12

Institutions and participation

INSTITUTIONS AND THE ECONOMIC CONTEXT

British media tycoon Lord Thomson is reported to have said that owning a television station is a licence to print money. For economic and other reasons, the media institutions are close to the centres of power in society. They are closer to the 'big end of town' than they are to their audiences.

Features of media institutions as businesses

Media organisations tend to have common characteristics, because they all operate in the same business environment.

Profit takers

Most media organisations are private businesses. They are corporations with shareholders, and their prime concern is to make a profit for those shareholders. Huge investments of money are made. Many blockbuster films now routinely cost over US$200 million to make. For example, the movie *Black Panther* (2018) cost more than US$200 million to produce and within a few months had returned over $1 billion. Returns are not guaranteed, but they are spectacular when they happen. Revenue from box office and DVD sales for *Avatar* (2009) has long passed US$3 billion.

Supporting the powerful

The owners of media organisations can strongly influence those organisations. There are many examples of editors being forced to resign because they did not support the owner's political viewpoint. A survey of journalists showed that more than 70 per cent believed owners used the media to push their own political views.

The owners of big businesses are members of society's ruling class. While they make up approximately 5 per cent of the population, they control 50 per cent of the national wealth. Everyone else works for them, exchanging labour for wages. As members of the wealthy classes, owners tend to represent reality from the viewpoint of 'the bosses'. There are several famous cases of this. For example, European media baron Silvio Berlusconi used his own television and radio outlets to support his political campaign to become Prime Minister of Italy. Berlusconi heads the second-largest retail–industrial corporation in Italy (after Fiat).

However, this view may be partly inapplicable today. Media organisations cannot afford to alienate most of their readers. To make profits, they sometimes present material that does not directly support the interests of the owners of big business. Occasionally, for example through television programs such as *The Simpsons*, a less elitist view of the world is presented. Analysis of news programs nonetheless has shown much clearer support for the capitalist establishment.

Tending towards monopoly

The media industry is a competitive jungle where larger businesses gobble up smaller ones until only one (a monopoly) or, more commonly, a few (an oligopoly) are left. In either case, the result is an unhealthy concentration of ownership.

- **Monopoly**. In a media monopoly, a single firm dominates the market or even operates as the sole provider. Large western media markets have not yet reached the stage of monopoly.
- **Oligopoly**. In an oligopoly, four or five firms operate like card sharps in a poker game. Each player knows what the others are up to but does not have perfect knowledge. Others are excluded from the game. In Europe, the UK, Australia and the US, the major media markets seem to have settled down to four big players per market. Some of these, such as Rupert Murdoch, are household names in a number of countries.

Figure 12.1 Imagine a primeval swamp where a few bloated dinosaurs confront one another. They exist in an uneasy truce. However, if one beast averts its head momentarily, another will deliver a death blow. If one is smaller and grows more slowly, it will be hunted by the others. Eventually only one or perhaps two of the largest, most ferocious dinosaurs survive. These are our media organisations!

Jon Kudelka, www.kudelka.com.au

Diversification

Diversification is a process of enlarging a company by taking over or merging with other companies. For example, the NBC network in the US is owned by General Electric, which makes conventional and nuclear weapons on defence contract. In Australia, private equity investors in media companies have extensive other investments as well as their media interests. Diversification increases profits and long-term security. If one part of the firm loses money, the other parts can support it.

Sideways expansion is called **horizontal integration**. The entertainment media already sell their products in the leisure industry. For example, to horizontally integrate, a movie company may spread its activities into virtual reality technology or holiday resorts. It is still within the leisure industry, but has spread to other, parallel activities. For example, Sony Entertainment produces films, television programs and digital games, spreading horizontally across the entertainment platforms.

Expansion up or down is called **vertical integration**. It is made possible because the production process is divided into stages. For instance, a newspaper begins as a tree, and then goes through multiple stages of production and distribution as a newspaper until it finally ends up as stuffing for a padded post bag. In one example of vertical integration, the Japanese television manufacturer Sony purchased the US movie company Columbia in the early 1990s. Sony now controls the production and distribution of some of Hollywood's most famous movies and television programs. Sony also makes television sets and video cameras. In this way, it controls media production from top to bottom. In Australia, Rupert Murdoch controls 70 per cent of the nation's newspapers and owns all sources of mainstream newsprint.

When media companies buy shares in companies making other products, there is an increased danger of a conflict of interest. A newspaper company will be unlikely to run a story on problems with airline safety if the company also owns the airline.

Selling audiences as products

Media products are not sold direct to their consumers. Instead, the consumers are sold to other producers. For example, television advertisers buy the audience for a prime-time television program for 30 seconds so they can show their advertisement. The cost of each 30-second timeslot depends on how high the show's ratings are.

Figure 12.2 Laptops, smartphones, tablets and PCs provide data about audience through measurements of site visits. However, free-to-air media such as traditional television stations do not have any reliable way of measuring audiences.

The media factories

According to a study of news-gathering procedures, almost 95 per cent of television news stories appeared because they happened at the right time (11.00 a.m. to 5.00 p.m.) or because the media crew was close enough and there was enough videotape to record the event. What makes news has as much to do with institutional convenience as newsworthiness. The industrial processes of media organisations are major determinants of the texts.

Division of labour into roles

Henry Ford used assembly-line techniques to build cars. By the time the last Ford Model T was made in 1926, Ford had made half of all cars sold in the US. Much capitalist production continues to follow Ford's mass-production techniques. Each worker performs a single task repetitively on a production line. Labour, including labour in media organisations, is divided into component stages. For example:

- **Media producers have specialised roles.** Examples of these roles are journalist, subeditor and editor. A consequence of this multiple authorship is that media texts often follow standard routines.
- **Media texts are produced in teams.** No individual is totally responsible for the meanings communicated in a text. The values of the text are therefore more likely to be those values acceptable to the institution as a whole.

Media institution effects

12.1.1
Enhanced Media
Metrics Australia
(EMMA)

Media markets are heavily influenced by the commercial media. Even government broadcasters operate in an environment dominated by their often better-resourced competitors.

Sameness and repetition

Audiences are never guaranteed, no matter how much money is spent. Audiences can be uncooperative and fickle. This makes media programming a risky business – it becomes difficult to gauge what will work. Once a successful product has been discovered, the formula is copied over and over again as every other producer tries to cash in. Because of a desire to guarantee profits in fickle markets, media products can all seem the same.

Neglect of smaller and poorer audiences

The profit motive of the media works consistently to exclude audiences lacking economic power or resources. Unless the media organisation can sell the audience to advertisers, there will be no attempt to cater for that audience. The size of the ignored audience can be in the millions.

12.1 ACTIVITIES

1   Research any media takeovers that have happened in the past five years.
    Explain the details of which organisation made the takeover. **Provide information** about each media institution and about the takeover offer. **Identify** any effects on the market after the takeover, and identify any changes to media products as a result.
2   Investigate one of the media industries (such as the film industry).
    Explain the range of production agencies (for example, studio or independent), and the stages of production (such as scripting, shooting and editing).
    Appraise the impact of the practices of the industry, **making judgements** about the effect on the shape of the final product.
3   Identify the principal owners (or owner) of one of the media institutions. Prepare a personal profile of each owner. Research estimates of the percentage of market share each has accumulated. Research details of other investments each has acquired.

Explain the findings of your research, **giving information** about the impact of the owner/institution.
Appraise the significance of concentration of ownership in the media, **drawing conclusions** about the impact on society overall.

PUBLIC AND PRIVATE MEDIA ORGANISATIONS

In recent years there have been important changes in the regulations and operating environments of the media in Australia, the UK, Canada and New Zealand.

Background

Since at least the 1970s, most western democracies have carefully regulated the television and radio broadcasting environment. Justifications for the regulations included:

- **Spectrum scarcity.** The broadcasting spectrum was seen as very limited and therefore a scarce resource. There could be only a limited number of television channels. Spectrum usage therefore required regulation as a rationing measure.
- **Spectrum as a national resource.** The airwaves were seen as national property to be used in the national interest for the good of the public.
- **Media power.** The influence of the media was seen to be based on its pervasive presence. In particular, television and radio had constant access to every living room in the country.
- **Conflicts of interest.** Commercial profit motives were often seen as being in opposition to the needs of democracy and to the principles of quality broadcasting.

Present trends

By the 2000s, economic, social and technological changes meant earlier justifications for regulation no longer had widespread support from governments. Changes included:

- **Decentralisation.** Nowadays, anyone can be a media producer. Home computers, smartphones and digital editing programs have made it possible for ordinary individuals to do what

once required a hugely expensive television station or printing operation.

- **Free markets.** The dominance of the idea of free markets as a solution to many problems has brought a desire for less regulation.
- **Multichannel television.** Digital systems have become capable of delivering hundreds of new channels. Instead of everyone looking at the same few channels, there is suddenly the potential for a bewildering choice. This has weakened the idea of spectrum scarcity and the need for regulation to ration resources.
- **Globalisation.** The worldwide interlinking of digital media is called 'globalisation' (see page 58)

Public versus commercial media

In a public system, producers get the money to make programs. It is the reverse situation in a commercial system – they make programs to get the money. Whether to apply a market solution or a government-funded public service solution to today's broadcasting problems has been a subject of recent debate in all western societies.

The nature of the media reflects the nature of society. Therefore, the debate is really over what kind of society people want. Both sides seem to agree they want a television environment that promotes freedom, but both sides of the debate have different definitions of freedom. Public service media argue for 'freedom *from*' where as commercial media argue for 'freedom *to*'.

Public service media

In public service media, 'freedom from' tends to mean freedom from forces such as domination by the almighty dollar, powerful vested interests, advertising and mediocrity. In Australia, the UK, Canada and New Zealand, public service media have been organised along broadly similar lines.

Communications professor Michael Tracey of the University of Colorado has studied a range of public service broadcasters around the world and developed principles that form the basis of the public broadcaster's definition of freedom:

- **Universal availability.** Public broadcasters tend to make sure their signal is available to as many people as possible. This isn't to maximise the audience – rather, access is viewed as a right of citizenship. For instance, in many parts of remote Australia only the ABC was available until recently.

- **Universal appeal.** Programs are produced to appeal to a wide range of tastes, not just to 'high culture' tastes (for example, opera lovers).
- **Diversity and provision for minorities.** Public service media provide access to the media for disadvantaged or minority groups. In a multicultural society, public service media should be pluralist and diverse.
- **Education of the public.** Educational programming, ranging from school to university material, demonstrates the public service broadcaster's view of audience members as citizens with certain needs and rights.
- **Independence.** Public service media can best serve the public when they are independent of both the government and commercial interests.
- **Service to the public sphere.** The needs of the citizenry within a civilised society should be served by the public broadcaster. These needs may be related to politics, law, consumer issues, national culture or a whole host of other activities that make up the life of modern society.
- **Criticism.** The market opponents of public service media argue that they have been captured by cultural elitists and have imposed a diet of unpopular programs on the public.

Commercial media

In commercial media, 'freedom to' tends to mean freedom to maximise profits. The principles of commercial broadcasters might be summarised as follows:

- **Diversity.** Commercial broadcasters argue that the market creates the best chance of diversity of choice.
- **Consumer sovereignty.** Commercial operators see the audience as consumers rather than as citizens. The consumer is king, or sovereign, and rules by casting a vote for a particular program. This could be with cash (in the case of pay television) or through the ratings system (in the case of free-to-air television or radio). Of course, consumers with big wallets are worth more than the less well-off.
- **Mature audiences.** Supporters of the market argue that the contemporary consumer wishes to be exposed to as many choices as possible. The consumer does not need educating or regulating.
- **Criticism.** The opponents of the market approach say it simply gives freedom to large multinational

corporations. They dominate production and reduce the range and quality of programs, catering only for big-spending majorities. These critics argue that diversity is therefore reduced, and national culture is impoverished

12.2 ACTIVITIES

1   The beliefs that led to a heavily regulated television broadcasting environment after the Second World War still have value for some analysts.
    Appraise their relevance in terms of today's television. **Inquire** into the relevance of national media regulations in an era of globalised media and internet distribution. **Make a judgement** about the **worth** of the role of the nation in the contemporary media environment.
2   Research to find evidence of the idea that television works as a 'social glue'.
    Explain your findings, **giving examples** of the role that television has played in holding society together.
3   **Analyse** the current role of the Australian Broadcasting Corporation (ABC), **making judgements** using Michael Tracey's principles of public service broadcasting as the **criteria**.
4   Consider to what extent Australia's commercial media has lived up to claims of promoting freedom of choice, diversity and consumer sovereignty.
    Appraise the **status** of commercial media at the present time, **drawing conclusions** about the claims and assessing the **significance** of their current role in Australia.

AUSTRALIAN TELEVISION ORGANISATIONS

The Australian television system more closely resembles that of the US than those of the UK or the countries of western Europe. Australia, unlike Europe, has not experienced decades of government television monopoly. Both the US and Australia have significant commercial sectors.

Since the introduction of television, Australian governments have insisted on 'structural diversity'. There has been a commercial television market from the beginning. However, there has also always been a strong national public service broadcaster

to provide an extra dimension. In addition, the establishment of the Special Broadcasting Service (SBS) produced an organisation unique in the world.

Most western countries had pay television before Australia. Subscription television, delivered by cable or satellite, depending on the provider, was introduced in Australia in 1995.

Australian Broadcasting Corporation (ABC)

For most of the past 20 years, the ABC has operated in an environment of tight or reducing government funding, pressure to commercialise and vague threats of some kind of privatisation. Despite this, surveys show about 80 per cent of people think the ABC is one of the most valuable institutions we have in Australia. One survey showed the only brand more popular than the ABC was Vegemite! Most people also believe the ABC should be funded at or above current levels and are opposed to advertising.

12.3.1 ABC

The ABC charter

Parliament has given the ABC a charter of functions under the *Australian Broadcasting Corporation Act 1983*. Under the Act, the ABC has the following functions:

* **Innovative and comprehensive broadcasting.** The ABC must provide innovative and comprehensive broadcasting services of a high standard. It is also required to provide:
  – programs that contribute to a sense of national identity and inform, entertain and reflect the cultural diversity of Australia
  – educational programs.
* **Delivery of programs outside Australia.** The corporation is required to transmit Australian news, current affairs, entertainment and cultural programs to overseas countries. Under the Act, the aims of this provision are:
  – to encourage overseas awareness of Austra-lian culture and policies
  – to provide a service for Australians living or travelling overseas.
* **Arts coverage.** Under the charter, the ABC must encourage and promote the musical, dramatic and other performing arts in Australia.

Funding

The ABC is directly funded by federal government grants. This makes it different from many other public service broadcasters in countries such as Japan, the UK, Canada, France and Germany. Most of these countries collect licence fees as the most common method of funding the national broadcaster. A 2001 study by Macquarie Bank found the ABC was the second-lowest-funded public broadcaster of 18 western countries. A 2018 report found that the ABC costs each Australian taxpayer 4 cents a day – half what it did when the famous '8 cents a day' slogan was started in 1987.

The Australian government allocates funding grants on a three-yearly basis, indexed for inflation. At the end of each three-year period, the ABC management negotiates with the federal government for funding for the next period.

Programs

The ABC has a range of digital television channels. A substantial internet portal has stand-alone content and is also associated with both television and radio content. The Australia Plus network is an international television service that broadcasts to 39 countries, including India and Mongolia. ABC iView is also available as a global streaming service.

Programming on standard ABC television (ABC1) is 'balanced and comprehensive', according to ABC executives. The balance is between programs catering for a broad audience and specialist programs. The ABC argues that it must have popular programs to attract large audiences. For example, the news and current affairs programs are of broad appeal and work as 'gateway' programs. They channel audiences towards programs of a specialised nature later in the evening.

Audience

During peak viewing times, the ABC typically has a market share of around 17 per cent of the prime-time television audience. Unlike commercial free-to-air broadcasters, the ABC is not affected by audience fragmentation. Without advertising pressure, it doesn't matter if the audience for ABC programs is on television, on the official website or elsewhere. The only issue is that the program is seen.

The national broadcaster prefers not to use the commercial ratings system to measure its audience. Rather, it has a measure of audience response called 'reach'. Audience reach measures how many people in a week switch to the ABC to watch a particular program. Figures from 2018 show 70 per cent of Australians watch the ABC at some stage each week.

ABC digital online had an audience reach of around 24 per cent of Australians in 2018. Since the year 2000, the ABC website has consistently ranked in Australia's top 10 most visited websites each year. However, the ABC also pushes its news stories out to digital platforms such as AppleNews, Facebook, Snapchat and WhatsApp.

Research has shown that the widespread belief that ABC's audience is just a highly educated elite of 'culture vultures' has little basis in fact. Blue-collar workers and those with minimum education watch the ABC as often as white-collar workers or university graduates. However, older viewers make up a larger proportion of the audience than younger viewers. There is also a slight skew toward female viewers.

Special Broadcasting Service (SBS)

12.3.2 SBS

The Special Broadcasting Service (SBS) was set up in 1980 to provide multicultural and multilingual television. There is nothing like it anywhere else in the world. Although other countries often broadcast foreign language shows on television (for example, Sweden has shown many Australian movies), no other country has a station devoted exclusively to multiculturalism.

Australia is a multicultural society. This means it is a society composed of many different cultures, including Aboriginal and Torres Strait Islander cultures. As a policy of government, multiculturalism has the following three dimensions:

1 **Cultural identity:** the right of all Australians to express and share their individual heritage.
2 **Social justice:** the right of all Australians to equality of treatment and opportunity.
3 **Economic efficiency:** the need to maintain, develop and utilise the skills and talents of all Australians.

SBS says it attempts to cater for the needs of as many of Australia's cultures as possible. SBS television states its mission as contributing to a more cohesive, equitable and harmonious Australian society.

© SBS

Figure 12.3 SBS is unique in the world. No other country has a station devoted exclusively to multiculturalism.

The SBS charter

Like the ABC, SBS has a charter and operates as an independent, semi-government authority. The charter of functions was set up under the *Special Broadcasting Service Act 1991*. Following are the main functions according to the charter:

- **Multicultural broadcasting.** SBS is required to meet the needs of Australia's multicultural society, including Aboriginal and Torres Strait Islander communities, in languages other than English.
- **Cultural skills.** Retaining and further developing the language and cultural skills already present in Australia is a key role under the charter.
- **Diversity.** SBS must increase the community awareness of the contributions the diversity of cultures has made to Australian society. It should also promote understanding and acceptance of diversity.
- **Specialised broadcasting role.** SBS is also expected to extend the range and diversity of Australian broadcasting.

Funding

Like the ABC, SBS relies on federal government grants for its continued existence. However, SBS has a mixed-funding agreement with Parliament, which allows it to sell advertising time and accept sponsorship. Approximately 15 per cent of the SBS budget comes from advertising and sponsorship. Five minutes in every hour of air time can be used for advertising. Commercials can be broadcast only before and after shows, or during any 'natural breaks' in the program. Natural breaks are taken to include a change in narrative time, a change in continuity or a change of topic.

Approximately 25 per cent of the budget of SBS is spent buying programs from overseas.

Shutterstock.com/Radu Razvan

Figure 12.4 The Tour de France in the Alps near La Rochette during stage 16 of 100. SBS provides coverage of international and local sport. Audiences for the Tour de France increased by 17 per cent after Australian cyclist Cadel Evans won in 2011. SBS research shows that Australian fans have stayed with the event since then.

Programs

Programs are selected on the basis of the number of native speakers living in Australia. For example, 8 per cent of programs are in Italian, 7 per cent in German, 2 per cent in Arabic and 2 per cent in Chinese. About 47 per cent of all programs are broadcast in English.

Approximately 70 per cent of SBS programming comes from overseas and 30 per cent is produced domestically. News, current affairs and sport make up the bulk of locally produced programs.

Under the SBS Act, the broadcaster is seen as a provider of 'quality' programming. The government defines quality programs as resulting in high audience involvement and having an impact beyond the moment of their screening.

Audience

'Viewers don't use us as wallpaper TV,' says SBS director of publicity Jenny Looman. 'They tune in and out because they like our news, a particular program or a movie.'

SBS uses the same measure of audience size as the ABC: audience reach. Research has shown that SBS reaches about 12 million people per month (that is, these people watch the station at least once a month). Measured in the same way as the commercial stations, market share is about 5 per cent.

Commercial television

Advertising on the commercial stations is not just an annoyance that interrupts the shows. On the contrary, the shows are there merely to fill in the gaps between the advertisements.

Figure 12.5 Advertisements are not interruptions, say television networks, they are the main part of the show. Commercial television operators would rather people left the room during the shows and came back when the advertisements started.

Regulations and codes for commercial television

The Australian Communications and Media Authority (ACMA) regulates commercial television operators through its licence controls. These controls cover the following:

- **Limited term.** Licences are granted to commercial operators for five-year terms.
- **Ownership.** There are limits on ownership and control. Also, a licensee must be a 'suitable person' as defined in the *Broadcasting Services Act 1992*.
- **Programs.** There are compulsory standards in relation to children's programs and overall Australian content.

Beyond these regulations, commercial television operates under a voluntary code of practice. Aspects of this self-regulation code, drawn up by Free TV Australia in 2004 in consultation with commercial broadcasters, include the following:

- **Classification and programming.** The code sets out standards of responsible broadcasting. These refer to a range of program types including news, current affairs, drama and children's programs.
- **Advertising.** The code also sets out hourly limits on advertising. These limits are set at an average of 13 minutes between 6.00 p.m. and

midnight, and an average of 15 minutes at other times. A station may choose to schedule an extra 1 to 2 minutes of advertisements in any hour, as long as the averages are satisfactory overall. An exception is made for children's viewing times, when advertising is set at 5 minutes in any 30 minutes. No advertising is permitted during preschool programs.

Funding

To fund commercial broadcasting, audiences are sold to advertisers. The ratings system determines how much money television stations can charge for the audience. High-rating, popular programs attract large audiences. Advertisers want to reach large audiences and will pay handsomely for their products to appear during these shows. When fewer people are watching, the advertising rate is lower.

Just as the taxpayers support the public service broadcasters, it could be argued that the general community also supports the commercial stations. The cost of advertising is simply passed on to the consumer in the final cost of any products sold.

Programs

Advertising is the first concern of the commercial stations. Advertisers have a right to expect that their products are positioned in the best possible light. The television shows themselves need to provide a positive environment for the advertisements. As a result, many programs on serious topics never get to air. Advertisers simply have not wanted their products to be associated with them and so have refused sponsorship. In one example of this, a US program on the aftermath of nuclear war was hastily pulled off the schedules; this scenario was not seen as an appealing environment for consumers.

Audience

Since the early 2000s, each of the major television networks has managed to capture only 18 to 25 per cent of the market. This is significantly down from the 30 per cent share that was typical before the introduction of pay television, YouTube and the arrival of digital TV.

Recently, networks have sought to differentiate themselves by targeting certain broad audience groups. However, despite these early trends towards specialisation, all networks continue to appeal to a general audience.

12.3 ACTIVITIES

1 Refer to the ABC charter. Find a sample program to illustrate each area of endeavour. Explain why you have identified the program as fulfilling the charter.

2 Construct a strategic plan for the ABC, showing several tactical changes they could make to programming and to online content in order to attract a younger audience. Be specific about the types of programs, when they might be scheduled and the particular audiences they might attract.

3 Analyse the news stories on SBS and another news channel. Count the number of local and foreign stories on SBS news. Do the same for the news on another channel. Explain your results, identifying the key points of difference.

4 If you were an advertising agent and were asked to promote SBS, consider to which groups in society you would direct your campaign. Explain how you would sell the benefits of watching SBS television to each group.

5 Commercial stations sell audiences to advertisers. Analyse some programs, considering the kind of audience the station would attract, and then suggest advertisers who would be willing to 'buy' that audience. Explain how the program would suit the advertiser.

BIG DATA AND MEDIA INSTITUTIONS

Seemingly 'magical' technology is heavily reliant on data sets. Information is the fuel of online economies and the media-based interface we have with them. Big data is the petrol that runs the engines of robotics, mapping, search platforms and content delivery.

12.4.1
Sophia the robot

Big data

'Big data' is modifying its own definition as it evolves. The concept began in the 1940s with the large amount of information being created, particularly scientific data. By the 1960s, there was a recognition that the information growth rate was speeding up. The number of scientific papers published was doubling every 15 years, and each one of those papers was leading to new papers at about the same rate. This meant the increase in information

Figure 12.6 'Sophia' was showcased in open-ended conversations with strangers at the Las Vegas Consumer Electronics Show in 2018. The robot's apparent wisdom doesn't come from learnt experience or onboard programming, but from access to the wealth of data online.

was not a linear, straight-line rising graph, but instead an exponential curve growing ever steeper.

The original three 'V' factors that many organisations use to determine what is meant by big data are:

- **Volume.** The amount of data is large. Exact sizes vary between companies and government departments, but the storage requirements are beyond normal domestic resources and are expanding over time.

- **Variety.** Many quite diverse sources are contributing data. Transaction amounts for a particular purchase, key words mentioned in a posting to a network of friends, and genre of content viewed at a specific location can all contribute to a big data set. The apparently randomly arranged information is compared to data with a known structure in an effort make sense of it.

- **Velocity.** Information flow does not stop to be analysed. As the data is never really in a state of completion, real-time processes try to cope with increasing users on increasing networks with a broadening range of functions.

The large amounts of information may be randomly collected and therefore not organised. New data being added at a rapid pace is often bringing with it information that is not of use at the time of collection. Information is so vast and disconnected that it requires specialist processing using **machine learning** to recognise patterns in the data, typically about human behaviour.

More 'Vs' have been added to the definition of big data as the sector has expanded. A number of overlapping labels have been introduced to

address the changing uses and complexity of the information:

- **Veracity.** The information may not be true. Users may be deliberately misleading the information gatherers, or just simply borrowing a phone for the day that confuses their own habits with a friend. Data sets are assumed to have a certain amount of 'noise' that pollutes trustworthiness.
- **Validity.** Even accurate statistics can be irrelevant. The purchases of one customer may be a gift for another, therefore misleading retailers about the customer preferences. Data must be interrogated to see if it actually answers the question that has been asked of it.
- **Volatility.** Trends can rapidly change. Some data may relate to buying consumable items or be very temporary, like self-deleting apps or the traffic congestion due to one particular accident. While long-term habits may be of interest, the specific event that generated data may evaporate quickly.
- **Visual.** Cluster maps and tree diagrams are more useful than traditional graphic representations for human analysis. Representing millions of data points in a meaningful way is difficult and increases the reliance on artificial intelligence for interpretation.
- **Value.** The worth of knowledge to a particular group for a particular purpose may not be fixed in time. A retail entity can judge the value of big data collection if it leads to more sales or profits, but the future value of that data may not be known until the next generation of products become available. The potential future value of data for governments and corporations is a strong incentive for them to retain whatever information they already hold.

Big data organisations

The term 'big data' is still used to refer to the resources themselves that are being 'mined' for information. It can also be applied to a group of companies with business models reliant on accessing big data sets. Previous decades have seen companies or **cartels** regarded suspiciously when they have dominated certain sectors such as 'big tobacco', 'big oil' and 'big pharma' (pharmaceutical companies). Even the term 'big business' carries an implied negative connotation of prioritising profits over consumers and other less-powerful businesses.

Many big data companies are household names such as Amazon, Google, Facebook, Oracle, IBM,
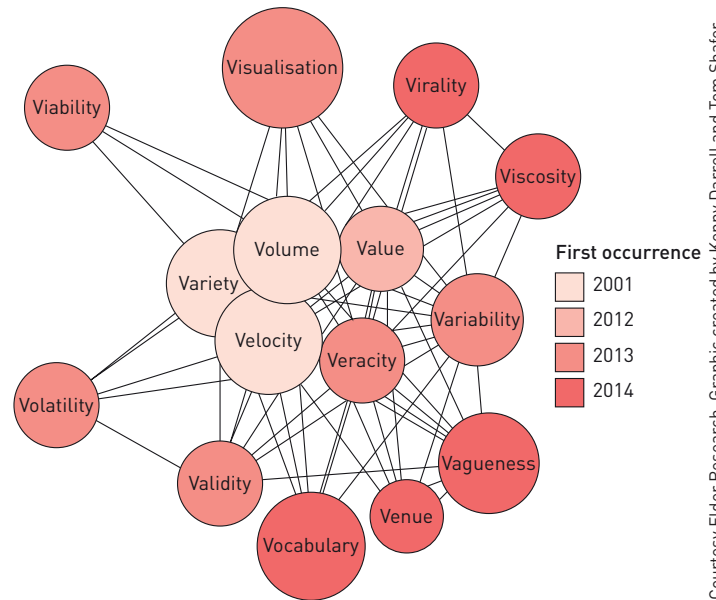

Figure 12.7 Dr Tom Shafer, data scientist, humorously proposes up to 42 Vs relating to big data. He also maps some of the more specific examples that have legitimately emerged around the original three.

Courtesy Elder Research. Graphic created by Kenny Darrell and Tom Shafer

and Microsoft. Some of the lesser-known players have ownership or cooperative affiliations with these companies: Azure, Alphabet, Tableau, VMware, Splunk, Cloudera, BigPanda, SAP, TIBCO, Jaspersoft and many more. They are able to monetise user-generated content and behaviours. In this way, even non-commercial media has become commercialised within the new digital economy.

Surveillance capitalism

Like previous media-based industries, surveillance capital turns the audience into the commodity for sale.

Surveillance capital goes beyond the media experience and into other spheres of activity in the real world. Companies are sold tools for predicting consumer behaviour and are then able to modify consumer behaviour based on this knowledge – also using closely allied technology to measure that changed behaviour. Loyalty cards or credit purchases give marketers quick feedback on spending.

An irate father in the US was furious at a department store when his teenage daughter was sent babywear brochures in the mail – but the store had worked out from her clothing and vitamin supplement purchases that she was pregnant. The change in shopping habits triggered an automatic response from computerised mailouts.

Business and digital developments have combined to present new opportunities to make

money. Academic writer Shoshana Zuboff asks a question that is fairly simple – master or slave?

Zuboff is known for her three laws around the roll-out of information technologies, in which she describes 'informating.' This is the converting of objects and human activities into an information format that can be recorded by organisations. Zuboff's laws are:

1 Everything that can be automated will be automated.
2 Everything that can be informed will be informed.
3 Every digital application that can be used for surveillance and control will be used for surveillance and control, irrespective of its originating intention.

Generating data

Any economic, social, political or community activity online leaves a **digital footprint** that the user has little control over. People can actively choose to contribute posts, knowing there will be a record of the contribution that may persist even after the content is deleted. **Passive footprints** refer to searches, emails, online services, phone calls and texts that generate an automatic metadata trail left behind as a consequence of those interactions.

For Zuboff, the opaque nature of the data collection is a problem. We are not expecting our

private moments to be on a kind of public record, and we don't even know what type of product our behaviour is being packaged into. The assumed rights of the data industries are rarely questioned in any serious way, even though centuries-old democratic conventions are being rewritten.

Engagement strategy

Social media platforms all aim to engage and sustain audience participation. Heightened engagement happens when users are extremely positive or extremely negative about what they see. The Facebook behind-the-scenes programs use machine learning to identify the kind of content the user prefers and delivers more of it. Items that enrage an individual will often be shared with others who feel the same, increasing engagement with the platform.

Some applications have the ability to monitor scrolling within each page and even leave cookies

Figure 12.9 Mixed reality glasses have the ability to capture everything a user sees, overlaid with algorithm-guided superimposed information and moving images. Magic Leap's mixed reality headset has strong moving-image media connections and distribution links. Some of the people connected to the project include the CEO of Google, the CEO of Weta (The Lord of the Rings SFX), the Alibaba executive chairman, the film director Steven Spielberg, a medical robotics entrepreneur and co-founder of Lucasfilm's Industrial Light and Magic.

Alamy Stock Photo/Technology/Stephen Barnes

Figure 12.8 The Google Home speaker and Amazon's Alexa respond to key phrases to invisibly set in train a complex series of searches, product orders and sponsored links to food chains based on what is already known about the owner of the voiceprint. The devices are sophisticated but cheap; highly subsidised by harvesting the value of the exported data about users as they talk in front of the speakers and make requests.

Copyright © 2018 Magic Leap, Inc.

on the user's device to report back about digital activity across the whole internet. Facebook has used this external search information to shape newsfeeds that mirror recorded preferences across the web. The more an individual uses it, the more accurate the information becomes and the more targeted the newsfeed is. If new material causes 'engagement' to drop, the machine learning kicks in and alters the content delivery strategy. This manipulation may be moving to the real world, with major players working on integrating big data with the engagement potential of augmented reality and **mixed reality**.

The individual in the data

An **algorithm** is a formula for solving problems in various steps, and the way they function in social media is working against democracy, according to futurist author Mark Pesce and many others. They worry about algorithmic discrimination and companies that work directly for political parties. Data sets from the likes of Google and Facebook are purchased to cross-reference with publicly available information on voters. Facebook advertising is purchased to trigger a response in *that* voter, even down to the timing of items in a newsfeed arriving at the user's most persuadable moment. Scandal erupted in 2018 over this data use and wiped US$119 billion from Facebook's market capital in one day, forcing one of the pioneering data companies, Cambridge Analytica, to close down.

It is possible to identify individuals even from anonymised data. Intersecting information from different sources can produce enough 'resolution' to recognise a person's details. Triangulation, similar to that in mobile phone tower technology, can be used to match specific facts from the databases: it is like mapping in dozens of unique circles to pinpoint an individual. Even without a name, a detailed story of a person can come into sharp focus by purchasing and cross-matching datasets.

Behavioural change

Online purchases offer a very direct measurement tool for advertisers: place the ad, and then measure the number of sales. Big data is also very interested in the motivating mood behind those purchases, and how emotions intersect with consumer action. The continuous monitoring of multiple facets of activity is similar to living in a perpetual experiment. While it is considered unethical to
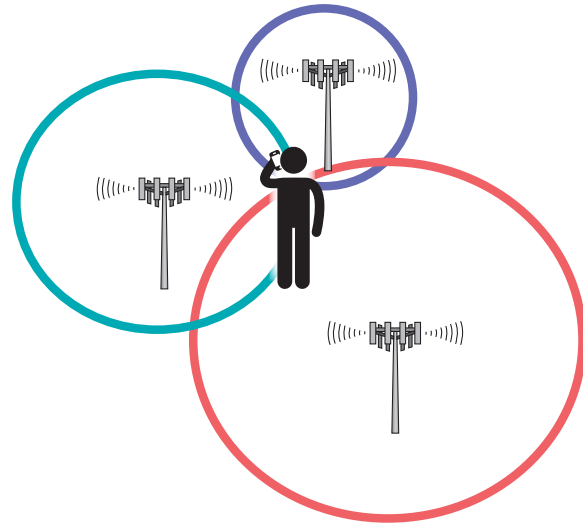

Figure 12.10 Mobile phone signals can be triangulated to pinpoint a location. The exact distance from a tower can be measured by the time it takes a signal to travel at a known speed. A distance from two base stations give two possible locations, but the third locks in one exact spot. Each tower only 'knows' a vague detail about where the caller is. Once the towers are networked, the location is precise and verifiable. In a similar way, individuals can be identified from anonymised data by intersecting information.

conduct human experiments without gaining 'informed consent' from the subjects, digital platforms claim their sign-up conditions constitute agreement to a range of scenarios.

Facebook and university researchers ran a 2012 experiment on 689 000 users without their knowledge. Pictures, videos, comments and links posted by other people were manipulated to exclude positive emotional content from certain users, and to exclude such negative content from other users. Unknowingly, they adopted the same pattern in their contributions that reflected their feeds. The finding was regarded as a shock and was dubbed 'emotional contagion'.

It may give a clue as to why networks of friends on social media indicate statistically that depression, obesity and divorce are contagious between peers. The experiment also sparked fears of some future political manipulation of mood that would be difficult to detect and beyond the reach of current laws about political advertisements.

Official data collection

The predictive ability to punish people for what they think about, rather than the crimes they actually commit, is the sci-fi scenario in the film *Minority*

Report (2002). In many ways, big data algorithms are already delivering this as reality. In an effort to pre-empt terrorist attacks, many governments monitor media for 'chatter' that might identify potential perpetrators before they enact any plans.

In April 2017, the Australian Government's data retention laws came into effect. **Internet providers (IPs)** must store all user metadata for at least two years, including:

- geographic location of the user
- user names, phone numbers and IP address of the recipient of communications
- date, time, duration and network connection details
- linked information to the account, such as name, address, phone number and billing details
- the source of any phone call, text, voice or email message
- the type of communication, such as social media post, chat, forum, voice message, email or text.

The context for data retention includes the 2014 laws that made it a criminal offense to 'travel to a designated area' (countries determined by the government) and to 'advocate terrorism'.

Privacy protections

From 2014, Australian citizens were given the right to ask marketers where they obtained contact details from and to provide an opt-out procedure from their contact list. Personal information collected for other purposes should not be used in marketing. Companies sending information overseas must have the individual's permission or make sure the data is going somewhere with similar privacy laws to Australia. Penalties for breaching the law are up to $1.7 million for a company or agency and $340 000 for individuals.

Legally, organisations collecting personal data need to have a privacy policy and can only use information for the exact purpose for which it was given. This personal information protected by law includes name, signature, medical and bank records, date of birth and telephone number. They should inform individuals of how their own information can be seen and checked for accuracy. Only with consent can they record sensitive information such as political opinion and membership, religious belief, criminal record, race or trade association membership.

Big data and society
Closed thinking

Cognitive bias is the tendency to cling to a mistaken conclusion because it agrees with an existing belief. Social media is already prone to this due to the nature of 'friending' people with similar interests or susceptibilities. Adding self-fulfilling newsfeed preferences to the social media experience may bring a dangerous confirmation bias to what is already an echo chamber where we are hearing our own opinion back.

Censorship

Democratic countries have banned symbols, phrases and certain content that is generally considered offensive within the culture. The Chinese government has been widely criticised for managing websites through the 'Great **Firewall** of China'. The filtering does allow Google, but searching banned terms such as 'Tiananmen Square' (where protestors were massacred by government forces in 1989) can generate a fake error message. Users may think their internet connection is down, unaware they have triggered digital censorship. Local variations of Facebook, Twitter, Google and Amazon (Tencent, Weibo, Baidu, Alibaba) are heavily moderated by the Chinese government, which oversees the digital interactions of 20 per cent of the Earth's population.

'Everyone is getting their own custom reality … like a drug we don't know we're taking because it is made to feel real, but it is "tickling" us to keep us around. It's making extreme people more extreme because middle-ground news is dropping out, making it harder to get consensus.'

Mark Pesce, futurist author

Social credit systems – big data meets big brother

SBS News reported in 2018 that eight Chinese companies and 30 localities were pilot-testing the 'social credit system' that monitors internet use, bill paying, recycling and commentary on the Chinese government. The system assigns a score for each person's compliant behaviour and is designed to be compulsory for all citizens. As a reward, reduced waiting times and housing deposits are on offer to cooperative citizens. However, punishments for 'untrustworthy' residents may include denial of school enrolment, job bans and displays of jaywalkers on billboards via facial recognition.

12.4 ACTIVITIES

1 **Apply** literacy skills to **communicate** a concise summary of a news story related to big data, **describing** the **context** and **citing sourced information**. **Distinguish** between arguments for and against the particular application of big data use and **recognise** the potential implications for social, political and community involvement.

2 **Appraise** the representation of the institutions portrayed in the films *Underground: The Julian Assange Story* (2012) and *Snowden* (2016). For each film, consider the institution's **viewpoint**. Search for reviews and summaries of the movie. **Inquire** into the big data-based true story, **drawing conclusions** about subsequent political events and their **significance**, and the **worth** of the retelling in the **moving-image media**.

CITIZEN JOURNALISM

These days, the first person on the scene of a dramatic newsworthy event is probably going to be an ordinary citizen with a smartphone. These people are often 'accidental journalists'.

New media technologies have allowed average users an active role in the collecting, reporting, analysing and disseminating of news and information.

Social networking sites such as Twitter, Facebook and Reddit allow the footage of news events to be uploaded and shared by ordinary citizens.

Citizen journalism is the participation of ordinary citizens in the process of reporting news.

The term encompasses a range of individual and social involvement in media creation, reporting and filtering. Content via citizen journalism can appear in established news sites or in independent blogs and citizen news sites. It has the following features:

- **User reporters.** Typical users or amateur reporters report directly on the news or analyse its content and meaning. They do this through blogs and video blogs, through user-generated news sites or through submitting their content to mainstream news organisations.
- **Mobile technology.** The convergence of mobile technologies and cameras means an average citizen carrying a smartphone is now more likely to be first on the scene of a news story than a professional crew. Often, the user is involved in the event. Even when not directly reporting the news, amateurs are able to submit footage for use in news reporting.
- **Social filtering.** This filtering of news allows users to highlight a news story they consider important and upload the story (or a link to the story) to social network news sites. Others can vote for or against display of the story.

Influence of citizen journalism

There are several types of citizen journalism, and it has been developing in new directions since its beginnings in the early 2000s.

Random acts of dramatic journalism

Photos and videos of the 2004 Indian Ocean tsunami, the 2005 London bombings and Hurricane Katrina in New Orleans have demonstrated the influence ordinary people can have on news reporting, especially now many of us carry a camera wherever we go. These events marked a change in the way media content is gathered and viewed. Because of its 'on the spot' quality, citizen journalism can often be more immediate, passionate and illuminating than professional reporting.

The first amateur footage with a sensational media impact was Dallas resident Abraham Zapruder's 8-mm film record of President Kennedy's assassination in a 1963 motorcade through the city. The momentous significance

'Journalists once had the exclusive province of taking people to places they'd never been. But now a mother in Baghdad with a videophone can let you see a roadside bombing, or a patron in a nightclub can show you a racist rant by a famous comedian. These blogs and videos bring events to the rest of us in ways that are often more immediate and authentic than traditional media. These new techniques, I believe, will only enhance what we do as journalists and challenge us to do it in even more innovative ways.'

Richard Stengel, managing editor of *Time* magazine

of this footage proved that anyone could capture history. Today, such a public event would be recorded by hundreds or even thousands of spectators with cameras, all connected to the internet. Mainstream news coverage would have to compete with the mass of user-captured material.

Many news organisations already invite their audience to contribute eyewitness reports and imagery, but media outlets continue to wrestle with issues of quality control, hoaxes and manipulated imagery. Financial compensation for content owners is another difficult issue, as media organisations seek to avoid fuelling a 'feeding frenzy' of uncontrolled and intrusive amateur news collection.

AAP Photos/Alexander Chadwick

Figure 12.11 An image taken on a mobile phone by Alexander Chadwick as he escaped from an underground tunnel at Kings Cross Station after the 2005 London bombings. The following day, this photo was used on the front page of *The New York Times*. News organisations could not gain access to the underground railway. The only footage came from those who had the foresight to film on their smartphones.

Hyper-local journalism

Many local newspapers have closed down as the newspaper industry struggles to be profitable. Citizen journalism can act to fill in the gaps. Ordinary citizens can investigate local issues and act as watchdogs on the activities of local government or businesses.

Crowd-sourced journalism

Some news organisations invite people to participate in journalism by submitting knowledge, sharing opinions and sending in photos they have taken. For example, *The Guardian* newspaper invited 'the crowd' to examine hundreds of thousands of documents about an expense scandal involving British politicians in 2009. In the US, the general public was used for information-gathering during Hurricane Irene in 2011. Often journalists organise and verify the information before publication. However, sometimes the volume of information is too great and publication happens regardless.

Blogs

Increasingly, bloggers are using video for political and social activism. Events such as the wars in Iraq and Syria allow those caught in the conflict to give voice to their own opinions and experience. As consumers of this content, we see a firsthand view of the conflict, and have access to uncensored reporting and imagery. Locals also have access to dangerous environments that western journalists are unable or unwilling to enter.

Issues in citizen journalism

Most of the criticisms associated with citizen journalism concern themselves with three main areas of weakness. They are objectivity, quality and the effect on traditional journalism.

1 Objectivity

Balanced reporting or impartiality (not taking sides) is an important principle in traditional journalism. It is included in the journalist's codes of ethics in most western democracies. This kind of 'objectivity' aims to limit the journalist to just reporting the facts – without letting their own emotions or political views interfere.

Objectivity was seen as a way of gaining the trust of the audience. The more a news outlet was trusted, the larger the audience became, and therefore the more money advertisers could be charged.

Journalistic objectivity is a set of practices that are taught within the profession and during university training. These include: interviewing a range of people, the presentation of opposing points of view, supporting evidence or verification and a careful structuring of the news story. Citizen journalists are not obliged to follow any of these procedures. In fact, part of the appeal of citizen journalism is the expression of emotion and of strong points of view.

2   Quality of the journalism

Mainstream journalists are worried about issues of quality control, bias and accuracy. They claim the assumption that everyone can be a journalist devalues the skill and experience of professional journalists and editors. Journalist James Farmer asks, 'When was the last time you encountered a "citizen doctor", valued a report by a "citizen researcher", took off in a plane flown by a "citizen pilot" or saw justice meted out by "citizen policemen"?' While there are exceptions, the quality of citizen journalism to date is questionable. Nonetheless, citizen-contributed content that can be used, analysed and recompiled by professional journalists and editors represents the power of citizen journalism.

Some critics are worried about the ease with which manipulated images can be distributed through citizen media channels. Journalists are bound by professional ethics, while average users may not fully understand the consequences of their actions.

On the other hand, Yahoo and Reuters identified that there is already a lot of quality amateur journalism being created by their users. In an effort to create a more efficient process for soliciting and publishing user-contributed content, Yahoo and Reuters pioneered the organised user contribution of news footage through their *You Witness* program.

3   The effect on traditional journalism

Many traditional news organisations have not been very welcoming of citizen journalists. News organisations have tended to view citizen-journalism content as merely convenient source material for stories. Some see it as a sideshow to the main game. The content has often been criticised as being untrustworthy and unethical – too emotional and subjective.

Even during a crisis, the citizen-journalism content is usually focused on sharing emotions and eyewitness accounts. It is not often used for giving important facts or information.

Traditional news sources are also forcing their journalists to produce content faster and with fewer resources. Mainstream journalists now have to write, film and edit their own stories. This is partly in response to competition from other sources of news, such as citizen journalists.

12.5 ACTIVITIES

1   **Construct** a timeline of the period since the year 2000 to the present, recording events where citizen journalism played a key role in providing the imagery or the information.
    Analyse the timeline you've created and comment on any trends. **Examine** the following areas of investigation in your analysis:
    • proportion of citizen journalism that is image-based versus information-based
    • role that luck plays in citizen journalism
    • trend increases in citizen journalism over time, or at certain times, such as during crises.

2   Select a news story into which citizen journalism has had a significant input. Respond to the areas of investigation in the following table.

EXPLAIN	ANALYSE	APPRAISE
Explain some of the issues concerning reliability that the component raises.	**Analyse** the impact of the citizen-journalism component by breaking down the story into its **constituent parts**, determining the percentage of citizen journalism.	**Appraise** the status of the citizen-journalism components, **making judgements** about the ways in which the inclusion of citizen journalism adds to or detracts from the credibility of the news story.

BARRIERS TO PARTICIPATION

'In a hunting culture, kids played with bows and arrows. In an information society, they play with information.'

Henry Jenkins, Provost Professor of Communication, Journalism and Cinematic Arts, University of Southern California.

While digital media have lowered many of the barriers to media access and participation, they have also opened up new barriers. The information society generally has created new forms of inequality that exist alongside the long-standing forms. There are big gaps between the participation levels of different groups.

Importance of media literacy

The new globally networked society requires people to have certain skills and access to technology. One of the most important skills is media literacy.

Media literacy is usually thought to have two parts. It is the ability to be able to 'read' media by interpreting its meanings and making informed judgements. It is also the ability to be able to 'write' media by becoming producers and participants in the media.

A lack of media literacy represents a barrier to participation. It can affect millions of people, both in wealthy western countries and in less-developed countries around the world. According to Henry Jenkins, if someone can just consume media but not produce it, they cannot really be regarded as being media literate. They are reduced to being spectators who are locked out of the empowering potential of contemporary media.

Types of barriers to participation

As well as being an issue of media literacy, barriers to participation can be thrown up by the types of inequalities that exist elsewhere in society. These include socioeconomic, age and identity group inequalities. They also include power inequalities between individuals and big business.

Economic, age and identity group barriers

People who function well in the world of digital media tend to enjoy advantages in a range of other areas. These include advantages in the labour market, income earnings potential and better access to a whole range of other services. Certain other groups experience barriers in each of these areas.

- **Socioeconomic barriers.** The term 'socioeconomic' refers to the combination of social factors, such as education and cultural groupings, together with economic factors, such as income and wealth. Socioeconomic disadvantage is closely mapped onto digital disadvantage and a lack of participation in the potential of new media. Those in disadvantaged socioeconomic groups are less likely to use the internet than those in more privileged groups. This reduced online connection leads to a range of other barriers. For example, employment status and income are both connected to the intensity of computer usage. Social networks are also affected.

- **Age.** There is considerable variation in the media and digital literacy skills of people of different generations. Generally, it is assumed that younger people have better media literacy skills. However, this is not always the case. Despite the media image of teenagers as being glued to their smartphones, there are wide variations in the media participation skills of young people.

- **Gender.** While the gap in participation according to gender was once quite large, contemporary research is showing that it has narrowed considerably in western countries. However, there are still differences in the types of digital engagement. Females are still under-represented in the IT production and design areas. Some women still tend to underestimate their skills as well, and this may form a barrier to participation. These differences are larger in countries with a greater degree of difference in the power of each gender.

- **Cultural groups.** Multicultural societies are made up of different cultural and social groups that often have different socioeconomic positions in society. Media participation rates are often quite different between cultural groups. For example, ethnic

minority groups in the US have lower internet access rates, yet studies show that American Latinos and African-Americans participate more in content creation than other groups of Americans.

- **Disability.** Media participation for those with disabilities is a case of both exclusion and possibility. At times, the hardware and software are not designed with disabled people in mind. Assistive technology can help disabled people. However, this is often an add-on and sometimes it is clumsy. Disabled people argue that the hardware and programs should take them into account right from the beginning. People with disabilities tend to lag behind those without disabilities in their use of computers and the internet. In the US in 2013, only 53 per cent of people with disabilities owned a computer compared with 80 per cent of people without disabilities.

- **Regions and countries.** Intense use of technology is associated with highly productive regions and cities, such as Silicon Valley in the US. In Australia, capital cities tend to have much more intense use of technology and involvement in communications participation than do regional areas. Geographic location can still be a barrier to participation, despite the internet helping to break down those same barriers of geography. Some analysts speak of a worldwide digital communication divide between wealthy and poor countries. Many of the wealthy countries are in Europe, North Asia and North America. Many of the poorer countries are in the southern hemisphere. Analysts speak of a 'North–South digital divide'.

   Bandwidth allocation to particular regions and countries is another aspect of the digital divide. Only three countries host half of the world's available bandwidth. China is now the leader in world bandwidth allocation. The US lost its place as the global leader in hosting bandwidth in 2011.

Institutional and technological barriers

Some barriers to media participation are not related to media companies and specific technologies. Media companies can restrict participation in order to provide a benefit for themselves. This benefit could be greater profits, or it could be to enhance their ownership of certain media products. Technologies themselves can be a barrier to participation in the ways they are designed.

- **Big data barriers.** Cross-platform content and the rise of the user as a participant in media has allowed for data to be collected about users and their tastes and habits. This data is owned by media companies. While the benefits of all this data flows to media companies, very little of it is available to users. Users are prevented from greater participation by the fact that much information is privately owned.

- **Fragmented content.** Media companies often own multiple platforms of delivery. This allows them to generate huge audiences and therefore huge profits. However, this can often be a barrier to users. Content can be fragmented and difficult to track down. For example, if you want to watch a television program and also see what people are saying about it on Twitter, you have to log on to a website or access Twitter separately. You may need to be on two separate device screens. Often there are cumbersome registration and log-in procedures. Navigating across platforms is not as easy as turning a dial.

- **Proprietary platforms.** Platforms themselves provide barriers because they are their own complete systems. These platforms do not have any provision for communication with other platforms. For example, Facebook users cannot connect directly to Twitter users. All information and activity is embedded in the privately owned platform, with difficult cross-communication. This suits the platform owners because they can capture audiences and make them stay within their own platform. However, it does not really suit users who may benefit from seamless movement between platforms.

12.6 ACTIVITIES

1 Survey your class to see how many members are media-literate. Simply ask them if they can both 'read' and 'write' moving-image media – that is, can they interpret the media they see, and can they produce media themselves?
Analyse the results of the survey to express the final responses as percentages of class members who are media-literate and who are not.
Explain possible reasons why some people have become media producers, and others have not.

2 Consider how the economic, age and identity group barriers to media participation might be overcome. Explain some of the measures that individuals, communities or governments could take. Provide additional information about the details of what steps could be taken and give examples of how they might work.

3 Select a moving-image media product that has a multi-platform component and provides opportunities for audience participation.
Construct a graphic organiser that shows the multi-platform components, and also shows links to the various platforms that are used to provide audience participation (such as Facebook).
Appraise the overall ease of operation for audiences, and draw conclusions about the significance of institutional or technological disincentives or barriers to participation.