UNIT 3 PARTICIPATION

UNIT INTRODUCTION

Participation is the topic of Unit 3. You will learn how people now participate in the media in unprecedented ways. Today you can be an audience member, a user and a producer all at once.

Different technologies allow participation in different ways. You will learn how traditional and emerging technologies can provide different platforms for engagement. These can either enable or constrain involvement.

You will learn how to appraise different media platforms and the audience experience that they offer. Audiences become connected in diverse ways and their experience of participation can differ considerably. Audience participation is affected by the contexts of both reception and production.

Participation is also influenced by media companies or institutions and the contexts in which they operate. You will learn how different social, political and economic factors can affect the ways media institutions operate, and how they allow audiences to participate.

By the end of Unit 3 you will have completed a case study of audience participation in moving-image media. You will have proposed a multi-platform story that invites audiences to participate. You will also have produced one aspect of this story as a moving-image media production.

AREAS OF STUDY

Technologies How do technologies enable or constrain participation?

Audiences How do different contexts and purposes affect the participation of individuals and cultural groups?

Institutions How is participation in institutional practices influenced by social, political and economic factors?

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Technologies and participation

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TECHNOLOGY AND PARTICIPATION

Think back to your grandparents' day. The very thought that an ordinary person could start their own newspaper or make their own video channel would have been laughable. That was something only billionaires could do.

Today, this is possible because of the rise of digital technology. Computers and the internet have made it possible for media to be produced relatively cheaply. Academics speak of the democratisation of media production. It is no longer something that only the rich can do.

This means there has been a change in power relationships. Where once the owners of the media had all the power, now it is spread at least a little more evenly. Each of us has the power to participate to some degree.

Participatory culture

The rapid increase in new media technology encouraging users to generate their own content has created what media scholar Henry Jenkins has termed a 'participatory culture'. Jenkins believes this culture has the following characteristics:

- low barriers to artistic expression and civic engagement
- strong support for creating and sharing one's creations
- members who believe their contributions matter
- members who feel some degree of social connection with one another.

Skills gained in participation

Henry Jenkins suggests there are a number of operational skills needed to successfully engage in a participatory culture:

- **Use and reuse media.** Participants need the ability to play, perform, simulate and reuse media content.
- **Follow flows of information.** Users need the ability to follow the flow of stories across multiple sites and media types.
- **Negotiate with others.** Social network members need the ability to network, distribute, negotiate and respect diverse opinions. They need to appreciate other perspectives and be able to collaborate successfully with others.
- **Evaluate sources.** Users need the ability to make judgements about the reliability and credibility of different information sources.

'Creative literacy' is a term coined by researchers to describe the ability to creatively use technology for positive social purposes, instead of just using it to retrieve information.

Why people participate

It has been suggested that most people who participate in new media are not doing it simply to attract a mass audience. Reasons for participation include:

- **For attention or fame.** Everyone enjoys attention, and new media sites allow people to put themselves out there for the world to see.
- **To connect and 'hang out'.** Many online friendships are created from existing real-world friendships. New media, the internet and social networking sites can provide a sense of community and belonging. They are spaces not controlled by parents or teachers. Many other places to hang out, such as shopping centres, are becoming more tightly controlled for teenagers.
- **Self-disclosure and ritual.** Social networking sites and the internet generally provide an unparalleled opportunity for self-disclosure, opinion and communication with small groups of friends or the entire internet. Instead of talking on the phone for hours as teenagers used to do, they can now spend hours on social networking sites and instant-messaging each other. They can

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Figure 10.1 Profile pictures chosen for social media sites are often carefully curated. The individual is represented in selected ways that sometimes explore different identities or a more perfect identity. Sometimes this can make others feel insecure, especially if they do not see the look as managed or staged.

undertake the rituals of forming friendship and social hierarchies, displaying the hierarchy for other friends or would-be friends to see.
- **Building and exploring identity.** Social networks allow users to build and explore their identity – whether authentic or fictional. Most people, especially teenagers, are concerned with the way they believe people perceive them and the way they perceive themselves.

Collective intelligence

Collective intelligence is the term for the sharing of knowledge across thousands or even millions of people, as occurs on the internet.

Knowledge communities such as wikis capture and organise collective intelligence (also known as 'the wisdom of crowds'). While wiki contributors may be knowledgeable, it is networking itself that brings power through organising knowledge and making it accessible. The whole intelligence collection ends up far more powerful than the sum of the individual knowledge.

Other social-networking sites, especially those that are professional-, industry- or business-based, allow ordinary users to pool their intelligence to solve complex issues and questions, and to build vast bodies of collected and organised knowledge.

Technology, consumers and users

New media has changed the old patterns of media production, distribution and consumption. Earlier media used a one-to-many model whereby a small number of producers broadcast their work to a large number of consumers. New digital media can often use a many-to-many (sometimes called peer-to-peer) approach. In this model, lots of people are producers and they communicate with other groups of people (usually smaller groups). However, the one-to-many model of communication exists in new media as well.

The prosumer

Once, audiences were thought of as consumers of media. They consumed but did not produce. American futurist Alvin Toffler combined the words 'producer' and 'consumer' to come up with the word 'prosumer'.

Critics argued that the term 'prosumer' still seemed to emphasise consumption. A prosumer seemed to sound just like a really professional consumer or super-consumer. It seemed that another word was needed.

The prod-user

The term 'prod-user' was coined by Queensland University of Technology academic Axel Bruns. It has its origin in the two words 'producer' and 'user'. Combination words like these are called portmanteau.

'Prod-user' refers to the modern situation whereby someone can be both a producer and a consumer/user of media. In earlier times this was a rare combination. It might have happened if by chance you worked at a television station. Digital media have made this producer-user combination much more common. A prod-user is someone who, for example, views videos on YouTube, but also uploads their own videos through their own channel.

Features of prod-usage

Axel Bruns has isolated four features of the prod-user in action:
- **Open participation.** Content is created by prod-users using collaboration and peer-to-peer sharing. These peers may be real-life friends, or they may just collaborate online.
- **Fluid group organisation.** People work together on projects, doing the parts they are good at. There does not need to be formal role allocation.

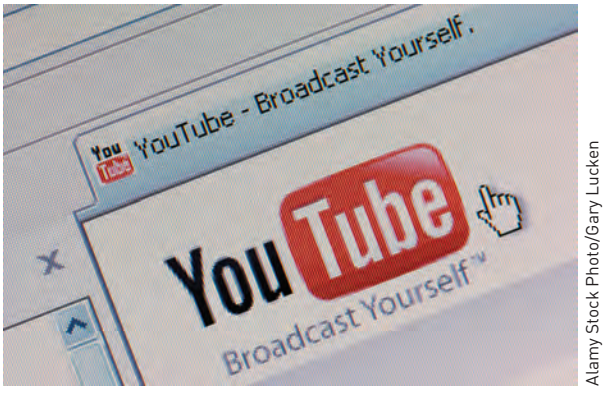

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Figure 10.2 YouTube represents the classic case of 'prod-usage' – the tagline 'Broadcast Yourself' makes a direct call to the producer-user. Someone with a YouTube account who uploads videos and also consumes the videos that are generally available is considered a prod-user.

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- **Always in draft stage.** Often the content made by prod-users is unfinished and in a state of perpetual updating. Bruns points to Wikipedia as an example of this aspect of prod-usage. A topic entry may be created by one user but can be overwritten by another and then another.
- **Unclear copyright.** Because there are often so many users involved in producing content, copyright becomes a difficult issue to establish. This complexity does not mean, however, that there is no copyright protection.

User- and loser-generated content

As users participate in the media, they generate content. Whether this is a positive or negative for them can be a matter of perspective.

- **User-generated content.** The modern internet allows people to participate in the production and distribution of their own media. When this is uploaded via prod-usage, it is called user-generated content. Blogging and the creation of wikis have become some of the most popular forms of user-generated content.
- **Loser-generated content.** Unfortunately, the internet offers lots of people the opportunity to benefit from the work of others. Content that is generated and shared (often with good intentions) and then exploited for profit by the greedy is termed loser-generated content. By the same process, a lot of young people are involved in working for relatively small returns or profit shares while big companies take the majority of the money. For instance, the microblogging platform and social networking website Tumblr was sold for $US1.1 billion in 2013, but the users who provided the content received none of that.

10.1 ACTIVITIES

1 Research a well-known musician who began by posting their performances on YouTube.
Explain how the various stages of their career happened, **providing information** about the sequences of events.
Construct a timeline documenting their progress from unknown to fame and document it on a timeline. On the timeline, place **illustrative examples** of the building of the fan base.

2 Survey the class to see how many people would fit into the category of prod-user. Include some of the following questions:
- Have you uploaded videos to an online sharing site? If so, how many views have you had?
- Do you provide online commentary on videos or games?
- Do you contribute to an online discussion group?
- In what context do you participate – school, home, with friends, etc.?
- What enjoyment do you get out of this kind of participation?

Respond to the areas of investigation in the following table.

EXPLAIN	ANALYSE	APPRAISE
Explain the survey **information** about the purpose and conditions, including the sample questions. **Explain** the respondents, including **information** about age ranges, gender, etc.	**Analyse** quantitative (numerical) results, **considering** percentages for each **constituent part** of the survey. **Analyse** qualitative (interview) results by **interpreting responses** and **examining** any similarities or differences. Try fluoro-highlighting all similar responses and seeking trends.	**Appraise** results to **interpret** user behaviour in the different contexts. **Appraise** results by **drawing conclusions** around the **worth** of user enjoyment of participation.

3 **Appraise** social media, **drawing some conclusions** about the degree to which it has brought positives or negatives into your life. How **significant** an influence has it been in your life?

4 Make a list of the ways in which you have used the collective intelligence of the internet to solve a problem you have had in the past week.
Appraise the significance of any dangers in relying on the internet in this way.

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PLATFORMS AND PARTICIPATION

'You have to put great story first. Where the pathways diverge is you have to understand the best practices for where you are airing that content. A reality segment for television is very different from one for YouTube or Snapchat. Each platform has a sweet spot. The common mistake is failing to understand that each platform has its own best practices.'

Charles Segars, CEO Ovation TV

Platforms

When media producers start planning a new program, they will often include a plan to deliver it across several **platforms**. This is the best way to ensure they increase audience involvement.

A media platform is a means of delivering media content to audiences. It is a means of allowing audiences to engage with categories of media, such as film, games or social media. A platform can be regarded as an information or content space.

Categorising platforms

Platforms can be regarded as mediums, or online sites or services.

Platforms can be technological mediums

The traditional mediums such as film or television can be regarded as platforms in their own right. They are the technological means of delivering content to audiences. Television has two platforms within the medium – subscription television (often called pay TV) and free-to-air television. However, within that, each channel or service provider may also be regarded as a platform or content deliverer.

Digital games are a newer medium that can also be seen as a platform. Within the larger games platform, there are several interrelated platforms or means by which audiences can engage with the content. These include the console platforms, the PC platform and the online platform.

Mobile phones and the internet are also mediums that are often referred to as platforms. The means of delivering the content can be seen as the medium itself, just as it is with film or television.

Platforms can be online sites or services

On the internet, there is a complex web of interrelated sites and services that are also referred to as media platforms. These include social-networking sites, discussion forums, video-sharing sites and services such as Stan or Netflix.

Appraising platforms

Originally a platform meant a raised area of flooring, like a stage. That stage was just a venue for presentations. The stage or platform did not really work to censor the content. However, the stage might have shaped how actors could use the space. The platform or stage could determine how a performance could be presented (or staged).

This original meaning of platform still helps when thinking about media platforms. Much more than a stage, a media platform shapes how people can use it. A media platform can also restrict the nature of the content more easily than a stage. José van Dijck, professor of media at the University of Amsterdam, says that people can appraise media platforms using six areas of investigation: ownership, technology, users/usage, content, business models and governance.

1. **Ownership.** The ownership of a platform affects its functioning. Many moving-image media platforms started as non-profit organisations for enthusiasts. Later they were swallowed up by profit-seeking global giants such as Google. The pressure to build profits can affect the experience that is given to users. Algorithms owned by private companies may direct the user experience towards increasing the profits for owners.
2. **Technology.** Platforms are made up of software and hardware that code original content into a media experience. Via an interface, they direct the users into certain behaviours. According to van Dijck, the important aspects of technology in platforms are data/metadata, algorithms, computer protocols, interfaces and defaults.
   - **Data/metadata** includes personal profile details and tags used to locate data.

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- **Algorithms** are the computerised instructions that make the platform work. Algorithms provide all sorts of information to the owners on the behaviour of users.
- **Protocols** are governing rules of computer coding that force users to follow certain pathways that can't easily be avoided. For example, protocols may force the joining of certain 'taste communities' (see page 62) or groups, or to share information with others.
- **Interfaces** direct users to operate in certain ways. There can also be a hidden interface behind the visible one. A hidden interface might link to software and hardware that the owners know about, but the users don't. Lots of studies have shown that a platform's interface architecture can cultivate styles of user behaviour.
- **Defaults and presets** direct users into certain behaviours. Defaults that are hard to change will result in most people doing what the owners intend them to do.

3 **Users/usage.** Users are often both audiences and producers. Users can also be builders of communities, and they can use platforms to develop their own individuality. Their ability to have a sense of control in a platform depends on a whole range of factors. Users can be constrained by certain features of the platform, such as coding features or ownership strategies. Sometimes there can be a battle between users and owners over information control. Technological knowledge can sometimes enable users to turn off defaults or change presets so that they have greater control. Privacy can be a major issue for users.

4 **Content.** Both users and owners have the same interest in wanting to have good content. However, users want a wide variety of content in all kinds of formats. Millions of people have millions of individual wants. In contrast, platform owners usually want to standardise things to make delivery easier. For example, YouTube has a standard length for video uploads. Algorithms work better if content features are standardised.

5 **Business models.** Traditional media earns money from selling the product and selling advertising. For example, cinema tickets give producers money from the sale of the movie product. Television ads provide revenue for television stations. Platforms on the internet have struggled to find profitable business models. Audiences are used to accessing platforms for free, and they are reluctant to pay. Business models are often a balance between users' trust and the owner's focus on profits. Owners usually monetise the platform through some form of the following:
   - **Advertising.** Despite declines in revenue, advertising still generates a huge amount of income. Customising ads to suit audience profiles has made online platform advertising a lot more profitable.
   - **Subscriptions.** Audiences can be charged a monthly fee for service access. Some platforms have free services funded by advertising, and a premium subscription service with no advertising – dubbed a 'freemium' business model. Subscription models suit streamed content rather than downloads. Streaming is more like a service than a product.
   - **Download fees.** These are the online equivalent of the fee-for-product approach used in cinemas. A download is more like a product. However, content that is streamed is harder to sell with this approach.

6 **Governance.** In the early days of the internet (and even the very early days of many other mediums), there were few rules. Today, most platforms have been taken over by large multinational corporations. They have established rules by which the platforms are 'governed'. These rules can be around privacy, property rights, acceptable behaviour or identification. Often the rules are maintained by automated algorithms.

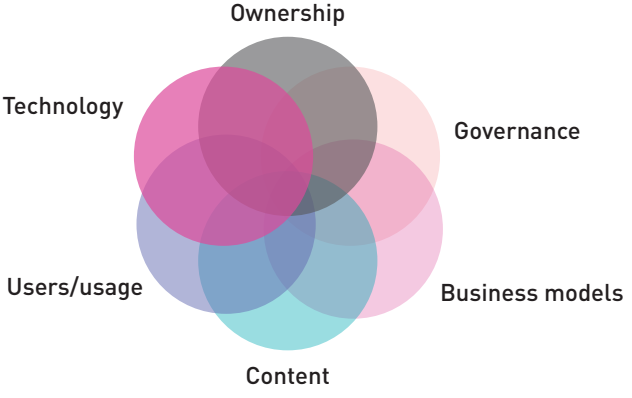

Figure 10.3 Appraising a media platform using six broad areas of investigation. The University of Amsterdam's José van Dijck has come up with a structure that illustrates how many aspects of a media platform are interrelated. However, only content tends to be the visible area of most platforms. The rest is in the fine print or hidden away in the platform architecture.

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Affordances and participatory culture

Different media technologies and platforms can do different things and have different capabilities. These capabilities are referred to as **affordances** by media analysts. For instance, paper-based newspapers have the affordance of print and still image, but they do not have the affordance of video.

Affordances are 'action possibilities' that are made available by the nature or design of something. The term was made up by adding to the verb 'afford' by US psychologist James Gibson in 1966. Gibson was using 'afford' in the sense of 'supply' or 'provide', rather than in the sense of having enough money. His new word originally referred to what an environment or landscape provides or furnishes (or affords) for its inhabitants. In 1988, designer Donald Norman applied the concept to human–machine interactions and the design of particular technologies, such as furniture, cars and computers.

When applied to design, 'affordance' means what the nature of the design allows the user to do. Affordances refer to the way a user is enabled or constrained. The design itself 'suggests' how the human can interact with it. For example, the design of a spoon appears to naturally allow for the holding of small amounts of liquids. A spoon's long stem allows for holding with human hands. These are its intended affordances or suggested action possibilities. A spoon does not have certain other affordances, such as allowing for the cutting up of a 'steak and three veg' meal. However, it might also have hidden or unintended affordances, such as allowing for the opening of a bottle as a party trick.

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Figure 10.4 Faced with an empty space and just a chair and a ball, would you sit on the ball and throw the chair? Not likely. Designer Donald Norman argues that this is because the designed-in affordances suggest that the most likely action possibility is the one nearly everyone takes.

Norman argued that, in theory, if a human was presented with a chair and a ball, they could sit on the ball and throw the chair. However, the design of those objects, their weight and shape, and their history of use, suggests that everybody would sit on the chair and throw the ball.

When applied to media technology, affordance refers to the ways the audience is most likely to interact with the technology. The affordances of media technologies are the ways in which audiences are enabled or constrained when they use them. For example, radio has the affordance of being audio only. The lack of vision means that audiences can be looking at something else while they are listening to the radio. This enables radio to be used while driving. However, radio also constrains audiences because they cannot see anything. As a result, radio is sometimes called 'the blind medium'.

Looking at technology in terms of affordances allows us to examine how individuals interact with technology, and how design both enables and constrains people. Affordances are an interaction between people's subjective mind-sets and the objective features of a technology. This makes the idea of affordances a good compromise between the theories of socially constructed technology and technological determinism (see page 70).

Types of affordances

There are three different types of affordances, according to William Gaver who further developed the theory.

1 **Perceptible affordances.** These are obvious and suggest a direct action that the user can take. For example, the buttons on a website suggest pushing (clicking). Sliders on mobile phones suggest swiping. Perceptible affordances rely to some extent on previous experience. For example, digital games have affordances that often rely on previous game experience.

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Figure 10.5 Staff at a design studio use standing desks to improve their posture while working. If you had told office workers 50 years ago that they could work standing at their desks, they would have ridiculed you out of the place. However, it is possible, and is even good for you. Affordances are also related to our mind-sets – we have to be willing to see them. This is especially true with hidden affordances.

2 **Hidden affordances.** These are possibilities for action that are there in the medium or platform but aren't immediately obvious. For example, some digital games have hidden affordances that allow players to make mods (modifications), or to create cheats or work-arounds. So-called 'Easter Eggs' in games are similar to hidden affordances, revealing a secret level or an insider joke. Hidden affordances can also be as simple as drop-down menus. They are not immediately visible but are there for those who are familiar with the protocols.
3 **False affordances.** This is when it looks like something should be able to be done, but it can't be. A button that does not work or a broken hyperlink are examples. The padlock near the beginning of *Half-Life 2* (2004) is another, because at this stage the player has no weapons to shoot it off. Some argue that the 'close door' buttons on lifts are false affordances – they never seem to make any difference to the speed of the door closing.

Traditional and new media affordances

Each medium has different technological capabilities. These affect the ways in which the content is delivered to the audience, and the ways in which they engage with the content.

When considering affordances, try imagining a live sporting event or a music concert, suggest American sociologists David Croteau and William Hoynes.

- A **radio station** could broadcast the event live. You could hear it, but you could not see what was going on.
- A **newspaper or magazine** covering the event could write about it and have still photographs, but you could not hear anything or watch a moving image. The print coverage would only be available in the next edition, not at the same time the event was happening.
- **Television** could show live action and sound, but there would be no text other than perhaps rolling titles and credits.
- **The internet** can do all of the above. As well as that, you would have the ability to interact with other fans through online messaging, tweets and discussion forums. All of those activities on the internet are supported by the medium.

The development of media technologies had two distinct phases: 'traditional media' and 'new media'.

Traditional media affordances

Media that developed before the internet era can be termed 'traditional media'. Traditional media often has the following affordances, according to Croteau and Hoynes.

- **One-to-many communication.** The media content is sent out from one source (such as a television station) and is received by a large audience.
- **Known senders and unknown receivers.** The sender of the media content is well-known (for instance, the Nine Network), but the audience at large is unknown to each other.
- **One-way medium.** Traditional media only offer a one-way communication within the medium. The television cannot provide a means of interacting back with the station. It is true that interaction between the audience and the sender of the content can occur – however, this usually involves another medium, such as the phone, written text or the internet.
- **Producer distinct from consumer.** Traditional media have a clear distinction between the producers of media content and the audience. Producers are usually big media organisations. The audience is usually a vast collection of ordinary people.

New media affordances

The arrival of the internet, together with digital instead of analogue media (see page 80), meant that digital media content could be spread across a number of different devices. These new devices

Table 10.1 The affordances (capabilities) and limitations of different media technologies of representation. Based on a table prepared by US media academics David Croteau and William Hoynes.

MEDIUM	LIVE?	TEXT?	SOUND?	PICTURE?	VIDEO?	INTERACTIVE?
Print	✗	✓	✗	✓	✗	✗
Radio	✓	✗	✓	✗	✗	✗
Film*	✗	✗	✓	✓	✓	✗
Television*	✓	✗	✓	✓	✓	✗
Sound recording	✗	✗	✓	✗	✗	✗
DVD*	✗	✗	✓	✓	✓	✗
Internet	✓	✓	✓	✓	✓	✓

*Film, television and DVDs can show text, but they are not primarily text-based. Croteau and Hoynes use 'interactive' to mean that the medium itself allows two-way communication, without having to resort to another medium to achieve it. Smart televisions are seen as a combination of internet and television.

offered a range of new affordances. In contrast to traditional media, new media has a very different set of affordances:

- **Many-to-many communication.** Individuals can communicate with each other as pairs, small groups or large networks.
- **Known senders and receivers.** Often, known senders of media content will be able to track their audience using cookies or other means of reading the 'digital footprint'. Some sites require registration. At other times, the internet-delivered content may allow anonymity both for sender and receiver.
- **Interactivity.** New media content often allows for interactivity using the same medium or platform that it is delivered on.
- **Prod-users.** New media allow for people to be both producers and audiences for media. Ordinary people can participate in the creation of media content.

Technological affordances and changes in social conventions

Public speakers once had to shout to be heard. Politicians used to stand and address crowds on old wooden packing crates for carting soap (soap boxes). They developed a certain loud and dramatic style to capture audience attention. Actors on the theatre stage would shout and over-act so that their audiences could hear them in the back rows and see the over-blown emotions they were expressing.

The affordances of the studio microphone and the camera changed these behaviours and changed the ways that audiences are able to interact with the content.

The media technologies produced new forms of appearing in public. The performer could be heard as if they were talking intimately, right next to the ear of the audience member. They could be seen as if in close contact. A newsreader could appear to be looking audience members right in the eye. The bellowing singing style of opera could be replaced with the soft crooning style of modern iTunes songs – only possible with speakers or headphones.

Mobile phone technology has additional affordances that have changed people's behaviour. Personalisation of the handset has allowed audience members to see the phone as part of their individual self. Caller ID means that some of the greeting rituals of landline phones have changed.

The internet has a whole range of affordances that have changed social behaviour. For example, the anonymity of the internet has meant that people can talk to each other in different ways than they would if they were in face-to-face contact. This can be both positive and negative. It can encourage online flaming or bullying. It can also allow people the security of anonymity and the ability to seek help or counselling without revealing their identity.

Platforms and affordances

Each media platform has its own unique characteristics. Each offers the audience a different set of affordances, even when something from one platform is delivered by another. For example, a movie delivered on a video-sharing platform such as YouTube has the affordances of YouTube, not of the cinema.

Video-sharing sites as platforms

As delivery platforms, video-sharing sites such as YouTube have some of the affordances of television as a platform. However, they have slightly changed those affordances, and developed new ones as well.

- **User-generated content.** Platforms such as YouTube allow users to upload video in a range of different file formats. User-generated content on these platforms is a significant proportion of all content. However, a majority of content is professionally produced material.
- **Short-duration video.** Ninety-eight per cent of videos on YouTube and similar platforms are less than 10 minutes in length. Around 20 per cent of videos are 1 minute or less in duration. Around 17 per cent of videos are between 3 and 4 minutes' duration.
- **On-demand video.** Television has 'flow' (see page 248), but video-sharing sites have an audience-driven flow. The audience is able to click on a set of equivalently accessible alternatives, one after another. However, the user is responsible for the flow, not the channel or station as with television.
- **Navigation.** The technology employed by sites such as YouTube is able to create searchability based on metadata such as tags. Tags can direct viewers towards videos when they perform searches.
- **Archived database.** Video-sharing sites are really huge video libraries.
- **Erratic collages.** The audience member or user can click on one video after another, but the pattern of the flow is often individual and unsystematic. This is unlike television, which is composed of a flow of programming organised according to set schedules.
- **Commenting, tagging and responding.** Comment features allow users to respond to videos and give opinions. They can also interact with each other in groups. Videos can be recommended to friends.
- **Channels and interest groups.** Communities of participation can be drawn together around channels and interest groups.
- **Scalability.** Being scaled means having significant size. Media content with scalability is highly visible to diverse sets of audiences around the world. Much media content on video-sharing platforms has limited scalability. Some media content gains huge scalability, but for the wrong reasons, or for unintended reasons.
- **Replicability.** Computer files can be copied a lot more easily than printed matter or videotape. Online media platforms are often based around replication or copies. These can be shared, changed or re-imagined. YouTube is full of replicated content.

Film as a platform

As a delivery platform, film requires complete audience attention. People make a conscious decision to go to the movies. Once there, they enter a darkened theatre, which (usually) prevents them from concentrating on anything other than the film. In a darkened cinema, audiences are more prepared to suspend disbelief and be drawn into a story.

The cinema experience is both collective and individual. In the cinema, the audience experiences the film as isolated individuals but also as part of a large and unknown crowd. In this anonymous gathering there is plenty of scope for mass behaviour, such as laughing or booing, but there is also opportunity for private reflection.

Some critics see the movies as a voyeuristic. The film experience transforms the audience into 'peeping Toms', says Laura Mulvey, UK film theorist and feminist. The film events take place while the audience, invisible in the dark, observes all the characters' secrets.

Cinema offers the best quality – even today. High-quality sound systems and a large screen reinforce film's power as a primary medium. Television images are made from pixels or electronic dots. In contrast, film has grain. Being created from light, film images more closely resemble what the eye sees in the natural world.

The sheer scale of the cinema screen is one of its affordances. The large-screen format of the cinema affords a greater sense of story taking place in a full-scale and well-developed world.

Movie images are 'over-specified' (filled with visual information). Film allows for a great deal of detail to be placed into the image due to the size of the screen. This has led some critics to refer to cinema as 'over-specified'. Each single shot can contain a huge amount of specific detail.

Cinema is good for narrative. Film is a platform where the narrative self-unfolds. The audience is not required to move around or take any particular action while the story plays out. Film is an excellent platform for storytelling, with an ability to explore plot, character and setting over a typical 90-minute duration.

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Digital game platforms

It could be argued that digital games are the most interactive platform. Unlike the cinema, where the story experience unfolds irrespective of what the audience member does, a game player must take physical and mental action for the experience to occur. The game platform has the following general features:

- **Interactive play.** Digital games involve the player in gameplay with digital representations of objects, characters and environments. The player has to play within certain rules, or sometimes against those rules. Games are generally either player versus player, or player versus environment.
- **Interactive story.** Many modern games have well-developed stories with characters, settings and narrative structures. According to media theorist Henry Jenkins, the interactive nature of games means that the compelling moments in a game story become more like 'experiences' for game players.
- **Contestation.** Henry Jenkins argues that contestation (rather than just competitiveness alone) is at the heart of most games. Contestation is goal-oriented struggle or contest against blockages or sometimes enemies.
- **Simulated spaces.** The environment in a game is a space for action. Much of gameplay involves opening up new spaces, whether they be levels or just new places for new experiences.
- **Performance.** Gameplay is like a performance, even if it is a private one. Players are always actively engaged in enacting on-screen actions.
- **Choice sequences.** The famous game designer Sid Meier says that 'games are a series of interesting choices'. The involvement of the player is driven by choices as each sequence is played out.
- **Identity play**. Modern games often allow players to assume different identities. This is especially the case with massively multiplayer online roleplaying games (MMORPGs).
- **Immersive.** Games allow a kind of intellectually absorbed interactivity between the player and the game system. This is often referred to as 'immersion'.
- **Perpetual play.** The time taken to play out the full game-story in many digital games can run well above 100 hours. Some games do not have an actual end and are more like long-running hobbies. These can be played over months or even years.

Getty Images/SSPL

Figure 10.6 The first television still image (a face) was transmitted in 1925. Moving images were first transmitted the following year. Even today with HDTV, television compares unfavourably with the sharp images obtained on film. This adds to the ordinary and domestic nature of television.

Television as a platform

As a delivery platform, television has the following general features for the user.

Television has 'liveness'. Television often works best when it is broadcast as a live event. Sports events, breaking news or live presentations are what separate television from film, and to some extent from online video-sharing platforms.

Television is primarily a domestic platform. Television needs to be ordinary because it is a constant presence in everyone's living room. It is a domestic medium that is viewed while people are doing a variety of other things. Television is a regular part of our daily life.

Flow of content is what defines traditional television. Television has a voracious appetite for program content, because there is a constant flow of programming. This has led many academics to speak of television as being defined by the idea of 'flow'. Programs are not so important individually (as movies are, for example), but for being part of a series that is itself part of a timeslot that is part of a vast flow of content. Free-to-air television is like this. Pay television, with its dedicated channels, is an even more continuous flow.

Television viewers are inattentive viewers. Research shows people pay attention to the television screen only 65 per cent of the time. By installing a small camera behind the screen,

Getty Images/Superb Images

Figure 10.7 One of the most important characteristics of television viewing is inattention. Studies show that viewers are engaged in a wide variety of other activities at the same time as they are watching television.

researchers found viewers involved in a range of activities apart from watching the television set. The research also showed that many people do not bother to watch programs all the way through. The average amount watched was 80 per cent of the whole program. The term 'channel surfing' originated in the restlessness of television viewers.

Television programs contain different, unrelated items, just as a newspaper or magazine does. However, almost all program material on television has a series format. A series is a group of thematically related programs, such as the animated comedy series *The Simpsons* (1989–). The series format of television programming was developed in the 1940s to 1950s as a way of answering the need for a ceaseless supply of new programs. The content of a show could vary from episode to episode, but the format remained the same and could be repeated over and over again. As a result, television became a medium of 'difference within a flow of sameness', churning out repeated patterns of programming.

Timeslots are a feature of traditional television. On free-to-air television, the viewing day is divided into a number of time zones. The most important time zone is peak time or 'prime time'. Prime time is from 7.00 p.m. to 10.00 p.m., and it is during this time that the television audience is largest. Prime time gradually tapers off until most viewers have left at around 10.30 p.m. Specialist programs are shown after 10.00 p.m. Pay television is divided according to channels of content. However, within those dedicated channels, the broadcast day is still divided into distinct rhythms. This is called dayparting.

Binge-watching is a feature of television as a new media platform. Since the early 2000s, there has been an increasing movement towards what is called 'citizen scheduling'. Audiences are streaming news, sport and entertainment programs directly from the internet and watching them whenever it suits. They will often watch a whole series all in one go. This growing group of people have effectively freed themselves from the limits of the timeslot.

Mobile media platforms

Mobile media include mobile phones, smartphones, laptops and tablets connected to the internet. According to communication specialist Andrew Schrock, mobile media have the following platform affordances:

- **Portability.** The whole point of a mobile device is that you can move around with it. The physical characteristics of the technology have gradually developed to support this. The size of the devices, the length of battery life and the weight all contribute to the portability affordance. Portability can be considered as being high or low. Smartphones have high portability. Wearable technologies have even higher portability. Laptops have relatively lower portability.
- **Availability.** Mobile media technology means it is now possible to be in permanent contact with total availability. However, people use this affordance according to their own personal comfort zone. Many people turn their phones off when asleep. Many turn off certain notifications, such as those from Facebook.
- **Locatability.** Since about the year 2000, GPS data has been available for mobile media services. The affordance of locatability has been taken up by people using apps such as Google Maps. They are able to see where they are, and where businesses and services are. In some apps, they can see where friends are. Locatability as an affordance has been taken up much more slowly than the others. However, the 2016 augmented-reality game *Pokémon Go* used it to advantage.
- **Multimediality.** Taking photos or videos with your phone is now an everyday activity. Mobile devices are multimedia devices capable of recording images and sound with increasing quality. These can then be used to communicate with others. It is this affordance that has led to the rise of citizen journalism (see page 297).

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10.2 ACTIVITIES

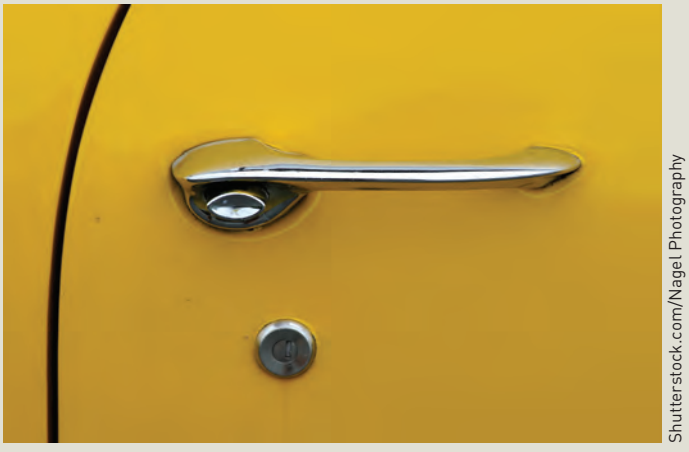
1 Choose a medium that hosts moving-image media, such as the internet, film, television or digital games. List all of the available platforms within that medium.
Explain what defines each platform and what separates it from others, giving **information** and **examples** to **clarify**.

2 Select three designed objects that are interesting because they are both practical and stylish. Have a look at designed physical objects, such as furniture, sections of (or whole) cars or appliances. Respond to the areas of investigation in the following table.

EXPLAIN	ANALYSE	APPRAISE
Explain the designed appearance of the object and its appeal on the basis of style. **Give information** about its general 'looks'.	**Analyse** component design features, **examining** each and **considering** the individual affordances they offer. **Consider** the logic behind the design and its fit to usage. **Examine** the potential for hidden affordances. **Analyse** the **strengths and limitations** of the design using simplicity and ease of use as **criteria**.	**Appraise** the **significance** and **status** of the design, **drawing conclusions** about its overall worth when compared to other similar objects (e.g. other cars).

3 There are three separate design affordances to the car door handle shown in Figure 10.8 (not counting the key lock). Two of the affordances are nested in the one design feature.
Explain and what each of them is, and explain how they anatomically suit the human hand and its actions.
Analyse the **component parts** of this 1960s car door handle and **consider** its limitations compared to one from the present day. You may need to research why this type of door handle has been abandoned by car makers, and use your findings as **criteria**. Consider whether the actual affordances were the same or different in each era.
Explain how the design affordances meet the end goal of allowing access to the car.

4 Select one of the six areas of investigation when appraising platforms suggested by Professor José van Dijck (see page 242). Investigate a chosen platform using the investigation area you have selected. Research as much detail as you can about the platform.
Appraise the impact your area of investigation has had on the development of the platform, and the audience experience of it. **Draw conclusions** about its **significance**. Present your findings to the class in a presentation that includes appropriate images.



Shutterstock.com/Nagel Photography

Figure 10.8 This door handle from a 1960s car has three separate design affordances to suit the human hand, excluding the key lock. (Clue: two of the affordances are nested within the one design feature.) Can you spot them? Why don't modern cars use this door-handle design?

5 The affordances of media platforms can change over time as technology improves or merges. Look at the table of affordances prepared by Croteau and Hoynes in 2014 (see page 245).
Appraise the contents of the table and **make a judgement** as to whether there have been any significant changes in the **status** of any of the platforms. **Support** your answer with **evidence** from research (such as recent online product catalogues).

6 Make a list of social conventions that the mobile telephone has changed. Build the list from what your parents have told you, or from group discussions in your class.
Explain any of the changes you think have occurred over the past 20 years, and **give examples** of what it would have been like before and after the mobile phone.

7 Have you watched the same program (such as a movie) on different media platforms?
Explain your experience and describe how the platform differences made for a different experience.
Appraise the **significance** of any of the media platform affordances in either enabling or constraining your experience.

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INTERACTIVITY

Interactivity as a term in media communications burst onto the scene in the mid-1990s as the internet expanded into popular use. Before that, interactivity was just thought to be something you did face-to-face in conversation with a person. However, the idea of interactivity being some sort of two-way communication dialogue is common to both usages.

Interactivity types and media types

Interaction involves communication through an ongoing exchange of messages. The exchange is like a dialogue. The nature and type of feedback that is received from each participant changes as it goes along. There is some measure of control over the content received, and the order in which it is presented.

There is also a perception aspect to interactivity. Not only does the user's input affect the screen, but the user perceives themselves as having control over what they see. For example, a digital game player perceives that they are changing the outcome of a game, but a television viewer does not think they can alter the progress of the story in any way.

There are three levels of interactivity, says Sally McMillan of the University of Tennessee.

1. **User-to-user interaction.** This type of interactivity allows for people to interact with each other, using the media platform to allow it to happen. Some forms of digital games, chat rooms and instant-messaging platforms are examples of user-to-user dialogue. Users adjust their messages in response to feedback from others. Each participant can be regarded as having equal power (in theory, at least).
2. **User-to-content (or documents).** User engagement with media content is a very common type of interactivity in new media. This could be internet interaction with a created story or 'document' – or even a document creator. It can also occur in traditional media, even if the means are more limited. User-to-content interactivity is not as equal as user-to-user. The sender of the original content or document has more power than those who interact with it afterwards.
3. **User-to-system interactivity.** Human interaction with the computer as a machine is especially important in new media. The user and the computer are in continuous communication as they work. Computer interfaces allow this interaction. Interfaces are the 'dials', 'knobs' or other designed computer commands that provide the connection between human and machine. For example, the Windows screen on a PC is an interface. Control in the user-to-system level of interactivity can be variable depending on the situation. Either the 'user' or the 'system' does the leading.

Traditional and new media interactivity

Interactivity is one of the key points of difference between traditional and new media. However, both forms of media have some degree of interactivity associated with them.

Traditional media interactivity

None of the traditional media can match the interactivity of the new media. However, even newspapers have space for interactivity in the form of letters to the editor. Magazines also have spaces for readers to write in.

Television is increasingly providing the same kind of space. It is common on current affairs and discussion programs. Viewers can film themselves asking questions or providing comments, and then send the clip to the show for comment by the panel. Many programs also include Twitter commentary in their broadcasts. Phone-in voting on talent-spotting programs is also a form of interactivity.

Citizen scheduling, time shifting or binge-watching are also simple forms of interactivity. Creating your own programming schedule gives you a greater degree of control. However, interactivity on television often amounts to just being given a menu of choices for programming on demand.

Content creation is not exclusive to new media. Traditional media have sometimes relied on active audience members to supply the content. Talkback radio operates on this principle. Some critics have argued that radio is the original interactive platform.

New media interactivity

New media are collaborative mass media systems. The audience is often the creator and source of media content as well as its receiver.

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How real is interactivity? The term 'interactive' is used by new media 'cheersquads' in a political way, argue cultural studies academics Aphra Kerr, Julian Kücklich and Pat Brereton. It emphasises the users' control over the medium, but it plays down the medium's control over the users.

The new media audience is involved and has some degree of control over both presentation and content. Often this is just at the level of navigating through a set of hyperlinked options. Professional content creators still dominate new media in the moving-image media platforms. However, interactive media can change how we understand the nature of stories. Producers once used to have total control over how a story was presented. Now, there is at least the opportunity for producers to hand some of this over to the audience.

Degrees of interactivity and participation

Interactivity can take many forms, and there can be many different degrees of interactivity. Some platforms allow more interactivity than other Some mediums allow considerably more interactivity than other. Some could be considered to be dialogues between equals, whereas some are almost monologues.

The direction of the interaction is an important consideration. Interaction can be mostly one-way, two-way or multi-directional. Another consideration is the degree of control that users or audience members have.

A model with four sectors of interactivity has been devised by Professor Sally McMillan of the University of Tennessee. An adapted version is shown in Figure 10.9. The four sectors are as follows:

- **Sector 1: Content on demand** – shows limited contribution but higher levels of control. Netflix fits into this sector. The audience has control over preferences and can customise the programming.
- **Sector 2: Co-created content** – has active contributors with high levels of control. Interactive fiction programs, interactive documentaries and some video blog sites fit into this sector.
- **Sector 3: Packaged content** – illustrates the traditional mass media model with one powerful sender and multiple non-contributing receivers. Traditional television stations fit into this sector.
- **Sector 4: Content exchange** – represents a situation where both receivers and senders can create content equally. However, group decision-making tends to mean that individuals have low control. Large multiplayer online games might appear here.

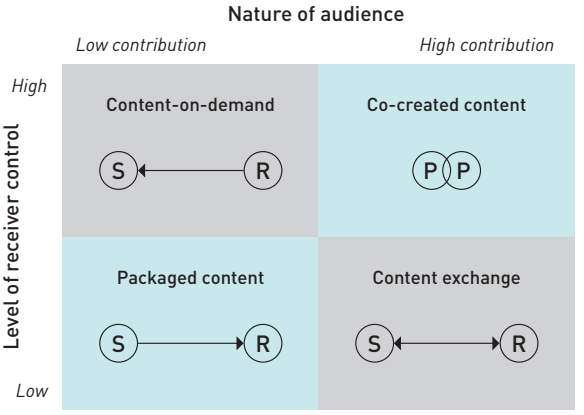

Figure 10.9 A model of interactivity in media, adapted from a model created by McMillan. Packaged content (such as traditional television programs) has the least audience contributions, and audiences have the least control. User-controlled interactive programs or certain console-based digital games have some co-created content and the most contributing audience with the most control.

Interactivity is not necessarily distributed equally among the population of users, says internet entrepreneur Ross Mayfield. The vast majority do not interact very much, and some contribute a lot. Mayfield argues that a lot of internet interaction (including moving-image media sites) is just low threshold participation. All the user has to do is click occasionally. At the other end of the spectrum, users are highly engaged with the available interactivity. Mayfield illustrates this with his Power Law of Participation graph (see Figure 10.10).

However, Mayfield argues that even low threshold clicking allows data to be gathered. This permits media organisations to adjust their responses to consumer demand. Mayfield calls this information gathering 'collective intelligence'. The work at this end is collective because it comes from being in such a large group. At the top end, there is collaborative intelligence. These audience members are highly interactive and may be co-creators of media content. Their work is collaborative, but there are only a small number of them.

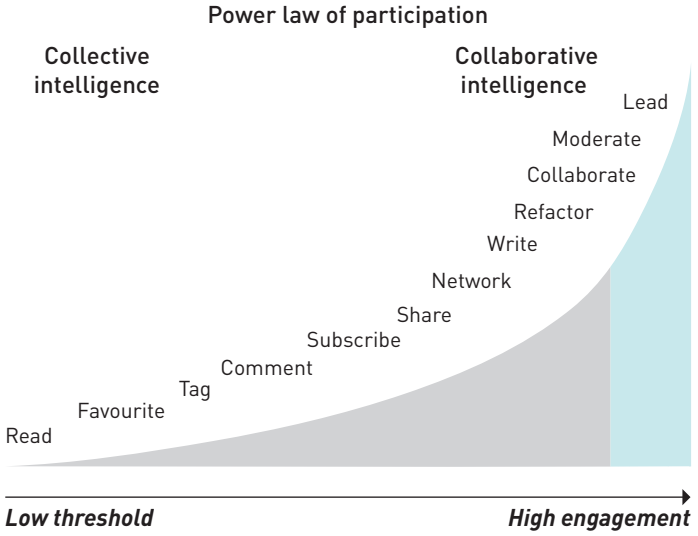

Figure 10.10 Internet entrepreneur Mayfield's example of a 'long tail curve'. The curve shows the varying degrees to which many users interact with new media. Both ends of the curve are engaged. Mayfield sees the lower end as being 'in training' for the upper end.

10.3 ACTIVITIES

1 **Explain** using your own experience, and giving personal **examples** to **clarify**, how you have used each of the three different levels of interactivity outlined by Sally McMillan (see page 252): user-to-user, user-to-content, user-to-system.

2 Provide a list of television programs that have offered some form of interactivity.
Explain the options that were available to the audience and **provide information** about audience use of these interactive features.

3 Using YouTube as an example, draw up a curve similar to Ross Mayfield's Power Law of Participation (Figure 10.10). Survey the class to find out where they are on the curve according to their YouTube interactions. Ask for the opinions of those at the head of the curve as to when in their lives they were at each stage moving up.
Analyse the results, **considering** the details of the findings as percentages. **Examine** the findings for any trends in the use of YouTube. **Make a judgement** about how applicable this might be for the students in the school as a whole. Present your findings to the class.

4 Redraw Sally McMillan's model of interactivity (Figure 10.9). In each sector, **provide an example** of a media platform that fits with the characteristics of that sector.
Respond to the areas of investigation in the following table.

EXPLAIN	ANALYSE	APPRAISE
Explain the media platform and its functions in brief. **Give information** about how audiences use the platform.	**Analyse** affordances of the platform, **examining** each and **considering** the capacity for participation. **Consider** the power relationships between the technology and the audience. **Examine** the potential for subversive ways of participating. **Analyse** the **strengths and limitations** of each platform using interactivity as the **criteria**.	**Appraise** overall **worth** of the McMillan model as a means of expressing platform interactivity.

5 List all the forms of interaction you can think of for traditional media and then for new media.
Appraise the extent to which new media and traditional media can offer an interactive experience for users. **Make a judgement** about whether or not this potential for interactivity is **significant**.

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TECHNOLOGIES AND CONTEXTS

When the time of production, social organisation, government regulations and all other factors of a technological environment are combined, they create what is called the 'context'. Context refers to all the natural, cultural and social aspects of an environment that help shape the final nature of a technology. Any media technology is very much a part of its context.

Contexts

Technology is like all human-made objects. It is the material embodiment of human interests, needs and relations in manufactured form, according to the 19th-century economist and political theorist Karl Marx. Today, many modern academics hold to the socially constructed view of technology. They argue it doesn't just arrive 'from above'. It is created by the society around it. In a different context, different types of technologies could arrive. Technology is a product of its context.

There are four main types of context:

1 **Time.** The period in which a technology is developed will shape it. For instance, television was developed in the 1930s–40s. Its form is suited to family-oriented viewing where people sit down together to watch.
2 **Natural environment.** Geographical and landscape features can play a part in the development of a technology. Vast distances between towns in the US played a part in the focus on the development of the landline telephone.
3 **Cultural context.** This includes language, history, shared beliefs and the economic system. In the US, a free-market capitalist culture with a focus on profits has played a part in the development of subscription-based media platforms.
4 **Social context.** The social context is the surrounding social environment of the organisation in which the technology is developed. For example, the fact that the internet was developed originally in a military and university context played a part in the nature of the technology.

Looking at the context helps us understand how a technology developed in a particular way. Many studies of technology look at failed inventions, or working inventions that did not get off the ground. For example, the winner of the so-called 'videotape format wars' of the mid-1970s and early-1980s was not the best system of recording. The dominance of VHS over Betamax is said to be due to the longer playing time of VHS suiting the social need for recording movies. VHS was also the rental videotape of choice for certain entertainment industries.

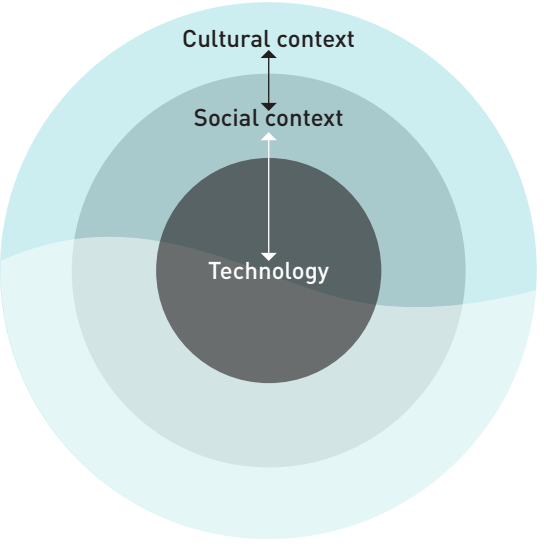

Figure 10.11 The development of a technology occurs in a social context surrounded by a cultural context. The social context is the group of people in the organisation where the technology is worked on. The cultural context is the surrounding culture; for example, English-speaking US culture of the 1990s.

How context shaped the internet

During the design and development stages of the internet, the design choices were a product of the type of people and organisations involved in the project. If it had been developed in a different surrounding culture, by different people, then the internet itself would probably not operate in the way that it does.

The internet is a global system of interconnected computers and computer networks designed for communication. It consists of government, academic, business and domestic networks. The internet uses standardised communications protocols to allow almost any

computer anywhere in the world to connect. Other end-user services are hosted on the internet, such as the World Wide Web, email services, Usenet, chat rooms, bulletin boards and RSS. The internet is open to anyone with a connection and a computer.

The social context

The internet developed in a relatively closed community right up until the early 1990s. The community was a tight-knit group of mostly US computer scientists and defence scientists. The members of this group were united in a common interest: research and knowledge development in the field of computers. They mostly worked in computer labs at universities or for the United States Department of Defense. They often attended conferences together and were in communication with each other via early forms of email.

This group of computer science academics and defence specialists had the following characteristics in common, argues Carol Gould of City University New York.

- Belief in the free exchange of scientific ideas and knowledge.
- Respect for other group members as equals (peer-to-peer communication).
- Belief in equal right of access to information and freedom of information.
- Little involvement in commercialisation, business or profit-making because they worked for government departments or universities.

The cultural context

The Cold War sparked the development of the internet. The Cold War lasted from the end of the Second World War in 1945 until the fall of the Berlin Wall in 1989. The Cold War was the constant state of intense political and military hostilities between the United States and the Soviet Union (Russia) that led to the build-up of nuclear weapons by both countries. Fortunately, it never turned into a 'hot' war directly between the two super-powers.

In order to keep the military communications systems intact in the event of a nuclear war, the original computer networks were connected like a web. If one part of the network was destroyed, the rest could keep functioning.

The history of development

Early tinkerings at defence

The beginnings of the internet were in the mid-1950s. Networking was extremely limited. Early computers were large and cumbersome, and required a whole room to store one computer that had less processing power than a smartphone. Computers also needed round-the-clock maintenance to keep going. They were very expensive to run.

In these early days of computing, no one had personal computers. As a result, time-sharing was developed. Time-sharing allowed more people to access the machines from separate terminals. Access to computers at any time was made available through limited networks that tapped into other computers in different locations.

Military beginnings

When John F. Kennedy was the President of the United States, Fidel Castro was a communist dictator in Cuba. He invited the Soviet Union (communist Russia) to set up a nuclear missile base in Cuba in 1962. From there, nuclear missiles could easily strike anywhere in the US. President Kennedy threatened the Soviet Union with war unless the missiles were removed. The Soviets complied, but for a moment the world was faced with the real prospect of nuclear war. The US military realised that one Soviet missile could have taken out the entire defence communication of the US. Because of this, the US military began setting up a communications network with no one centre. If one part of the network went down, the others could take over. The idea of the internet was born. To develop the network, the government handed the work over to computer scientists and professors at universities.

Start of the internet

In 1969, a United States Department of Defense computer network called ARPANET was set up. It allowed defence contractors and universities undertaking military research to tap into defence computer systems. The department allowed all kinds of research projects to take place, as long as they were in the field of computer science and related in some general way to defence.

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Choice of TCP/IP

During the early years of ARPANET, computer networks often failed and connections were difficult to maintain. Two kinds of network switching were available: circuit switching and packet switching.

- **Circuit switching.** This system was available from the telephone industry and assigned a separate dedicated circuit for the time of each communication – like a landline phone call. Using telephone circuit switching would have made it very easy to charge for each moment of internet use in the same way as phone calls are charged.
- **Packet switching.** Computer scientists at ARPANET chose a format known as TCP/IP (Transmission Control Protocol/Internet Protocol), also known as packet switching. Information is transmitted in digital form as tiny 'packets' of data. Text, image, video or audio files are broken up into small packets and transmitted bit by bit from one machine to another, where they are reassembled. Each packet represents only a tiny part of the huge amounts of information being sent.

Packet switching, or routing pieces of data simultaneously through multiple connections, overcame telephone system limitations, making the modern internet a possibility. It also made it difficult to charge for individual communications as they were all bundled up together.

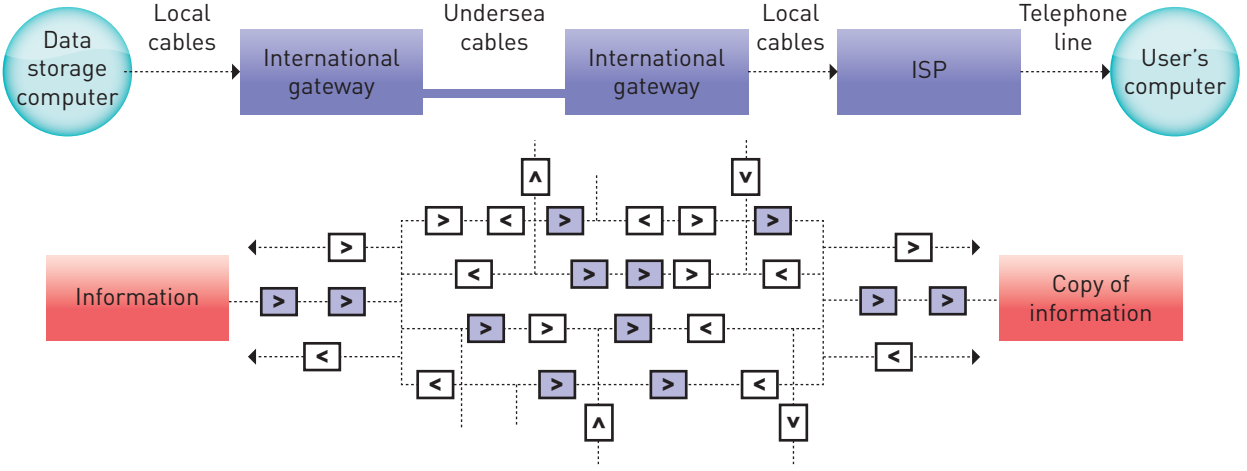

Figure 10.12 The internet communicates by sending tiny 'packets' of information from one machine to another. Each packet of information is virtually indistinguishable from its neighbours and is identified by only two elements: the header (which contains the delivery destination and sender's address) and the packet number (which the destination computer needs to put everything back together again).

Defence lets go

In the 1980s, the Computer Science Research Network was added to the global network. This gave researchers remote access to costly supercomputers housed at large US universities. Each of the universities then added its own networks to the system, further increasing its power. The United States Department of Defense separated its networks from the civilian university networks because of security concerns. Up until this time, commercial interests had been prohibited from the internet.

Business comes in

In the early 1990s, commercial interests gained access to the system, which opened the internet to the general public.

World Wide Web

While the World Wide Web (WWW) was developed by Tim Berners-Lee and the European Organization for Nuclear Research (CERN) in 1991, it was the 1993 creation by Marc Andreessen of the Mosaic internet browser using simple-to-write HTML (hypertext markup language) that spurred the internet's popularity.

The internet now runs on networks operated by major telecommunication, internet, computer and media companies as well as academic networks. No single organisation in any one country has overarching control.

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Figure 10.13 Often cited in the media as the first web image ever displayed is this 1992 image of a rock group from the European Organization for Nuclear Research (CERN) called *Les Horribles Cernettes* (The Horrible CERN Girls). They sing about high-energy physics! Although the group's line-up changed over time and they finally disbanded in 2012, according to their website the band is still loved by 20 000 physicists worldwide.

Technology different due to context

The context that existed at the time of the development of the internet changed the way the technology operates. Technology philosopher Robert Gertz says the influence of the context is visible in three main ways:

1 **Accessibility.** Information is openly accessible to anyone. Users can readily view information and they can equally contribute. The idea of a system that treated users as equals was a product of the academic community's involvement. No one's data got more priority in packet switching than anyone else's. This is called 'net neutrality'. The concept is that the internet is a public utility and that anyone has the same access – from amateur YouTube content creators to multimillion-dollar production studios. Net neutrality means there is one system for all – not a restricted one based on your ability to pay.
2 **Openness.** The computer scientists and academics made sure that the early ARPANET was open to meet the needs of all types of communications and networks. It was open in a technical sense to different kinds of hardware and software. It was also open to all kinds of information. No hierarchies existed. No piece of information was treated as more important or given greater priority than another piece. Thus, personal emails are given the same priority as important government documents. This is as a result of the academic community's desire for open collaboration in scientific development.
3 **Decentralised.** There is no central computer on the internet, and no hierarchical layers of computers. There is also no central regulation of the system. Decentralisation suited the military because it meant no one could sabotage the system by taking out a central computer. Decentralisation also suited the academic researchers' need for diversity and inclusion.

If other choices had been made in a different social context, the network could be very different. It could be much more commercial, requiring payments more often. Or it could be much more oppressive and intrusive, with centralised organisation and greater power to a small number of authorities. For instance, personal finances, social media postings, petitions, consumer habits and online friendship connections could all be tracked by a central authority. Citizens could be rewarded for compliance. Telephone circuit switching could mean that certain data could be discriminated against or given greater priority. Payment could be extracted. The documents of powerful people could be seen as being of prime importance.

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Alamy Stock Photo/AF Fotografie

Figure 10.14 A propaganda poster for a Nazi radio receiver called the *Volksempfänger*. One of the early theorists of media influence, Theodor Adorno, stated that 'in fascism, radio becomes the universal mouthpiece of the Fuhrer'. Had the internet developed in a different social and cultural context, it would not have been as open, accessible or decentralised.

10.4 ACTIVITIES

1 Imagine a different scenario for the development of the internet. Begin with a different social context and a different cultural context. Describe each.
Respond to the areas of investigation in the following table.

EXPLAIN	CONSTRUCT	APPRAISE
Explain how an imagined possible internet could have developed and **provide examples** of three different characteristics that could have stemmed from the imagined context. Provide some **additional information** about each of these imaginary characteristics.	**Construct** proposals for a science-fiction scenario that illustrates the examples you have explained. Use the **specific conventions** of the genre. Pitch your proposal to the class.	**Appraise** the extent to which the scenario you have suggested could already be in place somewhere today.

2 Research the biography of some of the important figures in the development of the internet, such as Tim Berners-Lee or Marc Andreesson.
Appraise their biographies and **make a judgement** about the extent to which their personal life histories may have affectted the way in which the internet developed. **Draw conclusions** about the overall **significance** of these personal details to the global internet as we know it today.