

Television Media Technology and Society

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Introduction

Television began as a scheduled broadcast medium received through an antenna, but it has developed into a flexible audiovisual environment distributed through broadcast towers, cable systems, satellites, internet protocols, mobile networks, and streaming platforms. This technological transition has changed more than the device in the living room. It has altered how individuals encounter news and entertainment, how families organize time, how advertisers identify audiences, and how societies debate common events. Television is now simultaneously a screen, an industry, a data system, and a cultural language. Understanding its social influence therefore requires attention to infrastructure, ownership, algorithms, business models, audience habits, and the continuing importance of shared public communication. (Lotz, 2014; Napoli, 2011)

From Broadcast Scarcity to Multichannel Choice

Early television systems operated under scarcity. A limited number of frequencies supported a small number of stations, so broadcasters selected programs for large audiences at fixed times. This structure created common national experiences but concentrated editorial and commercial power. Cable and satellite expanded channel capacity, allowing specialized news, sports, children's programming, and regional services. The remote control and electronic program guide made viewers more active in selection, although schedules still governed access. Multichannel television fragmented the mass audience into demographic and interest groups. This fragmentation increased choice while weakening the assumption that most citizens would see the same programs, advertisements, or public-affairs coverage during the same evening. (Lotz, 2014; Napoli, 2011)

Digital Television and Convergence

Digital transmission improved picture and sound, increased spectrum efficiency, and enabled broadcasters to carry multiple channels and data services within the capacity once used for one analog signal. The transition also accelerated media convergence. Television sets began to incorporate internet connections, software platforms, gaming, video calls, and applications. Content once associated with television could be watched on a phone or laptop, while social-media video could appear on a large television screen. The term television therefore describes both a technological display and an institutional tradition of professionally produced audiovisual content. Convergence blurs boundaries among broadcasting, computing, telecommunications, cinema, and social networking, making regulation and audience measurement more complex. (Federal

Communications Commission, n.d.; Lotz, 2014)

Streaming and On-Demand Culture

Streaming replaced the fixed schedule with searchable libraries and personalized interfaces. Viewers can begin, pause, resume, or binge programs across devices, reducing dependence on a broadcaster's timetable. In a 2025 Pew Research Center survey, a large majority of American adults reported using streaming services, while a much smaller share subscribed to cable or satellite television. This change gives audiences convenience and global access but also creates subscription fragmentation, price increases, and uncertainty about where a program is available. On-demand culture changes storytelling as well. Entire seasons may be designed for continuous viewing, and platforms can cancel or promote programs using detailed behavioral data unavailable to traditional broadcasters. (Pew Research Center, 2025a; Lotz, 2014)

Algorithms and Personalization

Streaming platforms organize abundance through recommendation algorithms. These systems use viewing history, searches, completion rates, ratings, and similarities among users to predict what a person may watch next. Personalization can help audiences discover unfamiliar programs, but it also gives platforms significant power over visibility. A user does not browse a neutral catalogue; the interface ranks titles, changes artwork, and emphasizes content aligned with business objectives. Algorithms may reinforce familiar tastes, reduce exposure to challenging material, or privilege programs that maximize engagement. Because recommendation logic is proprietary, audiences and producers often cannot evaluate why some content becomes prominent while other content effectively disappears. (van Dijck, Poell, & de Waal, 2018)

Television News in a Hybrid Media System

Television remains important for news even when distribution changes. Pew Research Center found in 2025 that many Americans continued to prefer watching news, and most television-news consumers still relied mainly on broadcast, cable, or satellite sources, although streaming was more common among younger adults. News organizations now distribute the same report through scheduled broadcasts, websites, apps, connected-TV channels, clips, podcasts, and social media. This hybrid system expands access but separates stories from their original context. Short clips can circulate without corrections or surrounding evidence, while live coverage may reward speed and emotion. Television journalism must therefore combine visual immediacy with verification, transparency, and clear distinction between reporting, commentary, and sponsored material. (Pew Research Center, 2025b)

Advertising, Subscription, and Data Extraction

Traditional commercial television exchanged audience attention for advertising revenue. Ratings estimated how many people watched a program, allowing networks to sell demographic access. Streaming introduced several models: subscription-only services, advertising-supported tiers, free ad-supported television, rentals, and bundled packages. Connected devices also enable more precise data collection, including viewing behavior and, in some cases, interactions across apps or households. Targeted advertising may reduce irrelevant messages, but it raises privacy concerns because television viewing can reveal political interests, health concerns, religion, sexuality, and family routines. Meaningful consent is difficult when tracking is distributed across device manufacturers, operating systems, platforms, advertisers, and data brokers. (Napoli, 2011; van Dijck, Poell, & de Waal, 2018)

Representation and Cultural Power

Television helps societies imagine who belongs, which lives are normal, and which conflicts deserve attention. Casting, narrative perspective, genre, language, and news framing can reproduce stereotypes or expand recognition. Greater channel capacity and streaming investment have created opportunities for international and minority-language programs to reach wider audiences. Yet representation is not guaranteed by technical abundance. Commissioning decisions remain concentrated, global platforms may favor content that travels easily, and algorithmic promotion can make nominally available programs hard to discover. Social progress requires diversity behind the camera as well as on screen, including writers, directors, journalists, editors, executives, and researchers capable of challenging inherited assumptions. (van Dijck, Poell, & de Waal, 2018)

Family Life and Individual Viewing

Broadcast television often functioned as a shared household activity because one screen and one schedule encouraged co-viewing. Multiple devices and personalized accounts now permit each family member to watch different content in separate rooms. Individual choice can reduce conflict and support age-appropriate viewing, but it may also remove opportunities for discussion and shared ritual. Parents face challenges involving screen time, autoplay, advertising, violent or sexual content, and children's data. Co-viewing remains valuable because adults can explain fiction, advertising, stereotypes, and news. The social effect of television depends not only on hours watched but on context, content, conversation, and whether viewing replaces sleep, exercise, study, or direct relationships. (Lotz, 2014)

Education and Public Service

Television has long supported education through documentaries, children's programs, distance learning, public-health campaigns, and emergency information. During crises, broadcast and online video can reach large populations quickly, especially when messages are translated and designed for accessibility. Educational value, however, depends on accuracy, pedagogy, and inclusion. A polished documentary can still mislead, while a short instructional video may support learning when integrated with discussion and practice. Public-service broadcasting addresses needs that commercial markets may neglect, including local culture, minority languages, civic information, and programming for audiences with limited purchasing power. Its continuing relevance depends on editorial independence, stable funding, and distribution across contemporary platforms. (Lotz, 2014)

The Digital Divide

Streaming is often described as replacing broadcast television, but access remains unequal. Reliable broadband, compatible devices, electricity, digital literacy, and subscription income are not universal. Data caps and rural infrastructure can make high-quality video expensive or unstable. Broadcast television still offers resilience because one transmission can reach many households without a separate internet subscription. Policy should therefore avoid assuming that innovation automatically creates inclusion. Universal-service goals, accessible interfaces, captions, audio description, multilingual content, and affordable connectivity shape who benefits. The digital divide is not only a question of connection; it also includes skills, disability access, privacy knowledge, and the ability to locate trustworthy content within overwhelming abundance. (Federal Communications Commission, n.d.)

Political Effects and Social Fragmentation

Television once created a relatively centralized public sphere, but cable news and online distribution have enabled ideological segmentation. Audiences can select channels and commentators that confirm existing beliefs, while dramatic conflict increases attention. This does not mean that earlier television was neutral or universally trusted. Centralized systems also excluded perspectives and allowed a small number of owners to define legitimacy. The current challenge is to preserve pluralism without losing a shared factual basis. Media literacy, transparent corrections, independent journalism, and exposure to multiple sources help audiences distinguish evidence from performance. Platform design also matters because recommendations that reward outrage can turn political identity into an engagement strategy. (Napoli, 2011; van Dijck, Poell, & de Waal, 2018)

Future Technologies

Television's next phase will include further integration of artificial intelligence, interactive storytelling, cloud production, virtual sets, personalized advertising, and potentially immersive or spatial media. AI can improve captioning, translation, search, restoration, and production efficiency, but it can also facilitate synthetic presenters, deceptive footage, and labor displacement. Technical innovation should be evaluated through public values rather than novelty alone. Audiences need disclosure when images or voices are generated, creators need fair compensation and consent, and newsrooms need verification systems capable of authenticating media. The future of television will be shaped by choices about governance, labor, competition, privacy, accessibility, and trust as much as by screen resolution. (van Dijck, Poell, & de Waal, 2018)

Conclusion

Television has moved from scarce scheduled broadcasting to a converged, personalized, data-intensive media environment. The transformation has expanded choice, global circulation, accessibility tools, and educational possibilities while creating new forms of surveillance, fragmentation, platform dependence, and inequality. Traditional television has not disappeared; it operates alongside streaming and remains important for news, emergencies, sports, and public service. The relationship among individuals, society, and media is therefore neither simple liberation nor decline. Technology changes the conditions under which communication occurs, but institutions and audiences determine how those conditions are used. A democratic television system requires diversity, privacy, reliable journalism, universal access, and transparent control over the systems that organize attention. (Lotz, 2014; Pew Research Center, 2025a; Pew Research Center, 2025b)

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