethical considerations. Online technologies have made it easier to inflict and spread a great variety of harm, especially against the vulnerable or the immature, with joking, lying, and false claims mistakenly taken as accurate or evidenced. There is the problem of protecting privacy with excessive data generated in digital interactions and the Internet being an easier medium to obtain, organise, redistribute, link, suppress and sell data linked to personal information.

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## 9.10 KEYWORDS

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|--|--|
| <b>Cyberbullying</b>   | : Is sending, posting, or sharing negative, harmful, false, or mean content about someone else over digital devices. It can also include personal or private information about someone else that causes embarrassment or humiliation to the person.  |
| <b>Fair Use</b>  | : Fair use is a branch of copyright law relating to reusing and reproducing copyrighted material. For a work to be considered fair use, it must meet several conditions. The four main determining factors are the Purpose and character of the use, the Nature of the copyrighted work, the Amount and substantiality of the portion reused, and the effect of the use upon the potential market. |
| <b>Man-in-the-Middle Attack</b>  | : This is a term in cryptography and computer security. A man-in-the-middle attack is a cyberattack in which the attacker secretly inserts themselves between two parties who believe they are directly communicating. The inserted person then relays and possibly alters the communications between the parties.   |
| Social Networking refers to using social media sites to stay connected with friends, family, colleagues, or customers. Social networking |  |

can have a social purpose, a business purpose, or both.

**UGC**

: User-generated or User-Created Content is any form of content, such as text, images, photos, videos, audio, etc., posted or uploaded to social media platforms or the web.

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## 9.11 FURTHER READINGS

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## 9.12 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

### Check Your Progress - 1

1. Online communication and collaboration are the process of communication and working over a computer network. In today's context, it is understood as online communication using various tools and platforms. Communication styles online are very similar to the ones in real-world communication. Online communication can be interactive, empathetic, or aggressive, like real-world communication. One can be formal and informal, verbal, and non-verbal, synchronous, and asynchronous, and one's messages can be broadcast or broadcast online.
2. Online Communication and Collaboration Tools are digital tools and platforms that enable individuals and teams to work together irrespective of whether they are separated by geography or time zones. These are normally subdivided by their functionality, i.e. document collaboration, file storage and sharing, video conferencing, messaging, and project management; the choice of tools or platforms depends on the specific needs and preferences of the individuals or teams using them. For example, Microsoft 365 suite offers Word, Excel, PowerPoint, and OneDrive for document creation and sharing; Zoom, Microsoft Teams and Google Meet allow for online meetings and screen sharing, while project management tools include Asana, Trello, Jira, Monday and Click.

### Check Your Progress - 2

1. Social Media has played a significant role in altering the online communication and collaboration landscape. This has happened as social media enables sharing a wide range of content, including text, audio, and video, in real time through comments, updates and messaging, which leads to quick information sharing and responses. Besides this, social media breaks down geographical barriers and allows individuals and teams to connect across spaces and time zones, fostering a sense of community of common interests, causes, goals, and shared knowledge. Then, professional networking platforms allow individuals to connect with peers and potential collaborators.

Social media in education helps establish virtual relationships, allowing students to see diverse information from multiple sources. It also enables its users to interact socially and create interpersonal relationships with peers and their guides, allowing them to cope with an unfamiliar social environment.

2. Besides the various benefits of online communication and collaboration, individuals, and organisations face challenges. The biggest challenge is technical issues related to devices and networks. As a computer and a computer network use hardware and corresponding software, any breakdown or glitch in either one, including the network which connects these computers, could disrupt the process. To add to the technical challenges are the security challenges as processing and storing data in a digital format and communication using a public network like the Internet exposes individuals and organisations to threat actors who wish to harm an individual or the reputation of an organisation, including harming financially due to data theft.

As virtual connections transcend space and time, online connections could be a social challenge if individuals cannot balance work and home lives. Online also have issues of Cyberbullying and other cybercrimes which play out worst for the vulnerable and the minorities.

Then, there are issues in virtual communication and work, such as communication misinterpretations, digital fatigue, and lack of team rapport and dynamics.

3. Virtual communications, in which the communicator is anonymous, bring their share of ethical considerations. The link between specific online activities and resulting harms varies depending on many factors. In the real world, people have a chance for clarifications in communication, which becomes tenuous as the people communicating cannot be seen, and hence, verbal cues are absent. So, a joke online can get misinterpreted as a serious comment, leading to trust issues. Online communication may harm the vulnerable or the immature.

Another important ethical consideration in online shopping is protecting privacy. As digital technologies generate much data without ethics, it is easier to leave unsecured personal data on local or network drives, which can then be obtained, organised, and sold by threat actors. In the online world, insignificant data about an individual can make her identifiable to those with access to other information about the individual.

Besides, the above two considerations involving plagiarism and copyright infringement are ethical considerations for online communication and collaboration.



## **Block-3**

# **Analysis of Participation**



## **BLOCK 3 INTRODUCTION: ANALYSIS OF PARTICIPATION**

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After exploring the communication patterns of digital media and critically examining the different modes of cyberspace, in Block 3, you will learn the levels of opportunities and scopes available for online users on digital platforms. The Units in this Block explore the dynamics of user participation and its relationships with the collective actions of more extensive human interactions. Since the digital platform is multifaceted, users have plenty of tools to convey their messages. More importantly, we need to understand that many individuals or groups have a specific reason for their participation in the digital space. Let us understand these perspectives in the Block.

**Unit 10: Mode of Production in Cyberspace.** The mode of production in cyberspace revolutionises economic activities, social dynamics, and technological mechanisms. This Unit explores how digital platforms redefine content creation, distribution, and commerce. Understanding this transformation is essential for comprehending modern journalism and communication. By the end of this Unit, you will grasp the dynamics of production in cyberspace, understand the principles of online journalism, analyse media functioning in digital ecosystems, evaluate journalism's status in India, and explore challenges and opportunities in digital journalism.

**Unit 11: Ideology and Digital Communication.** Through this Unit, you will understand the symbiotic relationship between ideology and digital communication. It explores how ideologies shape content creation, distribution, and consumption online. By examining persuasive technologies, echo chambers, and biases, you will gain insights into the complexities of digital discourse. Case studies illuminate real-world implications, while discussions on the future of civic discourse prompt critical thinking.

**Unit 12: Semiotics and Digital Communication.** You will understand the fascinating world of signs and symbols in the digital realm after reading this Unit. From understanding the basics of semiotics to its application in digital contexts, this Unit explores how meaning is created and conveyed online. Through discussions on digital semiotics, key concepts, principles, and real-world examples, you will gain insights into the intricate dynamics of digital communication.

**Unit 13: Issues of Big Data.** In this Unit, you will learn about the vast landscape of big data, exploring its definition, characteristics, and types. This Unit uncovers how big data impacts the media industry, driving business strategies and influencing content creation. Moreover, you will critically examine big data's social implications and ethical considerations.

**Unit 14: Political Economy and ICT.** This Unit introduces the nexus between political economy and information communication technology (ICT). It explores political economy's origins, definitions, and characteristics alongside media ownership dynamics. It unravels the evolution of ICT and its role in shaping the political economy of personal information. It identifies concepts and the evolution of political economy, discusses media ownership dynamics, analyses different schools of thought, evaluates ICT challenges, and connects political economy with ICT.

Interaction is a unique feature of digital and online platforms, and this Block discusses explicitly the characteristics of interactive platforms. We discuss very diverse perspectives on interactivity and the dynamics of digital communication, and we hope that you will gain a broader understanding of these perspectives.

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# **UNIT 10 MODE OF PRODUCTION IN CYBERSPACE**

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## **Structure**

- 10.0 Introduction
- 10.1 Learning Outcomes
- 10.2 Mode of Production - Definition
- 10.3 Understanding Online Journalism
- 10.4 Modes of Online News Production
- 10.5 Labour in Online News Production
- 10.6 Content Consumption Trends
- 10.7 The Impact of Media Convergence
- 10.8 Future - Policy Solutions, Independence, and Accountability
- 10.9 Conclusion
- 10.10 Keywords
- 10.11 Further Readings
- 10.12 Check Your Progress: Possible Answers

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## **10.0 INTRODUCTION**

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The mode of production is how a society conducts its economic activity to produce goods and services. It is also about social relations around such activity and the mechanical and technological means to achieve the objectives.

The cyberspace, which has emerged as an essential component of economic activity, requires a new understanding of this process. Driven by software products and solutions and digital technologies, cyberspace has added a new dimension to the mode of production.

The mode of production in cyberspace comprises the methods and processes that work on a solid IT and digital infrastructure to produce goods and services. While some of these methods and processes help produce physical goods faster and more efficiently, others produce IT goods and services to facilitate a host of digital services.

The list includes creating and distributing content, newspapers, multimedia content production, e-commerce facilitation, digital payment transactions, and virtual conferences (Google Meet, Microsoft Teams, and Zoom).

Though they started as extensions of real-life processes in the mode of production, these processes and methods evolved into an integral part and indispensable part of the traditional mode of production.

In this Unit, we will discuss how the mode of production works in cyberspace media. With digital technologies and solutions maturing significantly, the media is transforming. The media can now produce standalone, digital-only products and services (YouTube channels, e-papers, and podcasts) supported by electronic delivery services (social media platforms such as WhatsApp, websites, and emails).

The emergence of cyberspace has profoundly transformed the traditional modes of media production, introducing new opportunities, challenges, and complexities. To understand this phenomenon, we need to understand how the mode of production in cyberspace works, the key elements that make online journalism succeed, and what challenges traditional media organisations face to stay relevant and succeed.

## 10.1 LEARNING OUTCOMES

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After completing this Unit, you should be able to:

- Understand the characteristics and features of the Mode of Production in Cyberspace for medium;
- Understand the key characteristics and principles of online journalism;
- How the ecosystem works to make media function in cyberspace;
- Comprehend the status of the mode of production in journalism in India and gain insight into the processes and methods of production in this space;
- Understand the challenges and opportunities of online journalism; and
- Explore the evolving role of journalists and news organisations in the digital age.

## 10.2 MODE OF PRODUCTION - DEFINITION

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The mode of production in cyberspace explains the processes and methods of creating, distributing, and consuming digital goods, services, and information on digital platforms.

An ecosystem of digital platforms, content creators, technology service providers, gadget manufacturers, online communities, service providers, technology professionals, banks, and fintech companies (to facilitate money transactions), regulators, and policymakers work to make it possible.

Journalists, multimedia experts, photo-videographers, software engineers, Search Engine Optimisation (SEO) experts, web developers, digital payment players, policymakers, and readers are the key stakeholders in the mode of production ecosystem.

## 10.3 RELEVANCE OF MODE OF PRODUCTION JOURNALISM/MEDIA

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The media industry is undergoing a radical transformation. The Internet, digital platforms, digital technologies, the proliferation of digital gadgets, and affordable bandwidth availability have changed how print and electronic media function and deliver content. The media convergence (merging of print and electronic media) has brought in several changes in newsroom functioning and new content delivery platforms (websites, YouTube channels, podcasts, WhatsApp, Telegram, Facebook, Koo, LinkedIn, X (formerly Twitter) and podcast platforms).

This calls for a fresh understanding of the media industry's mode of production in cyberspace. Here are some key aspects of this mode of production.

**Faster delivery of content:** The mode of production helps the media reduce the time needed to reach its readers or audience. Journalists can reach their target readers in real-time.

**Democratisation:** Cyberspace has resulted in the democratisation of content creation and delivery. Digital gadgets are so powerful that even an ordinary individual can create content on par with any established media organisation. You can be a citizen journalist and start giving news updates and expressing your opinions 24 hours daily. You can write blogs or make vlogs (video blogs) and become social media influencers.

### New economic activity:

Due to a well-established mode of production in cyberspace for media, you can earn money by creating content. User-generated content is valued by the audience, who don't mind who created it if it informs, enlightens, or entertains them. You can teach, build a vast follower base to promote products, and get paid for content (video) from advertisers and advertising aggregators such as Google.

This economic activity is ably supported by universal digital payment solutions (Bhim app) and banking payment solutions such as IMPS (Immediate Payment Service), NEFT (National Electronic Funds Transfer), and RTGS (Real-Time Gross Settlement).

**Diversity:** The mode of production in media cyberspace facilitates a diverse set of people with deep knowledge and expertise in some fields (medicine, psychology, sports, music, and sports) monetising their content. This diversity allows people from all walks of life to participate in media economic activity, unlike traditional media, where only a few organisations form the core of the media industry.

However, the number of women in the digital media ecosystem could be higher. This could distort the representation of women in digital media content. Also, the content developed in the digital space is mostly English. Though there are efforts to improve the content in Indian languages, English continues to dominate the content space, leaving non-English readers out of the space.

### Interactivity

The media production mode in cyberspace promotes interactivity and exchanging ideas in real-time. You can talk to the most prominent political, corporate, scientific, and entertainment leaders. Both media organisations, journalists, and users get feedback immediately. They can rate your content. If your content is contextual and meaningful, it can go 'viral' (shared by many people), forcing others to create similar content.

### Data journalism

Cyberspace allows the creators to incorporate visual elements (infographics and videos) to make the content more appealing. Since space and time are no constraints (common constraints in print, TV, and radio media), media organisations and individuals can incorporate large datasets (graphs, images, and videos) to make the content more authentic, informative, and entertaining. Content with more data convinces the readers and audiences.

**Activity – 1** However, the mode of production in cyberspace comes with certain serious challenges. It leads to the proliferation of fake news, misinformation, noise (unwanted and useless content), and fraudulent content. Since digital platforms allow quick dissemination of content, this dark side could pose serious challenges to communities and countries.

### Check Your Progress: 1

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Explain the key features of modes of production?

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2. Enumerate the influence of digital technology in new modes of production?

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## 10.3 UNDERSTANDING ONLINE JOURNALISM

Online journalism creates and distributes content (news, information, and entertainment) over digital channels such as websites, social media platforms (ex, Facebook, LinkedIn, Instagram, WhatsApp, and YouTube), podcasts, and live streaming.

This will happen in two ways. Traditional media organisations (newspapers, television, and radio) have begun to have an online presence. To grow the reader and audience base in the digital world, they are trying to tailor or customise the content to suit their needs.

There are digital-only publications that started their ventures afresh, creating and distributing content through various digital platforms.

The content consumption habits of readers and audiences in the digital world are completely different from those in the physical world. They want content delivered in real-time, wherever they go and whenever they want. They are no longer passive news consumers like readers and audiences in the physical world.

The digital readers and audience want to produce content themselves, give feedback immediately, and interact with the news creators.

### User-generated content

User-generated content is created by individuals who are not attached to any media organisation. The availability of affordable digital gadgets, bandwidth, and other equipment allows individuals to create and publish their content on digital platforms. This type of content ranges from text to videos and podcasts.

## **New business models**

Online journalism has erased the physical barriers, allowing content creators (traditional media organisations, digital-only publications, and individual creators) to reach out to people with a digital gadget.

It has created new business models. While the subscription model (as in the physical world) is one important revenue-generating avenue, the online window has opened various new avenues to make money: sponsorships, endorsements, advertisements, and promotions.

Some service providers charge a fee to do all the work required to create and distribute the content on behalf of the creators on various digital platforms. They also make money by taking a portion of the revenues.

Social media platforms like Google (and its video-sharing platform YouTube), Facebook (and its small video-sharing platforms like Instagram), X (formerly known as Twitter), and LinkedIn charge their subscribers to increase their visibility and reach.

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## **10.4 MODES OF ONLINE NEWS PRODUCTION**

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A key aspect of Mode of Production in journalism is producing content for various online channels. This includes developing text, video, audio (for podcasts), infographics, and specialised content for platforms such as Instagram, YouTube Reels, and WhatsApp channels.

Unlike traditional content formats, cyberspace requires media organisations and individual creators to tailor-made content to meet the consumption requirements of readers or audiences belonging to different age groups, geographies, languages, and tastes.

### **Immediacy:**

In sharp contrast to the traditional way of reporting, online journalism The online environment enables real-time reporting, allowing journalists to provide instant updates and live coverage of events as they unfold. Social media platforms and live streaming technologies play a pivotal role in delivering news in real-time, fostering an immediate and interactive connection between journalists and audiences.

**Collaboration:** Online journalism requires greater collaboration and flexibility among reporters and the desk. As against traditional production (ex, newspapers), where reporters and sub-editors have abundant time to send reports and make pages, online editions require quick action.

A reporter must file a short report directly (with a photo or video) from the event venue and alert the web desk. The web desk must quickly edit and publish the report (including the videos and audio) online. Sometimes, coordination is required between multiple bureaus.

### **Algorithms at work**

One of the digital platforms' key strengths is their ability to personalise content and recommend content users might like to read or watch. Digital media platforms deploy

artificial intelligence and machine learning solutions to understand users' likes and dislikes subtly. The algorithms also monitor user content consumption across different accounts and websites.

Depending on a user's content consumption preferences, the platforms would throw 'suggestions' within the feed and on the sidebars. They would also promote relevant advertisements and websites. This will prompt the users to 'click' some links or 'follow' certain accounts.

### **SEO optimisation:**

A key aspect of online journalism is Search Engine Optimisation (SEO). The content needs to be curated and pushed per the machines' demands. The search engines continuously audit and measure the content consumption patterns. Organisations need to keep in mind what is being read and watched. They have to strictly follow the metrics provided by SEO experts, file and publish SEO-ready reports, and use the 'keywords' to attract the attention of search engines.

### **Storytelling Formats:**

Unlike traditional media formats, online journalism offers a scope to tell stories in various ways. Journalists can create content embedding videos, audio, images, and infographics. These can be standalone stories, or all clubbed into one. While the young audience prefers to consume content in short format (Reels) and longer videos, other older consumers expect both short and longer-format text and video content.

### **Digital-first strategy**

Media organisations have adopted the digital-first or mobile-first strategy to tap a huge opportunity in the digital world. Traditional and digitally-only media organisations have invested in relevant infrastructure to produce and distribute content across various digital platforms.

They mandate reporters and sub-editors to know the new demands for on-the-go content consumption.

### **User-Generated Content:**

Digital technologies and platforms allow users to create and publish content independently. As it democratises publication, the online window has allowed common people to express their opinions, report live events, and showcase their talent in various domains.

It has enabled a participatory approach to content production. Some users have gained the confidence of readers and audiences in the digital world for their well-informed posts and comments.

Some are so popular on social media that they have more subscribers or followers than most traditional media organisations.

Traditional media organisations ask reporters and sub-editors to create similar content when their posts go viral and gain the world's attention. They vet the user-generated content for story ideas and develop them into full-fledged reports.

## Check Your Progress: 2

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. What is the definition of the mode of production in cyberspace?

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2. What are the key elements of online journalism's mode of production?

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3. What are the key challenges in online journalism?

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## 10.5 LABOUR IN ONLINE NEWS PRODUCTION

Digital media workflows are not radically different from physical media workflows. However, certain additional job roles are required for online news production. Apart from reporters, sub-editors, and an editor, digital media organisations employ people with skills to create and distribute content.

Besides journalists (reporters and sub-editors), digital media companies employ digital editors, multimedia producers, data analysts, web developers, SEO experts, freelancers, videographers, social media managers, web developers, and freelancers.

**Digital Editors:** Digital editors play an important role in online news production. They manage the editorial process, ensuring immediacy and clarity. If they work for a traditional media organisation's digital publication, they collaborate with the print desk and reporters to identify relevant topics for the day and generate content accordingly.

If it is a standalone, digital-first, and mobile-first organisation, its role is much more important as it has to drive content generation. It doesn't have the luxury of taking content from the parent media organisation. Also, it must ensure accuracy, clarity, and journalistic standards as it produces content. It should work with SEOs to spot trends and develop content to meet demand.

### Multimedia Producers:

Online news production often involves multimedia elements such as videos, audio clips, images, and interactive elements. Multimedia producers, which includes job roles such as videographers, photographers, and graphic designers. They plan and

work with relevant journalists (reports and the sub-editors) to contribute their skills to enhance the storytelling experience. They are responsible for planning and lining up visually rich website content offerings. They are expected to be well-versed with relevant editing software solutions to make the videos very brief.

### **Social Media Managers:**

Social media has emerged as an inseparable part of online journalism. Their mandate is to monetise the content in the digital space. Those asked to head their respective social media teams are responsible for the content generated and published on their platforms. After the digital content creation team develops the content, social media managers should be cautious when distributing it on their accounts. They should not waste time because search engine algorithms reward the first movers by prominently promoting the links.

They need to act very responsibly while handling the feedback from some readers on the content and headlines. In some organisations, they also act as audience engagement specialists. Some other organisations assign the job to a dedicated ‘audience engagement’ team.

### **Web Developers:**

Web developers and designers are at the forefront of making a website or digital property successful. They handle the technical aspects of online news production and delivery, help digital media organisations build websites and blogs, and work constantly to resolve glitches. They also create an easy-to-navigate homepage and help readers find relevant sections.

### **Freelancers and experts**

The digital media teams also keep a list of freelancers, who include domain experts in various subjects (economy, science, stock markets, information technology, etc). The team alerts them well in advance for special articles on special occasions (satellite launches, budget presentations, and health emergencies).

### **Citizen journalists**

Digital technologies and platforms have democratised the ability to publish content freely. People with simple digital devices and a good broadband plan can publish content on their social media platforms, blogs, and websites. Technically, they can be as fast or even faster than the digital media outlets belonging to traditional media organisations. Since they don’t need to spend much on employees and offices, they can survive and compete with established players. Sometimes, they follow citizen journalists and develop stories based on their posts and comments.

Recognising their potential, some media organisations allow citizen journalists to publish their content on their platforms.

### **Challenges:**

Unlike traditional media, digital media is highly demanding. It calls for regular and immediate publication of news and other content. Reporters must maintain speed and accuracy while filing reports, while sub-editors are expected to process the content, giving no scope for mistakes. Any mistake could seriously tarnish the organisation’s image. Since readers would like to go to a site that gives them the news first, digital media organisations are under stress to meet the demand.

Media organisations, in general, and journalists, in particular, face tough competition from resource-rich competitors, influencers, and citizen journalists.

### **Check Your Progress: 2**

- Note:** 1) Use the space provided below for your Answers.  
2) Compare your answers with those given at the end of this Unit.

1. Explain the new job roles in the digital media production environment?

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2. Compare and contrast the modes of production in online vs offline media?

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## **10.6 CONTENT CONSUMPTION TRENDS**

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Digital technologies, platforms, affordable digital gadgets, and bandwidth have significantly changed how people consume news and other forms of content.

### **Digital space**

The proliferation of digital technologies, platforms, and gadgets (smartphones and tablets) has allowed people to consume news and other forms of content. The main reason for the shift to the digital world is unhindered access to content. People can read or watch the content wherever they are.

Smartphones have become affordable and powerful, with a huge processing capacity and memory. However, readers' attention spans have narrowed, forcing media organisations to develop bite-sized (short-length) reports and videos. For those who have time, they produce longer-duration content (long-form stories and longer videos).

### **Emergence of social media**

The proliferation of digital technologies and gadgets facilitated the penetration of social media networks such as YouTube, Facebook, X (formerly known as Twitter), LinkedIn, Truecaller, WhatsApp, Koo, and Instagram. These platforms allow users to publish photos, opinions, and videos, exposing them to many other users worldwide.

This has opened many opportunities for people to showcase their talent and express their opinions on any issue.

### **Algorithms and customised content**

Digital technology companies like Google and Facebook use artificial intelligence and machine learning solutions to carefully monitor their users' content consumption preferences and online behaviour their users' online behaviour. Based on the analysis, they automatically curate the content and suggest the content that suits their likes.

They also block or report abusive or unwanted content that doesn't suit their tastes and opinions. Based on the feedback, the algorithms prepare personalised content suggestions.

### **News aggregators**

The Internet is an ocean of information and content, and people can't find the right content. Some media organisations have started news aggregating services to help them identify relevant sources of information. These companies filter the Internet and segregate news reports according to user preferences. Google, Flipboard Daily Hunt, and Inshorts are some of the aggregators. This helps users save time and effort in accessing the content they like.

## **10.7 THE IMPACT OF MEDIA CONVERGENCE**

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Media convergence is at the heart of this transformation in the media industry. According to media studies experts, convergence is integrating separate media (print, radio, and television) to provide a common platform. This converged platform allows users to access content from all media platforms seamlessly.

Media convergence has forced traditional media organisations to create exclusive web teams to develop content for digital readers and audiences. It has also required journalists (reporters and sub-editors) to equip themselves with tools and skills to produce content for digital readers.

Journalists are expected to become multitaskers. In addition to writing stories for the print medium, they are expected to learn multimedia storytelling by incorporating elements such as photos, videos, and infographics in their reports.

### **Multi-platform Publishing**

Convergence has erased the boundaries between various media platforms, which used to function separately. While print medium reporters are expected to do video interviews and podcasts, television and radio reporters are asked to file reports for their web editions.

### **Social media factor**

While convergence media has allowed traditional media organisations to reach more audiences, it has also required journalists to spend additional time developing content for digital editions and engaging with readers there.

The requirement to constantly monitor developments and file reports puts heavy pressure on journalists. Citizen journalism is also posing a challenge. Many people are publishing posts and reports on even small developments. When some of such posts or reports go viral, it puts pressure on journalists and media organisations to produce similar content. If they don't, they will be left out of online metrics.

They are also expected to take and respond to readers' feedback, including hateful and abusive comments from trolls.

### **Impact on small publications**

Media convergence profoundly impacts traditional media organisations, which don't have the financial resources to open digital properties. With readers shifting their

loyalties to digital media platforms, newspapers have reported a significant drop in circulation and revenues. To cut costs, they reduced the number of pages and jobs. Several publications had to close operations, unable to take the pressure any longer.

## 10.8 FUTURE-POLICY SOLUTIONS, INDEPENDENCE, AND ACCOUNTABILITY

Online journalism is here to stay. Though it is still evolving as different media organisations are at varying levels of adapting to digital transformation, it is important to note that online journalism will be the order of the day. We need to find ways and means to oversee its evolution to streamline its growth.

### Policy Suggestions:

As the digital media space expands rapidly, we must discuss and evolve a policy framework to help the media industry tap the opportunity and address its challenges. Good policy support will help build a healthy and independent news ecosystem.

Governments should safeguard press freedom, ensuring journalists have the freedom to report.

Governments should promote media literacy initiatives to educate people about misinformation, fake news, and fact-checking. They should work with bodies like the Press Council of India and Press Academies in different States to organise workshops to teach multimedia skills to journalists.

It is essential to protect the independence of news organisations. It is essential for a healthy democracy. Media organisations should foster editorial independence, allowing journalists to report stories without bias or external pressure.

### Accountability:

Accountability is a key attribute that helps media organisations earn trust and credibility. Transparency in funding and revenue sources plays a significant role in building trust. Media organisations should implement a mechanism to process content diligently and check facts thoroughly before publishing such articles.

Digital media organisations should answer their readers, engage with them on various social media platforms, collect feedback, and initiate corrective measures.

By taking a balanced approach to the above-mentioned issues, media organisations, society, and event organisers must factor in their feedback.

### Key challenges

The mode of production in online journalism faces several challenges. Some are extensions of the fundamental challenges it faces in the physical world. The digital world accentuates some of the problems and presents certain new challenges.

### Digital Divide

There is a huge digital divide worldwide, creating disparities in access to technology, Internet connectivity, and digital literacy. The gap between people with digital gadgets and resources and those who don't is increasing daily. Though smartphone and bandwidth prices have decreased significantly, making them more accessible, the divide continues regarding access to digital resources.

The mode of production in cyberspace has further aggravated the digital divide, which can prevent equal participation and opportunities in the online economy.

### **Resource crunch**

The media industry faces financial challenges due to shifts in content consumption preferences. More and more people are consuming content on digital gadgets, requiring all media organisations to produce and distribute content through digital media. However, the digital transformation process requires huge financial and human resources, and most traditional media organisations lack the financial resources to embark on it.

The challenge for more prominent organisations that can invest money in digital transformation is that digital media channels are not yielding enough revenues. Existing ventures report lesser revenues, and the digital channels are not making enough money to justify the investments. This has become a big challenge for the media industry.

### **Skill shortage**

To prepare for new responsibilities (catering to digital readers and audiences), journalists must equip themselves with new skills and learn new processes. Unfortunately, not all media organisations invest money upgrading their employees' skills. However, they expect them to contribute heavily to producing and disseminating content on various digital platforms.

The journalists are being asked to spend more time and do more work without being given additional remuneration. They are left to themselves to learn new skills to make themselves relevant. This is impacting their quality of life.

### **Misinformation and fake news**

The proliferation of digital technologies, platforms, and cheaper Internet plans have allowed more people to open websites and digital TV channels. Since no effective controls and regulations exist, the scope for misinformation and fake news has increased significantly. Unverified news and deliberate attempts to spread false news could pose serious societal challenges.

### **Intellectual Property**

The digital space also poses a serious challenge to intellectual property rights. Content, the key raw material for media organisations, is copied extensively by some people. They are using the copied content to develop stories, causing severe losses to those who created it.

### **Large Language Models**

Large Language Models (ex: OpenAI's ChatGPT, Microsoft's CoPilot, and Google's Gemini) have begun to enter newsrooms. This, however, could cause some problems as the answers provided by the LLMs could violate the copyrights of other creators. Also, there is a possibility that the answers might include unverified facts, numbers, and quotes. Using such unverified data could not only mislead the readers but also tarnish the image of the media organisations and journalists.

LLMs are not just about creating text content. Many can also create images, videos, presentations, and songs. However, these LLMs can also cause similar problems if not used properly.

However, there is a solution. Some IT professionals and companies are developing SLMs (Small Language Models), which work on a specific domain and the data created by a specific organisation. An organisation can effectively use the data it creates when it develops its own SLM.

### **Data Privacy and Security**

Cyberspace's mode of production is largely about the development, collection, storage, analysis, and distribution of huge amounts of data, including personal and sensitive data. Any breach into computer networks could result in the theft of sensitive data, exposing people's privacy. Loss of data to hackers could cause severe losses to media organisations. Organisations should focus on deploying strong cybersecurity solutions to protect the data.

### **Platform monopolies**

The domination of digital technology companies such as Google and Facebook, which dominate the digital publishing platform business, creates platform monopolies in the digital space. They play a dominant role in the mode of production in cyberspace. They can control what content should be published, read, and shared worldwide. This has triggered a global discussion.

Even established media organisations are expected to follow the conditions set by such platforms. Several media organisations and countries have openly opposed their domination in the digital publication space.

Also, people with huge financial resources can buy space from the platform owners to make their content visible.

### **Check Your Progress: 3**

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Name three skills journalists must acquire to be relevant in the digital era.

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2. Name two digital platforms and describe their role in the digital mode of production.

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3. What is data journalism, and why is it significant in today's media landscape?

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## 10.9 LET US SUM UP

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There is a need to understand and assess the mode of production in the media industry in the backdrop of the evolution of media convergence. It will help the ecosystem streamline and standardise processes and define job roles. Since online journalism expects media organisations to update their websites and digital channels around the clock, it causes stress and anxiety among journalists and others involved in news production delivery. It also poses the challenges of misinformation, fake news, and deep fakes.

## 10.10 KEYWORDS

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|------------------------------|--|
| <b>Accountability</b>        | : The obligation to answer for one's actions, ensuring transparency and responsibility in decision-making processes, particularly within institutions or individuals holding power or influence. |
| <b>Algorithms</b>            | : Sets of instructions or rules followed by computers to perform tasks, make calculations, or solve problems, crucial in processes such as data analysis, machine learning, and automation.      |
| <b>Citizen journalism</b>    | : The practice of ordinary individuals, often utilising digital technologies, to report news and share information, contributing to media coverage alongside traditional news organisations.     |
| <b>Data Journalism</b>       | : Utilising data analysis and visualisation techniques to investigate, interpret, and present news stories, providing deeper insights and understanding of complex issues.                       |
| <b>Deep fakes</b>            | : Artificially generated multimedia content, often using advanced machine learning techniques, to convincingly depict events, people, or statements that are fabricated or altered.              |
| <b>Digital Literacy</b>      | : The ability to access, evaluate, and critically understand information and communication technologies, enabling individuals to navigate and participate effectively in the digital world.      |
| <b>Fake news</b>             | : False or misleading information presented as news, often disseminated through online platforms, with the intention to deceive or manipulate public opinion.                                    |
| <b>Large Language Models</b> | : Advanced artificial intelligence systems capable of processing and generating human-like text, used for various tasks such as natural language understanding, generation, and translation.     |
| <b>Media convergence</b>     | : The integration of different forms of media content, technologies, and platforms, blurring traditional   |

**Misinformation**

boundaries between print, broadcast, and digital media.

- : Inaccurate or misleading information, often spread unintentionally or deliberately, leading to misunderstanding, confusion, or harm.

**Mode of Production**

- : The methods and processes through which goods or services are produced, distributed, and consumed within an economic system, influencing social relations and power dynamics.

**Multimedia**

- : The combined use of different forms of media, such as text, images, audio, and video, to convey information or entertainment experiences.

**Online journalism**

- : The practice of reporting, producing, and disseminating news content through digital platforms, including websites, social media, and mobile applications.

**Platforms**

- : Digital services or applications that facilitate communication, interaction, or commerce between users, often hosting a variety of content and services.

**Privacy and security**

- : Concerns and measures related to safeguarding personal data and protecting individuals from unauthorised access, surveillance, or misuse of information.

**Regulation**

- : Rules, laws, and policies established by governments or other authorities to govern various aspects of society, including media, technology, and commerce.

**Revenue Models**

- : Strategies and mechanisms through which organisations generate income or profit, including advertising, subscriptions, donations, and sales of goods or services.

**Search Engine Optimization (SEO)**

- : Techniques and practices aimed at improving a website's visibility and ranking in search engine results, enhancing online discoverability and traffic.

**Small Language Models**

- : Simplified versions of large language models, designed for specific tasks or applications, with reduced computational requirements and capabilities.

**Social media**

- : Online platforms and technologies that enable users to create, share, and interact with content and other users, fostering communication, collaboration, and community building.

## 10.11 FURTHER READING

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## 10.12 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress 1:

1. The mode of production in cyberspace refers to the economic and social structures governing the creation and distribution of digital goods and services. It encompasses the mechanisms through which value is generated, exchanged, and controlled within online environments, including platforms, algorithms, and user interactions. This mode is characterised by digital technologies' impact on traditional production methods, leading to new forms of labour, consumption, and power dynamics.
2. Online journalism's mode of production comprises several key elements, including digital platforms, content creation tools, distribution networks, and audience engagement mechanisms. These elements facilitate the creation, dissemination, and consumption of news in digital formats, shaping the workflow and practices of journalists and media organisations. Additionally, factors like data analytics, monetization strategies, and social media integration play crucial roles in shaping online journalism's production dynamics.

3. Online journalism faces various challenges stemming from the digital environment's complexities and evolving nature. These challenges include issues related to information overload, fake news proliferation, audience fragmentation, and platform dependence. Additionally, concerns regarding digital privacy, algorithmic bias, and revenue sustainability pose significant hurdles for media organisations operating in the online sphere. Moreover, the rapid pace of technological change necessitates continuous adaptation and innovation to maintain relevance and credibility in online journalism.

**Check Your Progress 2:**

1. Modes of production encompass key features defining how goods and services are produced in societies. They include factors like ownership of the means of production, division of labour, and relationship between producers. Centralised planning, market-driven competition, and mixed economies are examples. These features shape economic structures and social relations, impacting distribution of wealth and power within societies.
2. Digital technology profoundly influences new modes of production by revolutionising production processes, facilitating automation, and enabling remote work. It fosters collaborative networks, empowers individual creators, and disrupts traditional business models through platforms and sharing economies. Moreover, it accelerates innovation cycles, challenges intellectual property norms, and raises questions about labour rights and digital inequalities amidst the rise of gig economies and algorithmic management.

**Check Your Progress 3:**

1. In the digital era, journalists must acquire skills in multimedia storytelling to engage diverse audiences effectively. Additionally, proficiency in data analysis enables them to uncover meaningful insights from vast amounts of information. Lastly, mastering social media and online community management is essential for reaching and interacting with audiences in real-time.
2. Facebook and Twitter are prominent digital platforms that facilitate communication and information sharing. Facebook serves as a hub for social interactions, news dissemination, and community building, while Twitter is renowned for its role in breaking news, public discourse, and fostering global conversations.
3. Data journalism involves the collection, analysis, and presentation of data to uncover compelling stories and provide insights into complex issues. In today's media landscape, where vast amounts of data are generated daily, data journalism plays a crucial role in enhancing transparency, holding institutions accountable, and providing audiences with evidence-based reporting, thus contributing to a more informed and empowered society.

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# **UNIT 11 IDEOLOGY AND DIGITAL COMMUNICATION**

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## **Structure**

- 11.0 Introduction
- 11.1 Learning Outcomes
- 11.2 Defining Ideology
- 11.3 Ideologies in Digital Spheres
- 11.4 Persuasive Technology
- 11.5 Bubbles, Echo Chambers, Biases, and Other Concerns
- 11.6 Case Studies
- 11.7 Future of Civic Discourse
- 11.8 Let Us Sum Up
- 11.9 Keywords
- 11.10 Further Readings
- 11.11 Check Your Progress: Possible Answers

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## **11.0 INTRODUCTION**

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Digital communication doesn't happen in isolation. It is shaped by an ideology, a world outlook that helps people understand the world and its ways from a particular perspective. This lesson deals with the critical relationship between ideology and digital communication. Ideology is a system of values, ideas and beliefs that drives people's understanding of the world.

Ideology determines content planning, production, distribution, and consumption. While ideologies influence content development and consumption and the dynamics of digital platforms, digital technologies and platforms help disseminate ideologies.

Understanding the underlying ideologies in communication and their impact would help comprehend how different perspectives are expressed, shared, and debated online. It would also help explain how certain opinions are amplified or not reflected well on various digital platforms.

By understanding the interplay between ideology and digital communication, students will get insights into how digital technology platforms promote certain views and contribute to the polarisation of opinions.

It will also help understand how echo chambers are created, how algorithms determine content distribution, and the challenges involved. You will learn about the role of algorithms and recommendation systems based on content consumption patterns. You will also learn how certain views are amplified, and digital platforms act as gatekeepers. You will explore how ideological polarisation happens in cyberspace, how it could lead to echo chambers, and how opinions and beliefs are reinforced. It will also focus on how public discourses get polarised. You will understand various ideologies and digital technology platforms that influence content production, distribution, and consumption by studying these aspects. Proliferate and interact within the digital landscape.

## 11.1 LEARNING OUTCOMES

After completing this Unit, you should be able to:

- Understand ideologies and their role in shaping digital content development, distribution, and consumption.
- Understand various ideologies, such as nationalism, libertarianism, socialism, and consumerism, and how they manifest in cyberspace.
- Discuss the influence of digital technology platforms on promoting these ideologies and some specific views that reflect them.
- Explain on the polarisation of views and their impact on public debate.

## 11.2 DEFINING IDEOLOGY

Ideology is a system of values, principles, and beliefs that helps people understand and interpret the world, including its social, political, and cultural aspects. It does the same thing in digital communication. However, it functions differently because of the digital world's special characteristics. Ideology determines what kind of information people are exposed to, how they engage with content in general and information in particular, how they convey their opinions, and how they interact with the world.

To understand how ideologies shape how information is produced, shared, and consumed through digital platforms and online networks, a person's ideological perspective would influence his or her content generation agenda, the people they talk to for information, and the tone and tenor of their discussions on various digital platforms.

Ideological biases can reflect on technological algorithms, promoting certain content that is positive to one ideology and muffling content belonging to ideologies that don't go well with the algorithms.

This will significantly impact the visibility, availability, and accessibility of certain viewpoints.

## 11.3 IDEOLOGIES IN DIGITAL SPHERES

Like in the physical world, where people believing in different ideologies spread their ideas through different means (books, articles, speeches, and movements), the digital space is also a place to spread one's opinions based on certain ideologies and use different technological platforms to explain the world in their respective outlooks.

These ideologies are reflected in various ways, using digital communication tools to hold discussions and form opinions.

Let's explore the ideologies shaping the world's opinions and how they could influence digital communication discussions and campaigns.

**Liberalism:** This ideology protects individuals' rights, such as the right to life, liberty and property, freedom of expression, equality before the law, and implementing the rule of law. It believes in limited government.

In digital communication, people who believe in liberalism support social justice causes, defend the fundamental rights of individuals, promote inclusive language and representation, and advocate digital privacy rights.

They create dedicated websites, use social media platforms, and participate in online campaigns supporting the causes to promote liberal views. They also quickly take to social media when liberal views are attacked.

They also join international campaigns and organisations that align with their views. Digital technologies and platforms allowed them to connect with like-minded people from all over the world.

**Feminism:** Feminism is an ideology that defends women's rights and fights against all forms of oppression and discrimination against women. Feminists feel that women face discrimination at different layers – in their workspaces, roads, and houses. They fight against sexual exploitation, lower wages for women, violence against girl children and gender biases in the workplace.

Feminist movements and worldwide campaigns have resulted in several pro-women policies and laws that protect women's rights.

For example, the Government enacted the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act in 2013, which mandates all organisations to set up an Internal Complaints Committee (ICC) to protect women from sexual harassment. All organisations that employ ten or more employees must form a committee to protect the rights of women employees.

The National Commission for Women (NCW), a Central Government organisation, can take suo moto actions against acts of violence and oppression in any part of the country.

Feminists take an active role in protecting women's rights in the digital space. They use digital technologies and platforms efficiently to defend these rights, highlight issues, and gather support for different causes. They also join international online communities and groups to promote awareness of the rights of women and girl children.

They, however, face challenges like trolling and online abuse. Some women's organisations and activists fight such attacks, defending their right to speak to support women's rights.

### **Capitalism:**

Capitalism is an ideology that advocates economic growth through private ownership and free markets. It advocates policies and laws that create an environment favourable for investments and the smooth functioning of factories. It also wants Governments to provide incentives and special schemes to promote investments, entrepreneurship, and digital marketplaces (such as Amazon and Flipkart).

In the digital space, the supporters of capitalism propagate views that promote the ideology. They invest in media organisations which build public opinion in support of policies that support capitalism.

They use virtual platforms such as Facebook, X (formerly Twitter), LinkedIn, Zoom and Teams and organise conferences and debates to discuss government policies and economic issues.

### **Communism:**

Communism is an ideology that advocates a classless society where a nation's financial and economic resources are owned collectively and distributed based on one's needs. It believes in a government-owned and administered by workers and farmers. They oppose capitalism, which supports a pro-industry form of governance.

In the digital space, people who believe in communism use online forums and platforms to promote Communist principles and engage in discussions with those who oppose it. They also set up online groups, resources, and websites to champion their cause.

### **Dictatorship:**

A dictatorship is a form of government in which an individual, a group of individuals, or an Army takes full control and dictates how it should be run. It believes in centralised authority, censorship, surveillance, restriction on freedom of expression, and other fundamental rights.

In the digital space, dictators take control and decide what sort of online resources should be available to people. They monitor various digital technologies to monitor people's online activities and take immediate action to express views against dictatorship. They resort to online propaganda in support of the government and its policies.

Digital spaces are under the complete control of governments run by dictators.

### **Socialism:**

Socialism is an ideology that advocates equitable distribution of wealth, opportunities, and resources. They oppose the domination of a few individuals or corporate houses and respect people's fundamental rights. They promote collective farming and collective ownership of factories.

In digital spaces, people who believe in this ideology promote the basic tenets of socialism, including freedom of expression. They try to build consensus on policies and laws that uphold individuals' rights, build digital resources and communities to promote awareness and oppose attempts to silence voices.

### **Nationalism:**

Nationalism is an ideology that takes pride in a nation's history and culture. It tries to unite the people of a country by strongly promoting national pride and invoking historical attempts to undermine its prestige.

They oppose all other ideologies, which, they think, are detrimental to the nation's interests.

In the digital space, they use digital technologies and platforms to rally around people in favour of nationalism. They build online communities and resources to spread messages in support of nationalism. They use messenger platforms like WhatsApp and social media platforms like Facebook and YouTube to create content and spread it among their followers, who, in turn, would share it with their friends.

**Check Your Progress: 1**

- Note:** 1) Use the space provided below for your Answers.
- 2) Compare your answers with those given at the end of this Unit.

1. Name three ideologies and explain the key features.

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2. What is meant by bubbles, echo chambers and biases?

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3. What are the key concerns about bubbles, echo chambers and biases?

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## 11.4 PERSUASIVE TECHNOLOGIES

Digital technologies and platforms can influence people's opinions, beliefs, habits, and attitudes. These are called Persuasive technologies, which include various tools, platforms, and solutions. These techniques can be used for both good and bad purposes.

They can be used to inform and educate people on various topics and issues by creating engaging and interactive content. They also can be used to manipulate the target audience by feeding them with highly opinionated and biased content.

**Social media:** Social media are digital platforms such as Facebook, YouTube, WhatsApp, Instagram, Reels, and blogs that play an important role in shaping people's opinions. They spread information, opinionated articles, and visual content to influence and reinforce people's views on various issues.

**Advertising:** Advertising promotes products, services, and opinions. Corporate and political organisations use a variety of advertising platforms to share attractive product promotion content. They use celebrities and other influencers in targeted advertisements to spread the message.

They use platforms and algorithms to create targeted digital advertising campaigns. They can tailor advertisements based on age, language, gender, financial status, caste, and religion.

**Propaganda:** Propaganda is creating and promoting content to a particular viewpoint. In this form, organisations, political parties, and governments deploy curated content and distribute it using online channels. This biased content influences people favouring a particular ideology, party, or organisation.

**Gamification:** This technique creates engaging content to persuade users to consume it. It uses attractive visuals, multimedia content, and interactive techniques to keep users hooked to the content.

While there are various persuasive methods in the digital space, there are a few theories about how these methods work. The list includes Captology (computers as persuasive technologies), Nudge theory, the influence of default settings on digital devices, and the Unintended Psychological Effects of Data Structuring and Display.

### **Captology:**

Researchers say computers can persuade users to change their opinions, form opinions on various issues, and persuade them to act in a particular direction.

Computers can also motivate people, help them learn new things, and raise awareness of environmental issues, healthcare, politics, science, poverty, and the economy.

### **Unintended Effects:**

While targeted attempts to influence people are one form of persuasion, there are specific cascading effects or unintentional uses, too. For example, stories about philanthropy and animal rights would indirectly inspire people. The positive attitude thus created may not reflect immediately, but people will be convinced to believe in something after seeing the positive results.

Captology discusses how technological solutions can be carefully designed to bring about positive attitudes and thinking.

Digital technologies and platforms can influence and encourage users to do good. They can also help increase their awareness of various issues.

However, these can influence people negatively, drive them to do something harmful and bring disharmony to society.

### **Nudge Theory:**

As the name suggests, in media studies, the Nudge Theory discusses how gentle nudging can bring about small positive changes in the behaviour and thinking of audiences.

It discusses how subtle design choices in media platforms, messaging, and content presentation can influence people's behaviours and decisions. It takes cues from behavioural economics and psychology to build the argument.

Specific nudge techniques, such as prompts, default settings, and suggestions based on algorithmic observations, can be used to 'nudge' the user's behaviour in digital spaces.

Default settings in smartphones, laptops, desktops, and tablets are one example of how nudging happens. By offering specific tools and apps (applications), the default settings make the users use them and get influenced or prompted by the content offered in such apps and tools (pre-installed payment apps, news aggregators, messaging apps and productivity tools such as PDF readers). There is a chance that users will go back to such tools and apps repeatedly.

These default settings can have positive and negative impacts. They can limit a user's experience and view.

## 11.5 BUBBLES, ECHO CHAMBERS, BIASES, AND OTHER CONCERNS

Ideologies keep people in isolated groups, giving them a limited view. Only certain ideologies allow people to consider and respect the views of people who believe in other ideologies. Ideologies not open to studying and discussing newer ideas and opinions tend to keep people with certain biases. They keep people in echo chambers and bubbles, not exposing them to explore diversified views. This is a major concern in digital communication as it can lead to a polarised world with low tolerance for views that oppose one's views.

### **Biases:**

Biases are not something new in media in the physical world. It is influenced by factors such as – rich and poor, gender, language differences, colour, literacy, and religion.

These biases continue to reflect in the digital space. Biases on digital platforms could be more pronounced, as these platforms can enforce them more effectively than in the physical world.

Biases are based on ideologies and the respective world outlooks that these ideologies propose. The scope for polarisation (pro or against a view or opinion) is very high in digital spaces, as the voices with neutral opinions are either subdued or silenced.

Platforms (such as Facebook, Google, YouTube, and other social media platforms) promote biases in several ways as they try to personalise content offerings based on user's location, browsing history, preferences of friends, language, and nationality. This will lead to echo chambers, where users are exposed to certain content. This, in turn, would promote polarisation, removing the scope for diversified views.

### **Bubbles:**

In the digital space, a bubble is a phenomenon where people are continuously exposed to a limited range of content that subscribes to one ideology. Since people are exposed to a particular perspective, they tend to read and internalise only one perspective while belittling others. Digital platforms, which use artificial intelligence and machine learning-based algorithms, fuel this phenomenon as they grasp user preferences and promote content that aligns with user preferences. They also make specific news reports and videos go viral, bombarding the users with the viral content. On other occasions, they deliberately promote certain content based on advertisers' preferences.

This technological determination has both positive and negative consequences. While it helps users find relevant information that they like, it can bombard them with only one perspective.

### **Echo chambers:**

Echo chambers are like bubbles. They are online communities or social media groups (Facebook, WhatsApp, and X) where like-minded people exchange ideas and reports to reinforce their views. They don't allow others who might have different views, and they will not tolerate any view that goes against theirs.

Beyond these groups and communities, they support their ‘friends’ when they face difficulties in online or social media discussions. They express their solidarity by joining the conversations and lending a helping hand. They amplify their echo chambers ‘challenging content’ to elicit more support.

This, in turn, will create an endless chain in which the users of a particular echo chamber continuously reinforce their views. This tendency leads to polarisation, where two groups fight with one another, removing the scope for neutral and diversified views.

People within bubbles and echo chambers will be less receptive to alternative viewpoints, causing damage to freedom of expression and scientific temperament. They reinforce deep-rooted biases.

### **Misinformation:**

In the digital space, misinformation is a major challenge. Some unscrupulous elements deliberately create fake news and misinformation, distorting facts, and other developments to defend one’s ideology. Once it is disseminated in social media and other online channels, it goes to many people, who tend to ‘forward’ such messages intentionally or unintentionally. Many people don’t know whether a particular message is factual or fabricated. Since they get it in a social media group (ex, WhatsApp, or Telegram), they believe it is true and forward it to others, thinking they are doing some social service.

Misinformation and fake news are created deliberately to gain financial, political, or cultural gains. They are used to create differences in societies and communities by spreading wrong information, doctored images or videos and highly opinionated content.

### **Deep Fakes:**

Deepfakes are a kind of misinformation to mislead people. By using publicly available audio, images and videos of celebrities and political leaders, cyber criminals manipulate original audio files, images and videos and create new files that appear to be genuine. They use advanced technological solutions and artificial intelligence to doctor the original content. The new files can depict people saying or doing things they never actually did.

The recent example of a deep fake video of a South Indian film actress shows how dangerous this phenomenon is. Using this digital technology, one can make a video or an image that can completely tarnish the image of a celebrity or a politician.

It can manipulate people’s opinions and create differences among communities and countries.

### **Check Your Progress: 2**

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. What do you understand by Persuasive Technologies?

2. What is the future of civic discourse in the digital space?
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## 11.6 CASE STUDIES

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When you buy a phone, you must notice that a set of apps has already been installed. Identify those apps (Ex, Facebook, Telegram, Gmail, YouTube, Calendar, etc.) and note the apps you have used to Loto the services.

Also, identify the apps that you have not used at all and make a list of such apps.

Have you used any productivity apps (ex, alarm, calculator, and GPS)?

Are you a member of any Facebook Community or a WhatsApp group exclusively meant for an ideology you subscribe to?

## 11.7 FUTURE OF CIVIC DISCOURSE

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This is an important issue that requires serious thinking and discussion. Discourses in the digital space should be democratic and allow for divergent views.

At present, discourses, and interactions on digital platforms such as Facebook and X (Twitter) are highly polarised, with limited scope for people with neutral views or views that slightly deviate from the two diametrically opposing views are minimal.

People who express a view that opposes a popular view are being trolled. They face abuse and harsh criticism, forcing them to keep silent or hold back their views. Discrimination is also seen based on language, religion, food habits, culture, nationality, and castes. Geopolitical issues also divide people in the digital space.

The scope for civic discourse, where people can freely express their opinions, is limited.

However, the potential for civic communication is immense, as digital technologies and platforms have democratised the ability to publish. People with smartphones can post their opinions and comments on any topic—a facility not available before the advent of the Internet.

Digital communication promotes healthy discussions and interactions on digital platforms. It also provides opportunities for people with diverse opinions to express themselves and present their points of view, allowing even people from marginalised communities to participate in public discourses without fear.

Moreover, they can immediately draw support from like-minded people across different geographies. Since digital communication connects people across geographies and linguistic barriers, people can access online resources to learn more and actively participate in discussions on various platforms.

### **Regulation**

This, however, calls for regulation to protect people's interests from marginalised communities and underprivileged sections. Perpetual abuse and trolling must be checked, and action must be taken against the offenders spoiling the environment.

Media regulation will also help address misinformation, hate speech, privacy violations, and digital exclusion.

### **Digital literacy**

To achieve this, people need to be educated and spread digital literacy. They should also be educated on how to tackle misinformation and fake news. If they can distinguish between factual and fake news, they will know what posts can be shared with others and what posts need to be questioned.

Many unintentionally become part of 'bubbles' and 'echo chambers' and participate in uncivilised and undemocratic discussions. Exposure to good practices and teaching how to behave responsibly in digital public discourses will help create a healthy digital space that facilitates civic discourses.

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## **11.8 LET US SUM UP**

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Ideologies are the means through which people understand the world. A variety of ideologies are practised across the world. Like in the physical world, ideologies influence people's thinking and content consumption behaviour in the digital space. People use digital technologies and platforms to promote their points of view and defend their perspectives based on different digital platforms.

Influence what information people consume, how they participate in online discussions, and ultimately their worldview.

Digital technologies and platforms are called 'persuasive technologies' as they are used to convince, encourage, or persuade people to believe in or do something.

Digital communication employs techniques to influence users' opinions and behaviours subtly. Social media algorithms curate content and suggest 'relevant' content to people based on content consumption patterns. They also promote content that goes viral on various digital platforms.

Sometimes, some platforms deliberately promote content that reflects a particular ideology.

Other techniques, such as 'nudge theory' and default settings, encourage people to consume content in a particular way. These persuasive techniques create bubbles, echo chambers and biases.

This results in the polarisation of people in the digital space, restricting people to thinking narrowly. It kills divergent views and perspectives, leaving little or no scope for pluralistic views.

While digital platforms have the potential to encourage diverse viewpoints and healthy debate, they also present challenges such as bubbles, digital echo chambers, misinformation, privacy, and biases.

To promote pluralistic views, regulation is needed to protect the users from abuse, trolling, misinformation and erosion of privacy and trust.

There is a need to promote digital literacy to educate people on different dimensions of digital communication and the need to respect the views of others.

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## 11.9 KEYWORDS

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**Algorithms**

: A set of instructions or rules followed by a computer program to solve a problem or perform a task, often used to process data, and make decisions.

**Biases**

: Preconceived notions or preferences that affect judgement and decision-making, often leading to unfair treatment or inaccurate conclusions.

**Capitalism**

: An economic system characterised by private ownership of the means of production, profit-driven markets, and competition, where goods and services are exchanged in a free market.

**Cryptology**

: The study of techniques for secure communication in the presence of third parties, encompassing both cryptography (encryption and decryption) and cryptanalysis (breaking codes).

**Civic engagement**

: Active participation of individuals in their communities and society, often involving actions such as voting, volunteering, and advocacy for social or political causes.

**Communism**

: A socio-economic system advocating for common ownership of the means of production, distribution of resources based on need, and the absence of social classes.

**Consumerism**

: A social and economic ideology that encourages the acquisition of goods and services in large quantities, often equating consumption with happiness or social status.

**Deep Fakes**

: AI-generated hyper-realistic digital content, such as images, videos, or audio recordings, often used to deceive or manipulate viewers by portraying false information or events.

**Default settings**

: The preset configurations or options chosen by manufacturers or developers for a device, software, or platform, which users can modify according to their preferences.

<b>Dictatorship</b>	: A form of government where power is concentrated in the hands of a single individual or a small group, often characterised by authoritarian rule and limited political freedoms.
<b>Digital communication</b>	: The exchange of information, ideas, and messages through electronic means, such as the Internet, email, social media, and digital devices.
<b>Digital platforms</b>	: Online frameworks or services that facilitate interactions, transactions, or content sharing among users, such as social media networks, e-commerce websites, and streaming platforms.
<b>Digital technologies</b>	: Tools, systems, or applications based on digital electronics, including computers, smartphones, software, and Internet-connected devices.
<b>Discourse</b>	: Communication or conversation, often involving the exchange of ideas, opinions, and arguments on a particular topic or issue within a specific context.
<b>Display effects</b>	: The impact or influence of how information is presented or visually displayed, affecting perceptions, attitudes, and behaviours of individuals.
<b>Echo chambers</b>	: Information environments where individuals are exposed only to perspectives and opinions that reinforce their existing beliefs, leading to the amplification of ideological biases.
<b>Fake news</b>	: False or misleading information presented as legitimate news, often spread intentionally to deceive, or manipulate audiences for various purposes.
<b>Feminism</b>	: A socio-political movement advocating for the equality of the sexes and the dismantling of gender-based discrimination and oppression.
<b>Filter bubbles</b>	: Online information ecosystems where individuals are selectively exposed to content based on algorithms or personal preferences, potentially limiting exposure to diverse viewpoints.
<b>Gamification</b>	: The application of game design elements and principles in non-game contexts to engage and motivate users to achieve specific goals or behaviours.
<b>Ideology</b>	: A system of beliefs, values, or principles that guide and influence an individual's or group's actions, often shaping political, social, and cultural perspectives.

**Influence****International Complaints Committee**

: The capacity or power to affect the thoughts, actions, or behaviours of others, often through persuasion, coercion, or social pressure.

**Liberalism**

: A body or organisation responsible for addressing grievances or disputes on an international scale, often related to human rights violations or cross-border conflicts.

**Manipulation**

: A political and philosophical ideology emphasise individual rights, civil liberties, free markets, and limited government intervention in social and economic affairs.

**Misinformation**

: The act of influencing or controlling someone or something in a deceptive or cunning manner to achieve one's own goals or interests.

**Nationalism**

: False or inaccurate information that is unintentionally disseminated, often leading to misunderstandings or misconceptions.

**National Commission for Women**

: A political ideology emphasising loyalty, pride, and devotion to one's nation, often accompanied by a sense of superiority over other nations.

**Nudge theory**

: A government agency or body tasked with addressing issues related to women's rights, gender equality, and empowerment within a specific country.

**Persuasive technology**

: A behavioural economics concept suggesting that individuals can be influenced to make certain decisions or choices through subtle prompts or interventions, without restricting their freedom of choice.

**Platforms**

: Technology designed to influence attitudes, behaviours, or decisions of users through persuasive techniques, such as feedback, rewards, or social influence.

**Propaganda**

: Digital or online frameworks that enable users to access, interact with, or contribute content, services, or applications, often facilitating communication, collaboration, or commerce.

**Social media**

: Information, ideas, or messages deliberately spread to influence opinions, attitudes, or behaviours, often with a political, ideological, or persuasive agenda.

: Online platforms and websites that enable users to create, share, and interact with content and other users, fostering virtual communities and social networking.

<b>Socialism</b>	: A socio-economic system advocating for collective or state ownership of the means of production, distribution of resources based on contribution, and social equality.
<b>Trolling</b>	: Deliberately provocative or disruptive behaviour online, often characterised by posting inflammatory or offensive comments to provoke reactions or sow discord.

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## 11.11 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

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### Check Your Progress 1:

1. Three ideologies are liberalism, conservatism, and socialism. Liberalism emphasises individual rights, limited government intervention, and free market economics. Conservatism prioritises tradition, social stability, and limited governmental change. Socialism advocates for collective ownership of resources, wealth redistribution, and social welfare programs.
2. Bubbles refer to personalised online environments where users are exposed only to content that aligns with their existing beliefs, reinforcing those beliefs. Echo chambers are spaces where individuals interact predominantly with like-minded people, amplifying their beliefs and isolating them from dissenting viewpoints. Biases are cognitive tendencies

that influence perception and decision-making, such as confirmation bias, which leads individuals to favour information confirming their preconceptions.

3. Key concerns about bubbles, echo chambers, and biases include their potential to polarise society, hinder critical thinking, and reinforce misinformation. They can lead to the spread of extremist views, reduce exposure to diverse perspectives, and undermine democratic discourse by limiting meaningful dialogue and understanding between individuals with differing opinions. Additionally, they may exacerbate social divisions and impede efforts to address complex societal issues through collaborative problem-solving.

**Check Your Progress 2:**

1. Persuasive Technologies refer to digital tools and platforms designed to influence users' attitudes, behaviours, and decision-making processes. These technologies leverage principles from psychology, behavioural economics, and human-computer interaction to encourage specific actions or beliefs. Examples include social media algorithms, personalised advertising, and gamification techniques. Through subtle cues, prompts, and feedback loops, persuasive technologies aim to shape user behaviour towards predetermined goals, such as increasing engagement, promoting product sales, or fostering social change. While these technologies offer opportunities for positive impact, such as promoting health behaviours or environmental sustainability, they also raise concerns about privacy, autonomy, and ethical implications. Thus, understanding the mechanisms behind persuasive technologies is crucial for navigating their effects responsibly in an increasingly digitised society.
2. The future of civic discourse in the digital space holds both promise and challenges. On one hand, digital platforms offer unprecedented opportunities for diverse voices to engage in public discourse, democratising access to information and facilitating grassroots activism. Citizens can connect, organise, and mobilise around social and political issues with greater speed and reach than ever before. However, this landscape is also marred by misinformation, echo chambers, and polarisation, fuelled by algorithmic biases and online anonymity. Addressing these challenges requires concerted efforts to promote media literacy, foster digital citizenship, and regulate platforms to uphold democratic values. Additionally, promoting inclusive and equitable participation in digital civic spaces is crucial to ensure that marginalised voices are heard and respected. Ultimately, the future of civic discourse in the digital space hinges on our ability to harness technology for constructive dialogue, collective action, and democratic governance.

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# **UNIT 12 SEMIOTICS AND DIGITAL COMMUNICATION**

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## **12.0 INTRODUCTION**

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Semiotics is the study of signs and symbols and their use in communication. In digital communication, semiotics plays a crucial role in understanding how signs and symbols

are used in various digital platforms such as social media, websites, and digital advertising. One of its founders first defined semiotics, the Swiss linguist Ferdinand de Saussure. Although the word was used in this sense in the 17th century by John Locke, semiotics as a tool of analysis was first defined by Saussure. In the late 19th century, American philosopher Charles Sanders Peirce brought pragmatism and logic to semiotic analysis. One of his major contributions to semiotics was categorising signs into three main types: Icon, Index and Symbol. We will discuss it later in this chapter.

Digital semiotics explores how digital media and communication technologies shape our understanding of the world around us. It is an interdisciplinary field that draws on theories from linguistics, philosophy, psychology, and other disciplines to explore how digital communication changes how we think, communicate, and interact.

Semiotics help analyse how meaning is created and conveyed through digital communication, including emojis, hashtags, memes, and other visual and textual elements.

Some key research areas in digital semiotics include discourse analysis, social semiotics, and digital methods. Discourse analysis studies how different modes of communication, such as text, image, and sound, work together to create meaning. Social semiotics concerns how social and cultural factors shape the production and interpretation of signs and symbols. Digital methods use digital tools and techniques to analyse and interpret semiotic data.

Digital semiotics is an exciting and rapidly evolving field that has the potential to shed new light on how we communicate and understand the world around us.

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## **12.1 LEARNING OUTCOMES**

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After completing this Unit, you should be able to:

- Understand the core concepts of semiotics and explore different theoretical framework;
- Analyse the relationship between technology and meaning;
- Develop critical thinking skills and apply semiotic tools to analyse digital content critically; and
- Analyse digital communication using semiotic analysis methodologies systematically.

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## **12.2 DIGITAL SEMIOTICS**

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Semiotics is the study of signs and symbols and their use or interpretation. It explores how meaning is created and communicated through signs, which can be anything from words and images to sounds and gestures. Semiotics is an interdisciplinary field that draws on linguistics, philosophy, psychology, anthropology, and other related fields.

Semiotics is concerned with how signs convey meaning in different contexts and cultures. It examines how signs are created, interpreted, and communicated ideas, emotions, and values. Semiotics is also concerned with how signs construct identity, shape social relations, and influence behaviour.

The age of new media, which has become an important communication tool, has expanded the horizon of semiology. Traditional signs have expanded, and new signs have emerged, as seen in new media platforms. Signs like emojis, memes, virtual avatars, and many interactive interfaces create new meanings, and semiological analysis also includes these signs.

Digital semiotics is an interdisciplinary field that explores the relationship between digital technology and semiotics, the study of signs and symbols and their use or interpretation. It combines semiotics with digital humanities, computer science, and other fields. Digital semiotics is concerned with how digital technology has changed how we communicate and interpret signs and symbols in the digital world.

New media provides multimedia content in which text, images, and audio/video blend into one to convey a single message. Semiologists are now analysing how these diverse elements interact and contribute to meaning. For example, a meme provides a message by bringing humour to the content. Semiology can study how these memes are creating new meaning.

In traditional media, users consume messages passively, while new media focuses on interactivity and participation. In new media, users change their role as receivers several times and become creators of the messages. They also comment, like, and share the content. Semiologists are exploring how user interactivity and participation affect content creation and interpretation of meaning.

### 12.2.1 Multimodal Semiotics

The rise of new media has changed the field of communication. New media has made communication more dynamic and vibrant. In traditional media, consumers are passive receivers of messages, but in new media, they are not passive receivers but active participants in content creation. In traditional media, consumers can access information through one medium. For example, newspapers and magazines can get information only through text; on the radio, they have audio only; on television, they get information through audio/visual mediums. TV as a medium has multimedia capability to integrate text into news presentations. But TV also has some limitations. New media has brought all these mediums together with some added features of interactivity and participation. To understand the complex meaning created by this multimedia presentation, multimodal semiology provides a fascinating field that studies how meaning is woven through the diverse elements of digital communication. Gone are the days when a singular medium was used to deliver meaning. Now, text, images, sounds, animations, emojis and interactive elements all play a crucial role in delivering meaning to the consumers. Multimodal semiology considers the following elements of new media:

- 1. Visuals:** Visual elements of new media content convey information beyond words. Images, GIFs, and videos provide new meaning to the written text and invoke emotions in the story. A single image can tell a story more clearly than a thousand words. Similarly, a well-timed animation can easily explain complex concepts.

2. **Sounds** provide clarity and authenticity and add new value to written information. Music, sound effects, and even silence affect a message's emotional and cognitive impact. A haunting melody can set the mood for a horror film, while a playful jingle can make an ad instantly memorable.
3. **Interactivity:** New media does not promote receiving messages passively; it invites user participation. Users are no longer passive recipients; they are active participants. Liking, sharing, and commenting are all part of the meaning-making process. For example, more liked and shared content gives meaning to the content.
4. **Emojis:** Emojis have become a new language of communication. An emoji can send a message more clearly and with brevity than written words. For example, a smiley can impact the receiver more than writing. I am happy. These emojis add emoticons to the message. These emojis have multiple meanings depending on the circumstances. A simple smile can be interpreted as happy, but it can also be taken as sarcastic if used that way.

Multimodal semiology equips us with the tools to decode the complex messages delivered by new media. By analysing diverse signs, platforms, and user interactions, we can become more informed and critical information consumers in a world where meaning is no longer confined to the written word. Multimodal semiology can be used to analyse the meaning of posts, memes, and other content on social media platforms. It can help us understand how different modes, such as hashtags, emojis, and visuals, contribute to constructing meaning and identity.

### 12.2.2 Social Semiotics

Social semiology studies the social and cultural aspects of signs and symbols. It is focused on how people use signs and symbols in their communication and create meaning in their social and cultural contexts.

The terms “social semiotics” and “social semiology” are used interchangeably, but both terms have some differences. Social semiotics focuses on the social construction of meaning through signs and symbols. On the other hand, Social semiology emphasises the system of signs within a society and how these systems evolved. Social semiotics is more interested in knowing how social structures, power dynamics and ideologies influence how signs are used and interpreted. Social semiology focuses on the underlying codes and rules that govern sign production and interpretation within a specific cultural context. However, the core idea of both concepts is that meaning is not inherent in signs themselves but rather arises from their use and interpretation within a particular social and cultural context. These concepts provide powerful tools for analysing various phenomena, from everyday interactions to mass media communication.

The core concepts of social semiology are different from those of traditional semiology. Traditional semiology believes that meaning is inherent in signs, but social semiology focuses on meaning actively constructed in a social and cultural context. It assumes that the meaning of a sign is not fixed; it keeps changing as social and cultural contexts change. For example, a smiley can be seen positively in informal communication, whereas in formal communication, it might be seen as sarcastic. Social semiotics also focus on power dynamics and ideological forces in society, which influence the production and interpretation of signs. For example,

different social groups use symbols, images, and language to mark their identities and claim authority.

Digital technologies have transformed how people send and receive messages, creating a new form of social and cultural expression. There are various ways to apply social semiotics to study the construction of meaning through digital platforms. One way is to analyse how people use signs and symbols like hashtags, emojis, images, and audio/visuals to create meaning and express themselves. Another way is to apply social semiology to how meaning is constructed using specific symbols for specific purposes and widely circulated throughout the culture.

Social semiotics/semiology can be applied to new media in the following ways:

1. **Analysing social media platforms:** Examining how design features, algorithms, and user interactions shape meaning making and identity construction.
2. **Deconstructing memes:** Understanding how shared symbols, references, and humour function within specific online communities.
3. **Studying the circulation of news:** Analysing how narratives are constructed, contested, and spread online.
4. **Examining the role of emojis and other elements:** Unpacking the social and cultural meanings embedded in visual and non-verbal communication.

Like multimodal semiology, social semiotics recognise that meaning is constructed through words and multiple modes like images, sounds, gestures, and even silence. Analysing these diverse elements provides a richer understanding of how social interactions produce meaning. Social semiotics is a fascinating field that delves into the intricate relationship between meaning-making, social processes, and signs. It's not just about studying signs and symbols but understanding how they are shaped and used within specific social contexts. By utilising a social semiotic/semiological perspective, we can better understand how communication shapes our experiences and interactions in the digital age.

### Check Your Progress: 1

**Note:** 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this Unit.

1. What is discourse analysis?

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.....

2. Differentiate between social semiotics and social semiology.

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.....

## 12.3 KEY CONCEPTS OF SEMIOTICS IN DIGITAL COMMUNICATION

Semiotics is not about finding one “correct” interpretation but rather about developing a critical and flexible approach to analysing the multiple layers of meaning surrounding us in the digital age. Key concepts of semiology help us gain a deeper understanding of the complex and fascinating world of digital communication.

### 12.3.1 1 Signs

A sign is something physical, recognisable by our sensory system. It denotes something other than itself. Signs are treated by their users as ‘standing for’ or representing other things. Take, for example, In the game of cricket, an umpire raises his/her index finger as a sign to a batsman. In this case, the sign refers to ‘Out’, recognised by the umpire and batsman. This is conveyed from the umpire to the batsman, who must leave the ground. Thus, the communication occurred.

Saussure’s model of sign, which focused on linguistic signs (such as words), defined a sign as composed of a signifier and a signified. The relationship between the signifier and the signified is called ‘signification’.

### 12.3.2 Signifier

The signifier is commonly interpreted as the physical form of a sign that can be perceived through our senses. It is the sign’s image perceived in different forms—a figure on the paper, sound in the air, or the colour of the traffic lights/signal.

### 12.3.4 Signified

The signified is the mental image or concept to which it (sign’s image) refers. This mental image or concept is common to all members of the same culture who share the same language. A signified should be identified as the ‘notion’ of a thing, not a thing.

### 12.3.5 Signification

The relationship between the signifier and the signified is called ‘signification’.

For illustration, let’s take a linguistic example, the word ‘DONKEY’. It might be read simply as a word by a child, in which case they become a sign composed of the signifier (their appearance) and the mental concept ('doneness) we have of this animal. Or, in case an annoyed person calls another person with the word ‘donkey’, it might be read differently (in a negative sense) by the person belonging to a particular culture. This relationship between a child’s concept of ‘donkeyness’ or that annoyed person’s notion of ‘donkeyness’ and the physical reality of a donkey is “signification”. Here, the word ‘donkeys’ should not be treated as literal. It has been used to illustrate the idea.

A sign is an identifiable combination of a signifier and a particular signified. The same signifier (the word ‘donkey’) could represent a different signified (thus be a different sign). For instance, a donkey could stand for the appearance of a particular type of animal, dumbness, or laziness. Therefore, the signification of a donkey is as culture specific as the linguistic form of the signifier in each language.

### 12.3.6 Codes

Codes are the systems into which signs are arranged. These systems provide a framework within which signs make sense. Codes organise signs into meaningful systems which correlate signifiers and signified through the structural forms of syntagms and paradigms.

Saussure defined two ways signs are organised into codes- (1) paradigm and (2) syntagm.

A paradigm is a set of signs from which the one to be used is selected. Example- The set of ‘like’ buttons for reacting to any social media post “thumbs up”, “Love”, “Haha”, “Waao”, “Sad”, or “Angry”- forms a paradigm; so, does the set of emojis that can go within them. Whereas a syntagm is the message into which chosen signs are combined. For example- a particular ‘reaction’ (maybe ‘like’ or ‘love’) to any social media post is a syntagm, a combination of the chosen ‘reaction’ with the corresponding chosen emojis. For better comprehension, we can say that the vocabulary is the paradigm, and a sentence is a syntagm. So, all messages involve *selection* (from a paradigm) and *combination* (into a syntagm).

Fundamentally, two paradigms give their names to two types of code: analogue and digital. A digital code is one whose units (both signifiers and signified) are separated or distinct. At the same time, an analogue code works on a continuous scale. A digital speedometer in a bike separates each kilometre per hour speed from the next. An analogue speedometer in old model bikes or scooters has a continuous scale, and it is only by putting marks on the speedometer dial that we can read it “digitally”.

Digital codes are easier to understand because their units are clearly distinguished. At the same time, all analogue codes are difficult to comprehend. John Fiske put it this way: Nature generally comprises analogue codes. In trying to comprehend or categorise nature, we impose digital differences, such as the “seven ages of man” or intimate, personal, semi-public, and public distances between people.

Considering the range, division and sub-division of codes, Daniel Chandler tried to organise the range of typologies of codes based on the most widely mentioned context of media, communication, and cultural studies. He refers to this classification as a tripartite framework.

#### 1. Social Codes

- verbal language (phonological, syntactical, lexical, prosodic, and paralinguistic subcodes);
- bodily codes (bodily codes, proximity, physical orientation, appearance, facial expression, gaze, head nods, gestures, and postures);
- commodity codes (fashions, clothing, cars);
- behavioural codes (protocols, rituals, role-playing, games).

#### 2. Textual Codes

- scientific codes, including mathematics;

## **Analysis of Participation**

- aesthetic codes within the various expressive arts (poetry, drama, painting, sculpture, music, etc.), including classicism, romanticism, realism;
- genre, rhetorical and stylistic codes: exposition, argument, description, narration and so on;
- Mass media codes, including photographic, televisual, film, radio, newspaper, and magazine codes, are both technical and conventional (including format).

### **3. Interpretive Codes**

- perceptual codes: e.g. visual perception
- Ethical codes include ‘encoding’ and ‘decoding’ texts- dominant (or ‘hegemonic’), negotiated or oppositional.

These three types of codes correspond broadly to three kinds of knowledge required by interpreters of a text, namely knowledge of:

1. the world (social knowledge);
2. the medium and the genre (textual knowledge);
3. the relationship between (1) and (2) (morality judgements).

Codes and conventions are at the heart of any culture’s experience. They allow us to understand our social existence and to locate ourselves within our culture. In this context, Fiske says that culture is an active, dynamic, living organism only because of its members’ active participation in its communication codes.

#### **12.3.7 Interpretation**

Since Saussure’s work was primarily oriented towards how signs work, Roland Barthes first developed a systematic model for analysing and interpreting negotiating, interactive ideas of meaning. The core idea of Barthe’s theory is the idea of two orders of signification.

##### **1. Denotation**

This refers to the sign’s literal, common-sense, obvious meaning. It describes the relationship between the signifier and the signified within the sign and between the sign and its referent in external reality. Barthes refers to this order as denotation.

##### **2. Connotation**

The term connotation points to the sign’s socio-cultural and ‘personal’ associations (ideological, emotional, etc.). This is when meanings move towards subjectivity. This subjectivity depends on the interpreter’s class, age, gender, ethnicity, etc. Connotation is thus context dependent.

John Fiske illustrates these two orders of signification by saying, ‘denotation is what is photographed; connotation is how it is photographed.’

To read the connotative meaning, Barthes introduced ways in which signs work in the second order. Some of them are:

- I. **Myth**—A myth is a culture's narrative that explains or comprehends a particular facet of nature or reality. According to Barthes, a myth is a culture's method of perceiving or comprehending something. For Barthes, a myth is a series of connected ideas or related concepts.
- II. **Metaphor**—Metaphors transform qualities from one plane of reality to another. In semiotic terms, a metaphor involves one signified acting as a signifier referring to a different signified. John Fiske contends that metaphor is a way of disciplining our thinking that is compatible with and part of the ideology of a work-centred, capitalist society. We should pay greater attention to everyday metaphors and the “common” ideas they convey because they are more subtle and ideological than literary ones.
- III. **Metonym**—Its basic definition is making a part of the whole. It works by associating meanings within the same plane. A metonym is necessary to depict reality, as we select a portion of “reality” to represent the entire thing. Television crime serials’ urban locations are metonyms; a street photographed isn’t supposed to represent the street itself only, but rather a specific kind of city life.

## **12.4 PRINCIPLES OF SEMIOTICS**

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One of the founders of semiotics, Ferdinand de Saussure, says it is the study of signs within society. The principles of semiotics are concerned with the formulation of messages, transmission of these messages, interpretation of these messages, and, finally, their significance. The principles of semiotics, the study of signs and symbols, provide a framework for understanding how meaning is created and exchanged. There are diverse schools of thought within semiotics; some key principles are the following:

### **1. Arbitrariness**

Saussure believed that the arbitrariness of the sign is a defining characteristic of signs. He challenged the idea of natural or inherent connections between signifier and signified. It means that words or images, signifiers, and their meaning, which are signified, have no natural connection. For example, when we see “cat”, this word has no meaning if we remove social context. Because in other languages, the signifier is different, but the signified is the same.

Arbitrariness does not say that a signifier has no meaning; it only emphasises social conventions to establish that meaning. Arbitrariness stresses understanding these conventions to understand their meaning.

One other semiotician, Michael Halliday, says that we might see some motivation in signifiers; for example, the word “bang” has a certain level of motivation, but that does not negate the fundamental arbitrariness of the sign system.

### **2. Sign Systems and Codes**

**Sign System:** This is another fundamental principle of semiology. Signs don't exist in isolation, but they operate within networks called sign systems. These systems have a set of related signs governed by internal rules and relationships. To interpret a sign accurately, we need to understand the system it belongs to. Knowing the

conventions of a specific system equips us to decipher the meaning of individual signs within that system.

Sign systems can be diverse, ranging from verbal and visual to non-verbal (gestures) and audio (music). Each system has its own set of rules and conventions that shape how signs function and interact.

**Codes:** Within sign systems, specific rules, known as codes, tell us how signs are combined and interpreted. Depending on the system, these codes can be grammatical, logical, cultural, or aesthetic. Think of traffic signs following a specific code of colour and symbol combinations to convey directions and warnings. Codes are keys to unlocking the meaning embedded within a sign system. By understanding the relevant code, we can decode the messages communicated through the arrangement of signs. We must also remember that codes are not static; they evolve when social and cultural conventions change. Different communities in the same systems may have different code variations, which leads to confusing interpretations and expressions.

### 3. Intertextuality and Context

Intertextuality and context are crucial principles in semiology. They are vital in interpreting and understanding signs and their meanings.

**Intertextuality:** This concept emphasises that texts don't exist in isolation. They engage with other words to give a meaning. Semiologist Jonathan Culler says that words interact and that meaning making is interconnected. Intertextuality applies to all forms of communication, including visual media, music, and even everyday conversations. Identifying intertextual elements can reveal hidden meanings and cultural references. Another semiologist, John Fiske, says that historical and cultural factors define intertextuality. For example, visual images and photographs can be understood while considering historical and cultural factors.

**Context:** No sign exists in a vacuum; the context always shapes its meaning. It means that in which situation is a particular sign used? Who are the audience, and what is the social and cultural background in which it is used? Context is not one-dimensional, but it has many layers. Think about a political speech by a leader. It has many layers of context, like the political situation in which it is delivered, the intended audience and the set-up in which it is delivered. Context is not static; it is dynamic and keeps evolving as our understanding of the world changes. The thought considered humorous in one context might be considered offensive in another.

### 4. Dynamism and Evolution

**Dynamism:** Another important principle of semiology is that signs and systems are dynamic and evolving. New words are coined, the meaning of old words changes, and visual symbols acquire new interpretations. Semiologist Gunther Kress argues that signs and systems are dynamic and natural, and they evolve and adapt in response to social and cultural changes. Bryan S. Turner highlights that meaning is constantly being created and renegotiated through changing norms of society. Changes in social interactions, cultural shifts, and technological advancements further influence the dynamism of signs. Take the example of social media; it has brought new languages, symbols, and communication styles that evolve rapidly.

**Evolution:** Over time, sign systems can undergo profound transformations. These may include a diversion in language, a change in visual styles, or cultural references

that fade into obscurity. Recognising how sign systems evolve provides valuable insights into social transformations. Analysing historical changes in sign systems can provide clues about shifts in power dynamics, ideological movements, and cultural values.

## 5. Power and Ideology

This principle of semiology focuses on how power and ideology have a more significant influence in constructing the meaning of signs. In his book “Mythologies”, Semiologist Roland Barthes deconstructs popular culture and everyday rituals, revealing how they naturalise specific ideologies and power structures. In his book “Critical Studies of Visual Images”, “Norman Fairclough examines how visual media reflects and reinforces social inequalities and dominant ideologies.

**Power and society:** To understand the construction of meaning, we must understand the power structure embedded in signs. Powerful groups utilise sign systems to assert their dominance and control. This can be seen in representing certain groups in media or in how public spaces are designed. The power embedded in sign systems tries to naturalise inequality and try to show that this is normal and inevitable. This principle of semiology offers tools to deconstruct power structure and critically analyse meaning. By this, we can question the existing communication system and demand an equitable form of communication.

**Ideology and constructing meaning:** There is a hidden power structure and some hidden values and ideologies in the sign systems. These values and beliefs are the dominant ideology of society. These ideologies can be political, economic, social, or cultural. By decoding this, we can understand the hidden agenda of the communication process. This understanding will help us become active and critical consumers who may resist manipulation and propaganda. We can demand more informed communication and challenge dominant narratives.

### Check Your Progress: 2

**Note:** 1) Use the space below for your answers.  
2) Compare your answers with those given at the end of this Unit.

1. Describe Saussure's model of sign.

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.....

2. Discuss some key principles of semiotics.

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3. Mention the steps for designing a semiotic study.

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## 12.5 APPLICATION OF SEMIOTICS IN DIGITAL COMMUNICATION

Semiology equips us with the tools to decode the complexity of digital communication. By understanding the signs, social contexts, and power dynamics embedded in digital platforms, we can understand this ever-evolving system with greater awareness, critical thinking, and cultural sensitivity.

### 12.5.1 Branding and Marketing

In the digital age, where it is very difficult to grab the attention of consumers, brands need to understand their audience deeply and craft messages that impact the audience deeply. This is where semiotics becomes a powerful tool for crafting impactful digital branding and marketing strategies.

#### 1. Understanding your brand

Semiotic analysis of the signs and symbols of your brand, which you will use in branding and marketing, can help you understand the core meaning embedded in your brand. Analysing your logo, colour palette, typography, and tagline through a semiotic lens reveals your brand's deeper values, emotions, and aspirations. This understanding forms the foundation for all your communication efforts across digital platforms.

#### 2. Understanding the audience

Semiotics help you understand the social and cultural values of your target audience. This analysis may help you understand society's current cultural shift or dominant narratives. By analysing online conversations, user-generated content, and social media trends, you can identify the signs and symbols that resonate with your audience and tailor your brand's message accordingly.

#### 3. Creating impactful Content

Once you understand your audience and social and cultural values, you can create an impactful message to promote your brand. You can speak in your audience's language, which may reach their hearts and minds. Choosing the right visuals and sentences and bringing emotions to your message becomes possible through semiotic insights.

#### 4. Building Brand Communities

Digital signs and symbols help in building digital brand communities. By creating engaging hashtags and designing interactive campaigns, semiotic analysis provides innovative ways to create a loyal community for your brand.

### 12.5.2 Digital Storytelling

Semiotics can help embed messages in digital storytelling to make your digital story more captivating. Semiotics can also help understand users' social and cultural understanding, which will help construct meaning in digital stories.

## 1. Constructing Signs

Semiotics empower you to examine each layer of meaning in a digital story. You can create a story layer by layer using text, audio/visuals, and pictures. Every element used in a story becomes a sign to be deciphered. Semiological analysis will provide a better understanding of using all these elements impactfully.

## 2. Understanding the users

Users read your well-crafted story with their own social and cultural context. Semiotics help you to understand your users' perspective on the story. Through this understanding, you can use signs and symbols that are familiar to your users. To give the intended message to your users, semiology can help you bridge the gap between you and your audience.

## 3. Bringing interactivity

The nature of an interactive platform is interactivity. By bringing interactivity, you can make your digital story more engaging. Semiology helps you understand your audience, which will help you design interactive elements like puzzles, discussion boards, and hashtags to engage your audience more effectively. You can further refine your story by analysing users' interactions.

### 12.5.3 Social Media Analysis

Social media has become an important platform for sharing emotions, opinions, and information. The amount and variety of content shared on social media sometimes leave everybody puzzled. Semiotics provides very useful tools for understanding the embedded meaning of all these messages. Semiology enables us to understand the complexities of social media discourse.

#### 1. Deciphering the signs

Semiotics help us decipher the message embedded in visuals, emojis, memes, hashtags, and GIFs. They decipher it layer by layer, providing us with cultural codes, emotions, and hidden agendas. This analysis also helps us understand the dominant narrative on social media issues. Semiotics decipher verbal and nonverbal communication elements, which is very helpful in giving a full picture of online communication.

#### 2. Understanding Power Dynamics

Social media is widely used by political parties and multinationals to influence social media users based on their ideologies. Semiotics allows us to analyse the power dynamics manifest on online platforms. It helps us decipher online trends, biased algorithms, and how messages are framed and shared among users. Understanding these dynamics enables us to evaluate messages critically and engage in responsible online dialogue.

#### 3. Tracking Trending Topics and Memes

With the help of semiotics tools, we can track trending topics and memes. We can understand the cultural, social, and political meaning of these trends. By decoding embedded messages through the humour of memes, we can

understand the hidden propaganda. We can understand society's symbolism and emotional triggers by semiological analysis of trending or viral topics.

#### 4. Bridging Cultural Gaps

Social media provides a platform where people from different geographical locations and diverse cultural set-ups can interact with each other. As we know, signs and symbols used in communication have a social and cultural context. This context may differ from one culture to another, resulting in the different meanings of shared expressions. Semiology can help decipher these meanings and help understand and appreciate diverse meanings attached to specific signs in different cultures. It can help foster mutual understanding and bridge communication gaps between different communities.

### 12.5.4 User Experience Design

On digital platforms, users look for user-friendly interfaces. Semiology can help create a highly interactive platform for a better user experience. It helps decode the meaning behind signs. With this understanding, we can create more user-friendly and engaging platforms.

#### 1. User Expectations

Semiology helps to understand the cultural and social context users bring while interacting with technology. By understanding these familial interfaces, we can establish more user-friendly interfaces. We can use signs and symbols that relate to users' social and cultural understanding. This helps provide a smoother learning experience and avoids unnecessary pressure on users.

#### 2. Meaningful Interactions

Every element used on the digital interface has a meaning. By understanding our audience, we can craft meaningful interactions using various elements that provide information more clearly and consistently. A well-designed element gives the message briefly, whereas a wrong label used in crafting the interface may lead to confusion and cognitive burden.

#### 3. Building Emotional Connections

Semiotics help build emotional connections with users. Specific colours, meaningful animation, and typography can invoke emotions and communicate values like reliability and fairness. By understanding the emotional impact of different signs and symbols, we can create interfaces that win users' trust.

#### 4. Inclusivity

Inclusivity is crucial in user experience design. Digital media is open to all, so the interface should be sensitive to the emotions of diverse communities. Semiotics help remove biases and ensure inclusivity in our interface. Analysing international design conventions and understanding the cultural meanings of specific symbols can prevent misinterpretations and promote inclusive design practices.

## 12.6 EXAMPLES OF SEMIOTICS IN DIGITAL COMMUNICATION

### 12.6.1 Emojis

In the meantime, these emojis have evolved; from a simple smiley face to various emojis, from anger to love, they can show different emotions. These emojis have become a global language, making expressions more interesting. Analysing these memes gives a variety of inputs related to their uses and meaning.

### 12.6.2 Button Icon

A simple like or unlike button carries social meaning. If a social media post gets more likes, it means that most users have approved of the message and agree with the idea shared in the online community.

### 12.6.3 Meme

Memes are condensed messages produced in a humorous way to touch the emotions of users. These memes have cultural and social contexts. Analysing the symbolism, visual jokes, and targeted audiences of memes provides an insightful understanding of current social and cultural trends, biases and ideas shared among and within online communities.

### 12.6.4 Logo

As a condensed visual representation of a brand, a logo is a perfect example of semiotics in action. The signifier is the physical form of the logo, in this case, the curved swoosh symbol. The signified is the complex web of concepts it represents, including movement, speed, victory, and achievement.

### 12.6.5 Hashtag

Hashtags like #BlackLivesMatter and #MeToo are mere keywords but represent a powerful symbol of social movements and collectivism. Analysing the semiotics of these hashtags, their evolution over time, and the emotional triggers they evoke reveals the potential of digital communication to mobilise public opinion and drive social change.

## 12.7 DESIGNING A SEMIOTICS STUDY

### 12.7.1 Identification of Problem

Before carrying out any study, one must identify the concerns or problems of the study area he or she intends to undertake. Only then will our research be relevant. To do that, we should aim to observe the patterns, phenomena, and events in our surroundings and media. Suppose we observe new patterns in media content, economy, habits, consumption, or technology. In that case, we can think of going ahead with that problem or concern to explore more about that issue or subject. In the semiotic study, we know the emphasis is on the ‘text’ and how it is ‘read’. So, whatever concerns we will address through our study must relate to the ‘message’ of the selected medium, ranging from print to audio and audio-visual.

Let's take an example for illustration. Since the last decade, OTT (over-the-top) platforms have grown exponentially in India. At present, India is the world's fastest-growing OTT market. According to a recent report from the Economic Times, India's video OTT market is expected to reach 12.5 billion dollars by 2030 from about 1.5 billion dollars in 2021. Increasing viewership of web series worldwide suggests that people are interested in watching web series.

The question and curiosity arise regarding the distinguishing factor that makes these web series different from traditional mainstream media content. What content are they producing that is appealing to the audience? How have these web series been able to communicate stories so effectively? What are the meanings they can negotiate from web series? If these web series are becoming so popular, especially among all age groups, then to what extent can the way they convey a message and their mechanism of conveying a message be a potential game changer in strategic, effective communication?

The above concerns and questions can best be answered by semiotic study. Now, we have identified the problem suitable for semiotic study, and we can explore the details and be specific to carry out the research. Likewise, we can explore the concerns and problems in other contemporary print, audio, and audio-visual mediums (newspaper, magazine, radio, television, digital media).

### **12.7.2 Rationale for selecting the topic**

To reach the rationale for selecting the topic we want to undertake for study, we must conduct a thorough literature review of the selected study area. Also, we might encounter some situations where much research has already been conducted in certain areas, such as print, television, or digital media, such as social media or OTT platforms. However, those problems might not have been undertaken using semiotic study. We can think of undertaking such research from a semiotics angle. The research outcome might uncover new insights into the problem other research methods had previously dealt with. This could be the novelty of our research. The outcome of the thorough literature review will give only a solid rationale for selecting our research topic.

Furthermore, after sorting out the topic we want to study, our literature review will guide us in framing the research questions and objectives of the study.

### **12.7.3 Research Methodology and Data Collection**

The objectives of the intended study determine the suitable research methods to collect the data. In the methodology section, we must study and mention the philosophical dimension of our study area. These philosophical dimensions help us establish the justification for selecting specific data from the selected sample and make our study robust.

We must filter and sort out the data from the selected samples to collect the data. Again, stressing this point, in a qualitative study, we must have enough justification for selecting the sample, selecting only a certain portion of the text or episodes for analysis to avoid bias and defend our study. While collecting the data from a digital medium, one should collect the data in a certain period. Since digital media, such as social media and OTT platforms, are dynamic, data changes quickly. For example, a semiotic study was conducted on the comments of Twitter users on certain trending

issues on Twitter. Every other day, trends keep changing, and the issue's intensity and opinion change over time. To collect the correct data on any certain issue at a particular point in time, we must be attentive and never delay in collecting the data.

#### **12.7.4 Analysis**

Now, we can select suitable semiotic methods, such as the commutation test, semiotic square, markedness, deconstruction, structural reduction, or multimodal analysis, depending on the medium and objective of our study.

#### **12.7.5 Findings and Conclusion**

After analysing the data, we should present our findings objective-wise. While presenting the findings, we should mention the significant findings we come across during the analysis. After analysing the findings of each objective collectively, we can mention the significant findings in totality. We can conclude by mentioning the outcome of the research and its significance and suggesting future courses of action in terms of contribution to scholarship in the study area and society at large.

### **12.8 LET US SUM UP**

In this Unit, we learned semiotics and its application on digital platforms, popularly known as digital semiotics. We also learned about types of semiotics: multimodal semiotics and social semiotics. Now we know about the key concepts of semiotics: sign, codes, signifier, signified and significance. We also tried to understand various examples of digital semiotics. We also tried to understand how a semiotic study is carried out. Overall, semiotics equips us with a critical lens to analyse the complex world of digital communication. Understanding the meanings embedded within signs and symbols allows us to engage with online content more thoughtfully, creatively, and responsibly.

### **12.9 KEYWORDS**

<b>Myth</b>	: A myth is a culture's narrative to explain or comprehend a particular facet of nature or reality.
<b>Metonym</b>	: Making a part for the whole
<b>Connotation</b>	: Points to the sign's socio-cultural and 'personal' associations (ideological, emotional, etc.).
<b>Semiotics</b>	: Semiotics is the study of signs and symbols and their use or interpretation.

### **12.10 FURTHER READINGS**

1. Chandler, D. (2007). *Semiotics. The basics*/Daniel Chandler. NY: *Taylor Francis*.
2. Hébert, L. (2019). *An introduction to applied semiotics*. Routledge.
3. Haykin, S., & Van Veen, B. (2007). *Signals and systems*. John Wiley & Sons.

4. Hawkes, T., & Hawkes, T. (1977). *Structuralism & semiotics* (pp. 16-17). London: Methuen.
  5. Danesi, M., & Perron, P. (1999). *Analysing cultures: An introduction and handbook*. Indiana University Press.
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## **12.11 CHECK YOUR PROGRESS: POSSIBLE ANSWERS**

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### **Check Your Progress: 1**

1. Discourse analysis studies how different modes of communication, such as text, image, and sound, work together to create meaning.
2. Social semiotics focuses on the social construction of meaning through signs and symbols. On the other hand, Social semiology emphasises the system of signs within a society and how these systems evolved. Social semiotics is more interested in knowing how social structures, power dynamics, and ideologies influence how signs are used and interpreted. Social semiology focuses on the underlying codes and rules that govern sign production and interpretation within a specific cultural context.

### **Check Your Progress: 2**

1. Saussure's model of sign, which focused on linguistic signs (such as words), defined a sign as composed of a signifier and a signified. The relationship between the signifier and the signified is called 'signification'.
  - Signifier: The signifier is commonly interpreted as the physical form of a sign that can be perceived through our senses. The sign's image is perceived in different forms: a figure on the paper, sound in the air, traffic lights/signal colour.
  - Signified: The signified is the mental image or concept to which it (sign's image) refers. This mental image or concept is common to all members of the same culture who share the same language. A signified should be identified as the 'notion' of a thing, not a thing.
  - Signification: The relationship between the signifier and the signified is called 'signification'.
2. The key principles of semiotics are arbitrariness, intertextuality, contextuality, dynamism, etc.
3. We ought to follow the given steps to design a semiotic study;
  - i. Identification of problem
  - ii. The rationale for selecting the problem
  - iii. Research methodology and
  - iv. Analysis
  - v. Findings and Conclusion

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# **UNIT 13 ISSUES OF BIG DATA**

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## **Structure**

- 13.0 Introduction
- 13.1 Learning Outcomes
- 13.2 What Is Big Data
- 13.3 5v's of Big Data
- 13.4 Types of Big Data.
- 13.5 Big Data and Media Industry
- 13.6 How Big Data Can Help the Business of Media Companies
- 13.7 Social Implications of Big Data
- 13.8 Recent Trends in Big Data Analytics
- 13.9 Challenges of Big Data
- 13.10 Big Data and Ethics
- 13.11 Let Us Sum Up
- 13.12 Keywords
- 13.13 Further Readings
- 13.14 Check Your Progress: Possible Answers

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## **13.0 INTRODUCTION**

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The Media and Entertainment industry is among the very first to adopt emerging technologies. The adoption of Virtual reality (VR), Mixed Reality (MR) and Augmented reality (AR) in creating new content is a recent example. Artificial Intelligence (AI) generated content in video and text form is also being used quickly, and advanced prototypes of generative AI-driven channels are being tested. AI-driven avatars and related technologies are being adopted in newsrooms in India, which promises better economic returns and low investment. The Internet of Things (IoT), cloud computing, recommendation systems and metaverse are some examples to understand how the media & entertainment industry is being transformed. This new technology for content curation, creation, and dissemination is also transforming the entertainment sector, including gaming, over-the-top content, films, and content production for mobile apps. Media companies like Amazon, Google, Hulu, and Hotstar are not only providing services and products. Still, they are also changing how people consume content and interact with media through different digital devices and platforms. These processes create huge amounts of big data daily.

Every media organisation wants to expand its customer base, optimise its revenue model, reduce investments, and increase profitability. Operational costs are one deterrent that stops new players from entering the media industry. With the emergence of digitisation and datafication, operational costs have been reduced substantially. At the same time, new players can focus on specific markets and target new customers. In the earlier days, content creation was expensive, and taking that content to audiences was an even bigger challenge. Again, there was no way of knowing the details about the engagement with the content.

A journalist prepares and publishes news reports on various events happening in and around the world. These news reports can be in text, audio, and video formats. Moreover, news reports can be in all formats or a combination of a few on social media and websites. This content, which is generated, disseminated to audiences, and commented upon by audiences, is seen as big data. Thus, it can be argued that in this digital era, almost every big media organisation relies on big data.

With the help of big data and emerging technology, things have changed drastically. Media companies track their customers and generate daily reports of content consumed across regions, language preferences, genres, and the average time spent watching shows. This is big data. Like other sectors, the media industry also needs big data analytics to understand its customers better so that precise strategies can be formed to reach and engage them with the content. This makes the media & entertainment industry highly dependent on consumers.

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### 13.1 LEARNING OUTCOMES

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After completing this Unit, you should be able to:

- Understand the concept of big data.
- Learn the uses of big data in the media and entertainment industry.
- Understand the factors which drive the growth of the media industry.
- Understand the ethics involved in big data.

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### 13.2 WHAT IS BIG DATA

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Information is expanding on a day-by-day basis all over the world. Billions of individuals go on the web and generate gigantic amounts of data. The amount of data collected by mobile apps and social media platforms daily is astonishing. To give an idea, Facebook generates almost 4 petabytes of data daily, 100 million gigabytes. This data is stored in a hive, which can store almost 300 petabytes.

Similarly, WhatsApp users exchange up to 65 billion messages per day. Five million businesses use WhatsApp, with over 1 billion WhatsApp groups worldwide. According to 2020 statistics, Google handles 1.2 trillion searches yearly, roughly 40 thousand search queries per second. So, roughly, each person generates two MB of data per second.

All our activities on the Internet create trails. Organisations, governments, universities, marketing companies, e-commerce sites, and other vendors know much about our likes, dislikes, habits, attitudes, preferences, etc. Data about our ethnicity, religion, political affiliation, interests, hobbies, health, income, and buying capacity is known or can be easily estimated through our history on apps and sites. User activities are monitored and captured by devices and the propriety apps. All this amounts to big data.

In this era of big data gov, governments, organisations, universities, companies, and marketers derive information and meaning from data such as ethnicity, religion, legislation, sexuality, purchasing behaviour, medical records, salary, credit card usage, and travel history. Big data is increasing as the cost of Internet-enabled gadgets is getting cheaper. Even the computational cost of handling and working on this big

data is getting more affordable. These innovations are giving rise to the ‘datafication’ of society, influencing all industries and human life significantly. Thus, big data refers to huge datasets that can be analysed and mined to get insights and value for the organisation. It is also seen as an umbrella term which includes techniques for dealing with massive data sets and the technologies that can be used to make sense of the data. So, big data means complex and expansive datasets that are getting bigger each day.

### **The 5 Vs of big data that describe its characteristics:**

**Volume:** It refers to the vast datasets generated on social media platforms, social networks, media organisations, etc. Storage capacity for these massive datasets is expensive, making big data analytics costly. The high volume of data includes consumer profiles, their interactions with companies, usage history, purchase history, social media uploads, likes, dislikes, videos, insta-reels, etc.

**Variety:** As customers interact with media service providers, various data is created in different formats, sizes, and types through different devices. Different devices and their apps are designed differently to allow different file types and affordances for users to comment, share, review, and react.

**Veracity:** This refers to the issue of quality and reliability of big data. The data may not be complete, accurate and credible. Low veracity affects data analysis and inferences. For example, public sector data sets, Wikipedia, or crowdsource data might suffer from veracity.

**Velocity:** Velocity refers to the speed at which big data is generated. It depends on the Internet, infrastructure, processing power of clients and servers, and bandwidth. Higher velocity ensures feedback and synchronous communication. For example, a sports website can update the scores faster than a TV news channel or other social media platforms. This can give the first movers an advantage and attract more traffic and business. However, higher velocity is relevant only when integrity is taken care of.

**Value:** Value refers to the benefits of big data and looks at the output quality generated by big data analytics. Media companies should be able to pull value from their acquired big data and use it for growth and visibility. The tools required to derive value from big data sets must be carefully chosen. Apache Hadoop, SQL, and Microsoft Power BI are tools that find value from data sets.

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## **13.4 TYPES OF BIG DATA**

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The captured data can be in different formats and come from different digital devices.

Big data can be sourced from distinctive sources and comprise unstructured, semi-structured, or structured data. Unstructured data includes video, audio, email, surveys, social media, and more, making up 80% of all big data. Mining unstructured data to extract actionable business intelligence is a challenge for an analyst. Big data also includes information about user likes and dislikes, preferences, interests, and location.

Let’s extend this scenario where a company owns a TV channel, a radio station, a website, and a newspaper. It produces and promotes content for all ages and

genders in different regions, genres, and languages. Because of digitisation, this content can be shared, edited, commented upon, and reviewed on social media networks and messaging apps. Thus, this content may be republished, re-tweeted, and discussed extensively. All this user activity creates unstructured data, which can be mined to identify relationships, associations, patterns, and trends. The analysis and the insights gained from this unstructured data are invaluable for media companies as they help them plan their operations, marketing strategies, outreach activities, and, most importantly, the content and the format in which they need to be served.

Structured data includes transactions, logs, and spreadsheets. On websites, the data provides click-through rates (CTR), engagement time on each page, number of external links used, time spent on each page, number of hyperlinks accessed, number of videos downloaded, images downloaded, pages saved, etc. Media organisations also look at social media sentiments, Google searches, social media searches, and cookies to extract information for their business operations.

The data captured from portable devices like iPods, iPads, tablets, and mobile phones differs because the devices use different apps and operating systems. Moreover, mobile phones also offer data in the form of SMS and MMS. Data gathered from mobile phones may also include in-app sales, advertisements, video ads, banners, and other metrics. Different algorithms are used to analyse and make sense of the big data. These are used for prediction, classification, association, and clustering. Tools like Tableau and Power BI are used to visualise the insights.

Big data can be classified based on several different criteria, such as the source, the structure, the application, and the analytics approach. Here are some common classifications of big data:

- **Structured, semi-structured, and unstructured:** This classification is based on the structure of the data. Structured data is well-organised and easy to process, like data in a database. Semi-structured data, such as XML or JSON, has a defined structure but may also contain unstructured data. Unstructured data, such as social media posts or images, does not have a specific structure and is difficult to process.
- **Internal and external:** This classification is based on the source of the data. Internal data is generated within an organisation, such as sales data or customer data. External data comes from sources outside the organisation, such as social media data, weather data, or financial data.
- **Batch and real-time:** This classification is based on the velocity of the data. Batch data processing involves analysing data in large batches, often overnight or at set intervals. Real-time data processing involves analysing data as it is generated, like processing stock market data in real-time.
- **Descriptive, diagnostic, predictive, and prescriptive:** This classification is based on the analytics approach. Descriptive analytics involves summarising historical data to understand what has happened. Diagnostic analytics involves identifying the causes of a particular event or pattern. Predictive analytics involves forecasting future events or patterns based on historical data. Prescriptive analytics involves recommending actions based on insights from predictive analytics.

By understanding the different classifications of big data, businesses and organisations can better plan and implement their big data strategies to extract insights and drive value from their data.

### Check Your Progress: 1

- Note:** 1) Use the space provided below for your Answers.  
2) Compare your answers with those given at the end of this Unit.

1. What is big data? Explain structured and unstructured data.

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2. Discuss the 5 Vs of big data.

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3. Discuss the relevance of big data in the media & entertainment industry.

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## 13.5 BIG DATA AND MEDIA INDUSTRY

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Subscription-based streaming services like Netflix, Amazon, and Hotstar provide platforms and infrastructure for producers to get their content screened. These companies also invest their money in producing movies and TV shows. The media landscape is changing fast where audiences, producers, developers, aggregators, and intermediaries exist and generate big data. Apart from the generation of content, these service providers use big data to know their viewer preferences, likes, dislikes, consumption patterns, consumption history, devices they use, preferred day and time to watch content and the amount of money they are willing to spend for that content. Big data also predicts the likelihood of a movie being bought or rented out through their platform. The time of release, storyline, advertisers, and products to be advertised is also decided with the help of big data. Finally, the market trends and the acceptability of themes in foreign countries are considered before releasing the programs on different continents.

Big data is also used in data journalism. User-generated content is a valuable source of information for media organisations. The debates around major news stories, viewers' reactions on social media sites, and messaging apps like WhatsApp become important fuel for these outlets. This also helps the news organisation automate a few processes in its work chain, simplifying its work, making it more efficient, and preparing it for bigger challenges.

News organisations are keen to capture content consumption patterns to extract useful information to improve their circulation, TV and radio ratings, audience views, and viewer perceptions.

Big data creates many opportunities for journalists and reporters to build robust relationships with their audience and readers. Huff's post uses large datasets and insights drawn from them to enhance the user's experience. They use big data to improve the user experience by offering real-time dashboards, recommendations, and personalisation. They also use small data for audience research, content research and search engine optimisation for faster retrieval and higher ranks on search engines. Tom Betts, head of client analytics at the Financial Times, stated that they use identifiers like customer signatures to monitor digital spending and use that history to understand consumers' preferences for content. This helps them personalise and prepares them to provide relevant content to consumers. So, they use intelligence and develop new offers to increase the consumer base and give value to the existing consumers.

Peter Bale, CNN's worldwide vice president and head of digital operations, pointed out how large databases deliver news, how CNN listens to and caters to its increasing market, and how CNN also uses big data to find relevant data-driven stories for its readers and viewers.

The use of big data in the media is continuously expanding. It checks fake news and generates text through LLMs, recommender systems, metaverse, and generative AI tools. All this is done to expand the markets, offer new products to new customers, and ensure that the existing customers do not disappear. Big data also helps to enter new markets where very few players exist. For example, in industries like publishing and fashion

### **13.6 HOW CAN BIG DATA HELP THE BUSINESS OF MEDIA COMPANIES?**

Some of how big data can help media companies grow are:

**1. Client Loyalty:**

Media companies like Viacom 18 use big data to ensure audience retention during ad breaks by choosing the time for the breaks in news programs. This helps Viacom keep viewers glued to the TV sets even during ad breaks, which has resulted in financial gains for the company.

**2. Investment in new shows and mixed genres:**

Big data includes various formats, such as numeric, date, images, text, geotags, geospatial, audio, video, and graphics. All this data helps content producers and management teams understand audiences' needs and psychology, which helps them develop new media products and services. Media companies like Netflix, Prime, and Hotstar ensure that they invest in the production of shows and movies that their audiences will like. This exercise ensures higher returns.

**3. Audience segmentation and customer profiles:**

Media companies like X, Spotify, Apple, Instagram, Hulu, and Amazon use big data to classify audiences and use this classification to target

advertisements. Specific audience populations are catered in a manner to suit their requirements. YouTube uses big data and machine learning techniques to improve the relevancy of customer advertisements. This promises a higher return on Investment (ROI). Big data in media organisations maintains customer profiles and supplier data, which is dynamic and updated regularly.

Media companies always want to have updated information about customers. This helps them track customers' changing preferences and build more engaged relationships. Quite a few of these customers also happen to be suppliers and producers of new data. For example, many who create data for YouTube and Instagram are also Netflix and Amazon Prime audiences.

## **13.7 SOCIAL IMPLICATIONS OF BIG DATA**

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Big data have many implications for society. A few of them have been discussed.

### **1) Enhanced decision-making**

Big data significantly affects supply and management processes, such as distributed process planning. It is also used for customer insight-driven marketing, advertising, and business-to-business processes. Advertising agencies push their advertisements to specific users since they know their preferences, buying capacity, brand preference, and the frequency with which they purchase new products and services. All this suggests that big data is used for faster decision-making in media companies.

### **2) Forecast market trends in the industry**

Big data is also used for surveillance, monitoring, and financial purposes. Financial models utilise huge amounts of information from Internet companies and e-businesses to forecast the growth of different sectors. Data generated from C2C, B2C and B2B indicates the future of small and big media companies. Many of these companies are listed on stock markets, and their big data includes information about their IPOs, stocks and shares, NAV, and other financial indicators, which are helpful for investors in making decisions about their investments. Big data is also helpful in customising payrolls, transactions, sales, negotiating future contracts and finalising International business deals.

### **3) Adaption of new technologies**

Emerging technologies like IoT, text mining, blockchain, generative AI, and transformers are being adopted in various sectors, such as manufacturing, automobiles, and consumer appliances, with the help of big data. Log files, data from sensors and devices, radio-frequency identification data, GPS coordinates, clickstreams, and social sentiments help these technologies provide solutions for the industry to grow and contribute to the economy.

## **13.8 RECENT TRENDS IN BIG DATA ANALYTICS**

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Big data analytics is an evolving field, and there are several recent trends that are shaping the future of this domain. Here are some of the key trends in big data analytics:

- 1. Real-time Analytics:** Real-time data processing and analysis are becoming increasingly important as businesses seek to make more informed decisions based on up-to-date information.
- 2. Edge Computing:** Edge computing involves processing data closer to the source, rather than sending it to a centralised server or cloud. This trend is gaining traction in industries such as healthcare and manufacturing, where real-time insights are critical.
- 3. Cloud-based Analytics:** Cloud-based analytics platforms are becoming increasingly popular, as they offer flexibility, scalability, and cost effectiveness. Cloud platforms such as AWS, Azure, and Google Cloud Platform offer a range of big data tools and services.
- 4. Artificial Intelligence and Machine Learning:** Machine learning and AI are becoming increasingly important in big data analytics, as they can help automate data processing and analysis and provide more accurate insights.
- 5. Data Privacy and Security:** With the increasing amount of data being collected and analysed, data privacy and security are becoming major concerns. Businesses must ensure that they are compliant with data protection regulations and that they are taking steps to protect sensitive data.
- 6. Data Democratisation:** Data democratisation involves making data accessible to all stakeholders in an organisation, enabling them to make data-driven decisions. This trend is gaining traction as businesses seek to break down data silos and improve collaboration and communication across teams.
- 7. Natural Language Processing (NLP):** NLP is a field of AI that involves analysing and interpreting human language. NLP is becoming increasingly important in big data analytics, as it can help businesses extract insights from unstructured data sources such as social media and customer feedback.

These trends are shaping the future of big data analytics and will continue to influence the development of new tools and technologies in this field.

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## **13.9 CHALLENGES OF BIG DATA**

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### **1) Big Data Divide**

The Big Data divide can be seen in two ways. It refers to users' difficulty accessing, using, and understanding the technologies and the agency they offer. This divide might have consequences for users of all ages and genders. For instance, senior citizens and rural women might struggle to use online banking and health services banks and government hospitals offer.

On the other hand, the ‘Big Data divide’ also refers to the relationship between media companies that collect, store, and mine big data and the consumers whose data is collected. This phenomenon increases the divide and makes consumers less powerful as they cannot access data, technology, know-how, or capital. This divide undoubtedly positions media companies in a more advantageous position.

## **2) Social cooling and withdrawal**

Social cooling happens because of the perceptions that emerge from big data. People feel that big data may reflect their weaknesses and analyse other personality traits, which are converted into scores. These scores may affect their ‘digital reputation’, limiting their growth opportunities. Social cooling deters people from speaking freely, and they gradually start exercising restraint over their thoughts and speech. Eventually, self-censorship prevails, and people stop raising their voices.

## **3) Complexity in Computation**

Big data computation presents a bigger challenge than getting and storing data. The computation challenge increases with the irregularity, inadequacy, ambiguity, speed of exchange, scalability, and versatility of datasets. The real problem in digital media datasets is making sense of such a huge volume of data. Here, data mining comes to the rescue of media companies. Data mining helps the analyst dig through huge amounts of big data and indicate beneficial results for the media organisation.

Organisations must be straightforward about their requirements with big data and understand the basic decisions of algorithms, including prioritisation, classification, aggregation, and filtering. These algorithms find hidden patterns, correlations, dependencies, and trends over some time. Error handling is also an issue with big data. Moreover, with the coming of AI, it is quite difficult to find data credibility. Is the data organic, or has artificiality been created through AI?

## **13.10 BIG DATA AND ETHICS**

### **1) Privacy Concerns:**

Users are increasingly concerned about how health companies, the insurance sector, investment companies, telecom companies, and e-commerce companies use their data. Individuals may not be aware of organisations’ policies and may feel cheated, as their privacy might be compromised.

Re-identification is another concern that can happen to any individual if his details are in the big data. User details get anonymised in such huge datasets. Re-identification happens because of the advancement in technology and computing power. Deep learning and AI tools can enable a trace back to the original personal data. Links between big data and users’ web usage, search history, and personal data can be analysed for confirmation. This puts the users at a greater risk of privacy invasion, scams, and fraud.

**2) Data Protection:**

Ensuring the protection of data is essential in big data applications. Safeguards must ensure unauthorised access, data breaches, and big data hacking do not happen. Media giants like Facebook, WhatsApp, and Amazon have access to the personal data of millions of users. Proper data protection laws should be enforced so people feel secure and can freely collaborate through the cloud. Moreover, data theft and impersonation in shared networks can lead to infringement and bigger crimes, which may affect users psychologically, emotionally, and financially.

**3) Bias and Fairness:**

Big data and the algorithms on which it is trained can be biased. This can lead to incorrect results and the formation of biased policies and decisions. Certain groups, leaders, and communities might be misrepresented, leading to disharmony.

**4) Transparency and Accountability:**

There is often a lack of transparency in how big data algorithms make decisions. Organisations must be transparent about their data practices and algorithms to rectify this. They should also have mechanisms to solve disputes when cases arise. Efforts must be made to inform individuals about how their data is being used and to give them some degree of control over its usage.

**5) Data Ownership and Control:**

Questions about data ownership and control are often discussed in big data. Data ownership is the owner's intellectual property right. This is a relevant concern among users since big data companies are often accused of copyright violations while generating and storing data. Thus, individuals should have the right to access and control their data, and organisations should be transparent about how they collect, use, and share data. While extracting and using big data, the algorithms may not know about data ownership. With the help of generative AI, the original data set and other digital assets can be easily converted into a new product that differs from the original. This severely impacts the economic growth of the original contributors.

**Check Your Progress: 2**

- Note:** 1) Use the space provided below for your Answers.  
 2) Compare your answers with those given at the end of this Unit.
1. What is the big data divide? Elaborate.
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2. How are big data and AI changing the news industry in India? Discuss.

Issues of Big Data

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3. Discuss the ethical issues related to big data.

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## 13.11 LET US SUM UP

Big data has become the most fundamental requirement of media organisations to accomplish their goals and profits. Present-day technology and innovations are changing the practice of journalism and making newsrooms more dependent on AI and big data. Big data is relevant for the news as well as for the entertainment industry. User-generated content on websites, mobile apps, e-commerce sites, surveillance, cameras, and sensors are captured and stored as unstructured and structured datasets. Deep learning algorithms make sense of these huge datasets and provide insight to the media owners and stakeholders. This data mining process has issues, such as privacy, copyright, data protection, and the digital divide. Overall, big data promises a revolution in generating and disseminating media content. This revolution will expose consumers to new media products and services that may get cheaper with time and promise them an engaging content consumption experience.

## 13.12 KEYWORD

**Algorithm** : An algorithm is a set of instructions, usually coded in a programming language, to carry out certain tasks on a computer.

**Artificial Intelligence** : Artificial Intelligence is a branch of computer science that allows machines to simulate human intelligence and be programmed to work like humans. The machines can be trained to do problem solving and reasoning, just like humans.

Cloud Computing is the delivery of computing services over the Internet. The services may include accessing software, storing results, and analysing them with the help of the Internet. This technology saves the resources of the local machine.

**Data Mining** : The process of extracting patterns, relationships, and other valuable information from big data sets. Data mining uses machine learning and deep learning techniques.

**Internet of Things (IoT):** The network of physical devices interconnected over the Internet. These devices collect and exchange information among themselves with the help of sensors and software. Devices over IOT follow certain protocols for the exchange of information.

**Linear Regression :** Linear Regression is a statistical model that estimates the linear relationship between continuous variables. Linear regression uses data points to check the linearity between dependent and independent variables.

## 13.13 FURTHER READING

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## 13.14 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

### Check Your Progress 1:

1. Big data is a term used to describe the vast volumes of structured and unstructured data generated by digital processes and interactions. Structured data refers to information that is organised and easily searchable, often stored in databases or spreadsheets, while unstructured data lacks a predefined data model and includes text, images, videos, social media posts, and more. The distinction between structured and unstructured data is essential because different tools and techniques are required to analyse and extract insights from each type.
2. The concept of big data is often characterised by five key dimensions, known as the 5 Vs: volume, velocity, variety, veracity, and value. Volume refers to the sheer quantity of data, often measured in terabytes, petabytes, or even exabytes. Velocity relates to the speed at which data is generated, collected, and processed in real-time. Variety encompasses the diverse types and sources of data, including structured and unstructured data formats such as text, images, videos, sensor data, and social media content. Veracity pertains to the accuracy, reliability, and trustworthiness of the data, ensuring that organisations can confidently use it for decision-making and analysis. Finally, value emphasises the importance of extracting meaningful insights and deriving actionable intelligence from big data to drive business outcomes, improve operations, enhance customer experiences, and create value.
3. In the media and entertainment industry, big data plays a transformative role by providing valuable insights into consumer behaviour, content preferences, and market trends. Media companies and entertainment providers leverage big

data analytics to gain a deeper understanding of their audience, tailor content offerings to individual preferences, optimise advertising strategies, and enhance overall user experiences. By analysing vast amounts of data from various sources such as social media interactions, streaming platforms, website traffic, and consumer feedback, organisations can identify emerging trends, predict audience demand, and develop targeted content recommendations. Furthermore, big data enables media companies to measure the effectiveness of their content distribution channels, track audience engagement metrics, and refine their marketing efforts in real-time. Overall, big data empowers the media and entertainment industry to make data-driven decisions, optimise content creation and distribution strategies, and ultimately deliver more personalised and engaging experiences to their audience.

### Check Your Progress 2:

1. The big data divide refers to the unequal access to and utilisation of large volumes of data, creating disparities among individuals, organisations, and nations. This disparity arises due to variations in technological infrastructure, resources, and expertise. Those with access to sophisticated data analytics tools and resources can harness big data for various purposes, such as business insights, healthcare advancements, and social development. However, marginalised communities, regions with limited Internet connectivity, and economically disadvantaged groups often lack the necessary resources to leverage big data effectively. Consequently, the big data divide exacerbates existing inequalities, hindering socio-economic progress, and perpetuating digital disparities. Bridging this gap requires concerted efforts to democratise access to data infrastructure, enhance digital literacy, and ensure equitable distribution of benefits derived from big data analytics.
2. In India, the convergence of big data and AI is reshaping the news industry by revolutionising content creation, distribution, and audience engagement. Data-driven insights enable journalists and media organisations to identify emerging trends, analyse audience preferences, and tailor content for targeted demographics. AI-powered algorithms optimise news delivery, personalised recommendations, and user interactions across digital platforms. Furthermore, data analytics facilitate real-time fact-checking, enhancing journalistic integrity and credibility. However, concerns regarding data privacy, algorithmic bias, and misinformation loom large. Media practitioners must navigate ethical dilemmas associated with data-driven journalism, ensuring transparency, accountability, and responsible use of big data and AI technologies to uphold journalistic standards and safeguard public trust in the news media.
3. Ethical considerations surrounding big data encompass privacy infringement, consent issues, algorithmic bias, and societal implications. The collection, storage, and analysis of vast amounts of personal data raise concerns regarding individual privacy rights and data protection. Moreover, the opaque nature of data algorithms can perpetuate biases, reinforce stereotypes, and exacerbate discrimination against marginalised communities. Additionally, the commodification of personal data by corporations for profit-driven purposes raises questions about informed consent and user autonomy. Furthermore, the potential misuse of big data for surveillance, manipulation, and social control poses significant ethical challenges. Addressing these issues requires robust regulatory frameworks, ethical guidelines, and stakeholder collaboration to balance innovation with ethical principles, ensuring the responsible and equitable use of big data for the benefit of society.

# **UNIT 14 POLITICAL ECONOMY OF ICTS**

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## **Structure**

- 14.0 Introduction
- 14.1 Learning Outcomes
- 14.2 Introduction to political economy, definitions, and characteristics
- 14.3 Origins of political economy
- 14.4 Schools of political economy
- 14.5 Media Ownership, Concentration, and Control
- 14.6 Political Economy of Media in Information Age
- 14.7 Key Components of Political Economy of Media
- 14.8 Political Economy of Media in Indian Context
- 14.9 Evolution of ICT
- 14.10 Political Economy of Personal Information
  - 14.10.1 Political Economy of Information and Communication Technology
- 14.11 Opportunities and Challenges of PEICT
- 14.12 Let Us Sum Up
- 14.13 Keywords
- 14.14 Further Readings
- 14.15 Check Your Progress: Possible Answers

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## **14.0 INTRODUCTION**

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This Unit is concerned with acquainting the learners with the basic concept of political economy, its history and evolution, and its connection with communication. The learner shall develop a critical analysis of the different schools of political economy and understand the different aspects of media ownership and power dynamics that are in practice.

Again, understanding the relationship between the evolution of Political Economy and that of Personal Information will eventually help readers connect the broad concept of political economy with that of communication technology. Eventually, the learner will be able to understand and analyse the Opportunities and Challenges of PEICT.

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## **14.1 LEARNING OUTCOMES**

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After completing this Unit, you should be able to:

- Identify the concepts and evolution of Political economy;
- Discuss the broad concepts of media ownership and the dissemination of power;
- Describe the different schools of political economy;

- Discuss the factors and challenges of communication technology; and
- Develop the areas of political economy with that of Information and Communication Technology.

## **14.2 INTRODUCTION TO POLITICAL ECONOMY, DEFINITIONS AND CHARACTERISTICS**

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A crucial wing of social science today is the political economy. The approach conceptualised in the early 1940s encompasses the study of the social relations, associations, and power relations that eventually constitute the production, distribution, and consumption of resources, including communication resources.

The political economy of communication has traditionally been addressed as spatialization, which refers to social activities, material things, and experiences or progression that consider geography, sociology, urban planning, and cultural studies and create a sense of space. The global economy and politics were shaped in the early 1970s and 1980s. This was primarily because relocating industrial output from expensive developed nations to developing nations or nations with limited resources became feasible. All this can be attributed to the use of modern communication technology. There were shifts in the political and economic landscape, which had a massive impact on the communication system and how the media was designed. Numerous Asian and Latin American nations, including Argentina, Venezuela, Chile, Korea, Singapore, Taiwan, India, and China, took to developing consumer economies, triggering extensive communication. Greater demand for media products followed economic expansion. This opened doors for foreign direct investment, global joint ventures, and content exports, creating a steady demand for tangible products like goods and intangible products like information and services. Similarly, the Berlin Wall's fall and the Eastern Bloc's collapse in 1989 created fresh investment opportunities for Western media worldwide. The loss of colonial power and the emergence of young economies looking for information balance also largely also developed the political economy.

## **14.3 ORIGINS OF POLITICAL ECONOMY**

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The term political economy started as early as the 1940s and bought out the elusive use of power, the way the resources are owned, produced, circulated, and eventually consumed.

Political economy has led to the expansion of political activism. This includes the continued growth of established organisations such as the Union for Democratic Communications and the International Association for Media and Communication Research. The media reform movement most substantially embodies the trend in the United States. Still, it is also exemplified in the success of new national (Free Press) and international (the World Summit on the Information Society) movements.

Political economy has gradually transitioned from its conventional strength in probing how power functions systematically in older media to various approaches to new media, especially the Internet. This creates a different degree of power play in different sectors. The elevated new media sector has also shifted the power from the content creators to the consumers and passive content creators.

## 14.4 SCHOOLS OF POLITICAL ECONOMY

There are different schools of political economy. Prominent among them are:

### The Radical Critique:

Utopian and Marxian socialists formed a powerful critique of the classical position, from the human devastation brought about by policies enacted in its name to the theoretical shortcomings. Their radical response was supported and sustained by workers and other social movements that enlarged intellectual critique by incorporating the democratic forces erupting in response to the Industrial Revolution. This forms the base of Radical Critique in Political Economy.

### The Conservative Critique

Often known as constitutional political economy, the conservative school of public choice works on applying economics to moral decision-making and extends its analytical tools to reason out moral considerations. This is one of the primary reasons why political economists of communication continue to hold a firm stance regarding the significance of moral philosophy despite resistance from structuralism and deconstructionism circles.

### Check Your Progress: 1

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Write about Political Economy.

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2. Discuss the Radical critique of the Political economy.

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## 14.5 MEDIA OWNERSHIP, CONCENTRATION, AND CONTROL

In a capitalist society and more so in any demography, how a social structure is created through production and consumption determines the economy. Political involvement here refers to the existence of power. When the product is none other than the communication tools, right from the production, distribution, and consumption of resources, including communication resources, we arrive at what we call the political economy of communication.

## Media ownership:

Today's media is hardly independent; it is a full-fledged set-up that different media conglomerates own. Based on the types of ownership patterns and the emphasis on power, there are different types of media ownership. They are:

- a. **Chain ownership:** Chain ownership implies the kind of ownership when a single chain of media conglomerates owns numerous outlets in a single medium. For instance, Radio Mirchi has outlets across India, and News 18 owns media outlets across different regions.
- b. **Cross-Ownership:** Cross-Ownership implies a kind of ownership in which the same corporation or conglomerate owns several media platforms, such as newspapers, e-magazines, web portals, television channels, radio, etc. For example, the Times group under Bennet and Coleman owns the Times Now News Channel, Times of India newspaper, and Radio Channels.
- c. **Conglomerate ownership:** Conglomerate ownership implies the ownership of several business enterprises, among which media is one.
- d. **Vertical Integration:** Vertical integration indicates that a media company can often control the production of the resources used to create content. For example, a newspaper publisher may own the Internet domains if the business concern is releasing a particular web portal. Similar is the ownership of cable networks by news channel owners or taking over the timber industry when the media house generates newspapers.

The different kinds of media ownership determine a definite shift of power from one place to another, and the owners have a different power equation, especially when delivering and communicating using any medium.

**Control:** Media Ownership brings out the element of changing power dynamics. The evolution of new communication technology has changed the flow of communication. With the growth of globalisation and privatisation, new communication technology has a strong role in working for or against those in power.

## Political Economy of Communication:

Political economists generally refer to this problem of media concentration as the determining factor of opinion, which is crucial in democracy. With the meteoric increase in the size of the media, there has been a shift in its assets, revenues, profit, staff, and stock value, which determines the political economy of communication.

Political economy has many sides to it. It has made important strides in addressing the combined junctures of feminist studies and communication aspects and deepening into moral philosophy. Some of the primary characteristics of the Political Economy of Communication are:

**Exercising control over the thought process:** Even in the face of resistance, political economy clears our path for thinking about a certain set of social interactions that are concentrated on power or the capacity to apply control to manipulate the thought process through a systematic control over other individuals, groups, and objects.

**Social praxis:** The political economy works on social praxis, which determines the fundamental unity of thinking and doing. This function functions on the core principles of being conceptually strong and emphasising the steady change process.

**Moral philosophy:** Political economy is also invaluable for its inclination towards moral philosophy, which strategically works on the values that create social behaviour and depend on the moral principles that ought to guide efforts to change it.

Political economy has paid some attention to audiences, particularly to understand the common practice whereby advertisers pay for an audience's size and quality (propensity to consume) that a newspaper, magazine, website, radio, or television program can deliver.

## 14.6 POLITICAL ECONOMY OF THE MEDIA IN INFORMATION AGE

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Primarily, political economy, as it applies to the media, has historically found itself divided into two distinct approaches of study: The socialist democratic tradition of Europe that saw broadcasting dominated by State-funded public service broadcasters such as the British Broadcasting Corporation following the Marxist approach, and the contrasting completely commercial American media that drove studies in political economy of the media towards the economics of media ownership. In recent years, however, globally, the role of public service media has gradually lessened; commercial media provides much of the content. Therefore, in today's era of globalisation, much scholarship regarding the media's political economy has focused on the commodification of information and media artefacts, which are produced and distributed for profit by commercial organisations in a capitalistic setup.

Wasko reiterates that communication and information, as crucial components of the marketisation process, have also developed as significant industries; "in many countries, public media institutions have been privatised, along with other public institutions, opening additional markets for growing transnational media and entertainment conglomerates" (2005). While Internet and new media distribute culture to a far wider global audience today - a phenomenon not witnessed earlier in the history of mass media - media conglomerates and institutions such as the State continue to act as hegemonic forces in the production and distribution of culture (Kellner, 2015; McChesney, 2013). This is, however, not to suggest that the power of audiences themselves as producers of media content may be overlooked entirely; "in the age of new media and social networking, it is also possible for consumers to become producers of their own media content and form, including oppositional voices and resistances" (Kellner, 2015).

## 14.7 KEY COMPONENTS OF THE POLITICAL ECONOMY OF THE MEDIA: THE BUSINESS OF MEDIA

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An analysis of the media business, both traditional and convergent, encompasses some prominent concepts. It is incumbent to mention that traditional media comprises newspapers, magazines, television, radio, music, film, and video that do not use digital platforms. Convergence, however, does not lend itself to an explanation with

much ease. While broadly, convergence is considered the “ongoing restructuring of media companies as well as to describe the latest developments in media forms, distribution, and consumption”, there is no universally accepted definition of the concept (Appelgren, 2004). By convergence, Jenkins (2006) denotes the flow of media content across diverse platforms, the nexus between different media industries, and the exercise of choice by audiences in accessing any media that caters to their immediate needs. He further elucidates that media convergence is not merely a technological process that brings “multiple media functions within the same devices”; convergence represents a cultural shift with consumers motivated to explore new information “and make connections among dispersed media content”.

Nevertheless, the political economy of the media, as stated at the start of this paragraph, encompasses certain key concepts, which will be touched upon here to direct the reader towards a holistic analysis of the subject.

#### **14.7.1 Commodification/Commercialisation of Media Resources**

Content and products created by the mass media are typically assigned a monetary and economic value in the process termed commodification. The modes of commercialisation or commodification vary according to technology and the institutional frameworks within which the symbolic media forms are deployed (Thompson: 1995). These products and services are then sold to consumers and buyers for profit. Examples of commodification include producing multiple copies of printed media artefacts such as books, advertising of sale spaces in newspapers and magazines, selling radio and television airtime to advertisers, providing broadcast and Internet services for licence and subscription fees, etc.

#### **14.7.2 Diversification of/Synergy among media conglomerates**

Diversification, explains Booz, Allen, and Hamilton (1985), is a way to expand a business to ensure higher growth and minimise risk. Companies may diversify their operations by investing in new products or services in other geographic markets or tapping into new consumer segments. It is important to note here that aside from media corporatisation and ownership concentration - take, for instance, six multimedia corporations (Time et al. owned by General Electric, Bertelsmann, CBS, Disney and Viacom) and 4 Internet giants with diversified media holdings produce the most content in the world - globalisation, digitisation, Internet and cultural differentiation of media “have induced new forms of organisation, production, and distribution through which these multi-national media businesses operate” (Arsenault & Castells, 2008). Globalisation, which encompasses transitions in the nature and location of the key components of the political economy - production, consumption and distribution - of products, services, information, and wealth from domestic and local systems to highly integrated global systems (Wilson et al., 2013), along with diversification, are together “solidifying the formation of a global network of interlocked media businesses, the backbone of which is formed by a select number of multi-national media conglomerates” (Arsenault & Castells, 2008). Further, various businesses owned by these media conglomerates have the scope to synergise to minimise risks and maximise profits (Wasko, 2005).

#### **14.7.3 Horizontal/ Vertical Integration of Media Enterprises**

Deregulation and digitisation have enabled companies to add related media businesses in vertical integration. Vertical integration has advantages such as lower transaction

costs (the buying and selling costs incurred when separate companies own two stages of production and operational costs), the supply assurance of critical materials, improved coordination of production and inventory scheduling between stages, greater scope for innovation given possible participation in relevant production and distribution activities which are rife with possibilities of change thus further facilitating adequate coordination of marketing and technical functions and improved coordination, and finally higher entry barriers because more financial and managerial resources are required to enter a vertically integrated company or compete with it (Buzzell, 1983). Horizontal integration occurs when enterprises add more companies that operate in similar lines of business to their portfolio (Wasko, 2005).

#### 14.7.4 Concentration

*Media concentration* is defined “as an increase in the presence of one or a few media companies in any market” caused by mergers and acquisitions and the absence of competition (Meier & Trappel, 1998, p. 41). Concentrated ownership of mass media or the domination of global markets by a few companies (transnational media conglomerates or TMNC) is fundamentally facilitated by deregulation (policy allowing foreign entities to enter the domestic market) and the advent of new technologies that have made diversification possible. The implications of media concentration by way of risks to media diversity, loss of editorial freedom, and homogenisation of cultural content are primarily significant in media markets where the plurality of news, information, and entertainment has profound and largely positive roles in democratisation and informed citizenship, and the facilitation of cultural growth. This is not to suggest that caps on foreign ownership do better in ensuring media diversity, given that such regulated ownership further reinforces concentration at a national level (McQuail & Siune, 1998). Nevertheless, Bagdikian (1990: 5) writes: Market dominant corporations in the mass media influence the public’s news, information, public ideas, popular culture, and political attitudes. The same corporations exert considerable influence within government precisely because they influence the audiences’ perceptions of public life, including perceptions of politics as they appear—or do not appear—in the media. All these key concepts about the political economy of the media have implications that are beyond the purview of this chapter. It is, however, in the interest of an engaged student to explore alternative views and criticisms of these phenomena as put forth by media scholars who approach the political economy of the media primarily with the two contrasting perspectives: media as an instrument of public welfare and media as an economic entity.

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### 14.8 POLITICAL ECONOMY OF THE MEDIA: THE INDIAN CONTEXT

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Given the theoretical underpinnings of the political economy of the media discussed till now, it becomes incumbent on the author to briefly discuss the political economy as it applies to media in India. India’s economic crisis as an aftermath of the 1991 Gulf War and its following bailout from the International Monetary Fund, given its declining investor confidence in the global fiscal markets, pushed for a large-scale structural reform programme in India. Changes in the global political economy - with the collapse of the Soviet Union and the end of Communism as chief influencing factors - further influenced India towards economic liberalisation, with the country realising the urgency and importance of “a modern and efficient telecommunications system as vital to the success of the overall reform program (sic)” (Sinha, 74). This led to the opening of the telecommunications sector to private capital

and multi-national corporations and the loosening of the government's monopolistic tight hold on the sector. Thomas (2010: 70) explains that many changes in the Indian media landscape brought about by this deregulation, economic liberalisation, globalisation, and privatisation make documenting the political economy of media or communications in India today challenging. The changing nature of politics in India that has inexplicably pushed media to take sides, multiple sources of funding of media organisations, the gradual lessening influence and power of India's public service broadcaster Prasar Bharati (that operates Doordarshan and All India Radio), and unclear policy directives regarding vertical and horizontal integration, consolidation and cross-media ownership of media entities have further created an unclear mediascape in the country.

## **14.9 EVOLUTION OF ICT**

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The final ten years of the 20th century were both the greatest and the worst In terms of public service education since the history of devices created a ground whereby it began to keep track of objects and generate data. Starting from the first electrical digital computer in history, the Atanasoff-Berry Computer (ABC), which debuted in 1942, the advent of computing and IT in the US set off the era of Information Technology. Post-World War II, computers replaced traditional bookkeeping and accounting methods, even with the ABC being reintroduced and the Electronic Numerical Integrator Analyzer and Computer (ENIAC) being deployed to assist with firing table preparation.

Not long after, vacuum tubes were replaced by transistors in the 1950s; with microchips, floppy disks, and now drives, information sharing has become an extended part of human life. Today, from brick-and-mortar governance, even day-to-day life has been transformed into a click-and-chip mechanism. Application-based technology and the subsequent evolution of new business models and applications exist almost everywhere.

Information and Communication technology today has undergone a sea change with the presence of traditional computer-based technologies and the more updated digital communication that thrives on constant connectivity.

**ICT and the Digital divide:** The digital divide refers to the gap between those with regular, effective access to digital and information technology and those without access to it. There is physical access to technology, hardware, and, more broadly, skills and resources that allow for its use. The imbalance of such technological ownership is termed the digital divide.

### **Check Your Progress: 2**

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. Write about the different types of media ownership. Does it have any implications for power?

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## 14.10 POLITICAL ECONOMY OF PERSONAL INFORMATION

In the present generation, information is the new currency. One must understand that measuring personal information in units like goods is impossible to determine the exact value of personal information. Information carriers like books, records, films, and news packages can be marketed in units and can be individually priced. Sometimes, it is also the medium through which it is circulated, determining its price. There is no homogeneity in its measure. Copyright and other types of “intellectual property” law, which attempt to heavily impose criminal liability on those who might attempt to “evade” technical safeguards against unlawful copying, are examples of intangible objects that Marx finds difficult to determine the units of measurement for. This is an attempt to utilise or manage the political economy component of private data.

### 14.7.1 Political Economy of Information and Communication Technology

ICT is now a noteworthy constituent of the economy. Computers and Internet access are indispensable to all businesses and consumers for commercial objectives, such as increasing product quality, offering customers more customised and diverse options, and making sales of goods and services. There has been a meteoric rise in the last two decades in the invasion of technology. Its effects on economic growth in both developed and developing nations manifest the way domination through technology.

Despite the recent global economic crisis, there has been an upward trend; yet country-level data on computer, mobile phone, and ICT diffusion rates vary across different countries and areas. This also determines the power play and subsequent ownership of these ICT tools that are influential in the socio-economic era and the political front. In a gist, this is the broad concept of the political economy of ICT.

#### Check your progress - 3

**Note:** 1) Use the space provided below for your Answers.

2) Compare your answers with those given at the end of this Unit.

1. What do you mean by the political economy of ICT? Discuss with examples.

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## 14.11 OPPORTUNITIES AND CHALLENGES

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The different opportunities of Political Economy under the Information and Communication Technology are:

- a. With ICT impacting the power structure and international politics, there are opportunities to speed up and intensify the international flow of money and goods.
- b. ICT has led to easy communication of policies and has standardised policy implementation to a certain extent.
- a. This creates room for new investment opportunities and stimulates economic growth.
- b. The political economy of information and communication also leads us to consider that change makers can use social media tools like blogging and social networking sites to resist autocratic Government or evasive business establishments.

The different challenges of Political Economy under the Information and Communication Technology are:

- a. The “digital divide” creates an inequality in the political economy, triggering imbalances in information distribution, unawareness of developmental policies, and unequal resource distribution.
- b. With the imbalance in media ownership and the entry of political and business conglomerates in this sector, the same people who create information are sometimes the policymakers; hence, information as a resource is used in their favour.
- c. The political economy of power can create an imbalance of power distribution and trigger mass protests since control over information and communication technology can also control the mindset of the people to a certain extent and guide their thoughts and ideas.

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## 14.12 LET US SUM IT UP

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We have learned the concepts and evolution of Political economy. Political economy is not a simplistic concept that can be learned in isolation. Rather, to understand this concept in the present-day scenario, we must understand the social structure, the broad ecology of economics and the ownership patterns of media institutions that determine the psychology of the people. Towards the later part, we have also understood the factors and challenges of communication technology and created a suggested ground of balance in the system.

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## 14.13 KEYWORDS

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<b>Electronic Numerical Integrator Analyzer and Computer (ENIAC)</b>	: This was the first programmable, electronic, general-purpose digital computer, completed in 1945.
<b>Intellectual property Rights</b>	: The legal privileges granted to the creator or inventor to keep their work secret for a predetermined amount of time.
<b>Spatialization</b>	: Is the spatial forms that social activities and material things, phenomena or processes take on in geography, sociology, urban planning, and cultural studies.
<b>Structuralism</b>	: The body of knowledge about human existence and the natural world that emphasises relationships.
<b>Karl Marx</b>	: Thinker and philosopher Karl Marx is best known for his theories, which led to the development of Marxism, which served as the basis of communism.

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## 14.16 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

### Check your progress 1

- i. The approach encompasses the study of the social relations, associations, and power relations that eventually constitute the production, distribution, and consumption of resources, including communication resources.
- ii. Marxian and utopian socialists developed a potent critique of the classical viewpoint, pointing out the theoretical flaws and the human destruction caused by laws passed in its name. Workers' and other social movements, which expanded intellectual criticism by embracing the democratic forces emerging in reaction to the Industrial Revolution, encouraged and sustained their radical response. This is the radical critique of Political Economy.

## Check Your Progress 2

- i. Based on the types of ownership patterns and the emphasis on power, there are different types of media ownership. They are:
  - a. Chain ownership implies ownership when a single chain of media conglomerates owns numerous outlets in a single medium. For instance, Radio Mirchi has outlets across India, and News 18 owns media outlets across different regions.
  - b. Cross-ownership implies a kind of ownership in which the same corporation or conglomerate owns several media platforms, such as newspapers, e-magazines, web portals, television channels, radio, and so on. For example, the Times group, under the Bennet and Coleman group, owns the Times Now News Channel, Times of India newspaper, and Radio Channels.
  - c. Conglomerate ownership implies the ownership of several business enterprises, among which media is one.
  - d. Vertical integration indicates that a media company can often control the production of the resources that go into making the media content. For example, a newspaper publisher may own the Internet domains if the business concern is releasing a particular web portal. Similar is the ownership of cable networks by news.
- ii. The final ten years of the 20th century were both the greatest and the worst in terms of public service education since the history of devices creates a ground whereby it begins to keep track of objects and generate data. Starting from the first electrical digital computer in history, the Atanasoff-Berry Computer (ABC), which debuted in 1942, the advent of computing and IT in the US set off the era of Information technology. Post-World War II, computers replaced traditional bookkeeping and accounting methods, even with the ABC being reintroduced and the Electronic Numerical Integrator Analyzer and Computer (ENIAC) being deployed to assist with firing table preparation. Not long after vacuum tubes were replaced by transistors in the 1950s, with microchips, floppy disks and now drives, information sharing has become an extended part of human life. Application-based technology and the subsequent evolution of new business models and applications exist almost everywhere.

## Check your progress 3

- a. Despite the recent global economic crisis, there has been an upward trend; yet country-level data on computer, mobile phone, and ICT diffusion rates vary across different countries and areas. This also determines the power play and subsequent ownership of these ICT tools that are influential in the socio-economic era and the political front. In a gist, this is the broad concept of the political economy of ICT.
- b. The different challenges of Political Economy under the Information and Communication Technology are:
  - i. The “digital divide” creates an inequality in the political economy, triggering imbalances in information distribution, unawareness of developmental policies, and unequal resource distribution.

- ii. With the imbalance in media ownership and the entry of political and business conglomerates in this sector, the same people who create information are sometimes the policymakers; hence, information as a resource is used in their favour.
- iii. The political economy of power can create an imbalance of power distribution and trigger mass protests since control over information and communication technology can also control the mindset of the people to a certain extent and guide their thoughts and ideas.