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Television

Television (TV) comes from the Greek *τῆλε* (*tele*), meaning “distant” or “far,” and the Latin *visio*, meaning “sight” or “vision.” It is a mode of (tele)communication typically used for transmitting moving (color) images (and potentially sound) to audiences. Although the technology was commercially available since the late 1920s (in very limited amounts and at a very high price), television has since become a common household good. It is also used in businesses and institutions particularly as a vehicle for advertising, entertainment, and news broadcasting. From around the 1950s onward, television increasingly became the primary medium in the Western world for shaping public opinion because of the saturation of television in society. Color televisions became widely available from the 1960s, and because of the availability of media such as video cassettes, laserdiscs, DVDs, and high-definition discs, viewers have been able to use the television to watch prerecorded material. Recently, there has been a rise in Internet television services, with services such as BBC iPlayer, Hulu, and Netflix broadcasting their material onto television screens via the Internet.

In 2009, approximately 78 percent of the world’s households owned at least one television set with 87 percent of TVs sold being color liquid crystal display–screen TVs. The most common medium for broadcast television is modeled on the radio broadcasting systems developed in the 1920s, it uses high-powered radio-frequency transmitters to broadcast the television signal to individual TV receivers such as antennae or satellites, which are then linked to the television set. The technology is also used in other forms such as closed-circuit television. The broadcast television transmissions are typically disseminated via designated channels in the 54- to 890-MHz frequency range. A visual display device that lacks a tuner is called a video monitor, which distinguishes it from a television. In its most basic form, a color broadcast can be created by broadcasting three monochrome images, one each in the three colors of red, green, and blue. When displayed together or in rapid succession, these images will blend to produce a full-color image, as seen by the viewer. Televisions are also used for surveillance, industrial process control, and guiding of weapons.

The first transmission of images occurred in 1881 using a device called the pantelegraph. Scanning in one form or another has been used in nearly every image transmission to date this includes television. “Rasterization” is the concept used to describe the process of

converting a visual image into a stream of electrical pulses. In 1927, Philo Farnsworth made the world's first working television system with electronic scanning of both the pickup and the display devices; it was demonstrated to the press on September 1, 1928. Following this, Manfred von Ardenne gave the world's first public demonstration of a television system at the Berlin Radio Show in 1931; he used a cathode-ray tube for both the transmission and the reception of images. This laid the foundation for the world's first electronically scanned television service that started in Berlin in 1935. In August 1936, the Olympic Games in Berlin were carried by cable to television stations in Berlin and Leipzig, where the public could view the games live. On November 2, 1936, the BBC began transmitting the world's first regular publicly available service in North London. It therefore claims to be the birthplace of television broadcasting as we know it today. In 2012, television revenue was growing faster than film for the major media companies.

TV programming is usually broadcast in one of two ways: original run or broadcast syndication. For an original run, a producer creates a program of one or multiple episodes and shows it on a station or network, which either has paid for the production itself or to which a license has been granted by the television producers to broadcast it. *Broadcast syndication* is the term used to describe usages beyond original run. It includes not only secondary runs in the country of first issue but also international usage, which may not be managed by the originating producer. The alternative producer(s) are allowed to and able to sell the product into their broadcast markets after signing a contract from the copyright holders. First-run programming is increasingly becoming available on subscription services, with few programs available on domestic free-to-air channels. To protect their income streams, subscription channels are usually encrypted to ensure that only subscription payers are able to receive the decrypted broadcast. Around the globe, broadcast television is financed by governments, advertising, licensing, some form of tax, subscription, or a combination of these. Most subscription services are funded by advertising.

Because of the broad reach of television, it has become a powerful and attractive medium for advertisers. Television networks sell blocks of broadcast time to advertisers in order to fund their programming. Television adverts have become effective, persuasive, and popular methods of selling consumer goods as well as utilizing the technology for spreading ideological and political interests. Research from and about the less-developed world has

been a response to and a critique of the modernization or developmentalist theory that attempts to emphasize the role of the media in economic and social development. The paradigm holds that the media is a resource which, along with urbanization, education, and other social forces, would mutually stimulate economic (especially neoliberalism), social, and cultural development. As a result, media growth was viewed as a sign of development. According to this view, societies became modern when they demonstrated a specific level of media development and consumption of newspapers, broadcasting stations, and so on.

The rates for advertising costs are determined primarily by viewer ratings. The time of the day, the popularity of the channel, and the day of the week determine how much an advert can cost. For example, a slot during highly popular show can cost hundreds of thousands of dollars for a 30-second block of commercial time. However, the same amount of time during the Super Bowl or another big media event can cost several million. Time slots that often have fewer viewers are generally sold in bulk at lower rates to maximize profitability; this explains why at certain times the advertisements are often either for the same product or for different products from the same company that fits the needs of the viewer demographic. Some companies and businesses produce items for broadcast such as video news or press releases and pay program directors to use them. Some broadcasts weave advertising into their broadcast; this is known as product placement. For example, a character could be drinking a certain kind of drink, going to a particular restaurant, or driving a certain brand of car. This can alienate some viewers such as when James Bond stopped driving an Aston Martin because of other brands vying for the airtime.

In the 20th and 21st centuries, television has come to play a pivotal role in the socialization of people, especially children. Although some aspects of television include negative aspects as the effect of media violence on children and young people, current research is still discussing if there is a direct effect between viewing material and acts committed by people. Others have suggested that individuals suffering from social isolation employ television to create what is termed a parasocial or faux relationship with characters from their favorite television shows and movies as a way of deflecting feelings of loneliness and social deprivation. Some other studies have suggested there is a link between infancy exposure to television and attention-deficit/hyperactivity disorder. Several studies have found that educational television has many advantages and that television can be a very powerful and effective learning tool for

children if used wisely; this is largely reliant on the interactivity of the programming and the environment of the child. It has been found that simply placing a child in front of the television is more likely to be harmful than helpful in its development. However, if a child engages with the programming together with a parent or a sibling, for example, then the effects are enhanced and the educational aspects are increased and more likely to be remembered.

There is growing concern about electronic waste from among others discarded televisions as their high lead content and the rapid diffusion of new flat-panel-display technologies, some of which use lamps that contain mercury, are harmful for the environment and those employed in the recycling and destruction of these products. The occupational health concerns exist for disassemblers as removing copper wiring and other materials from televisions are a threat to their health. Further environmental concerns existing as a consequence of televisions is that the design and saturation in society mean that the use of the devices increase electrical energy requirements as well as provide an extra strain as the older models need to be disposed of.

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See Also: *ABC (American Broadcasting Company); BBC (British Broadcasting Company); Cable TV; CBS (Columbia Broadcasting System); ESPN (Entertainment and Sports Programming Network); Fox Broadcasting Company; HBO (Home Box Office); Movie Studios; NBC (National Broadcasting Company)*

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