Chapter 11

Broadcast Television

This chapter will prepare students to:

• trace the development of television
• describe the evolution of the networks
• explain the impact of the Telecommunications Act of 1996
• detail the implications of the digital age for broadcast television
• explain how television ratings are formulated
• describe the departments of the television industry and how programs are produced

Chapter main points:

1. Electronic television developed during the 1930s. After World War II it quickly grew in popularity and replaced radio as the main information and entertainment medium.

2. Three networks – NBC, CBS, and ABC – dominated early TV. Live drama, variety, and quiz and game shows were popular during the 1950s.

3. Television matured in the 1960s, and its content became more professional. The public television network began in 1967. Cable TV grew slowly during this decade.

4. The 1970s saw TV programs criticized for excessive violence.

5. In the 1980s and 1990s, the three traditional TV networks lost viewers to cable and to VCRs. The Fox network became a major competitor.

6. The Telecommunications Act of 1996 had a significant impact on TV station ownership and also introduced program content ratings. Rules for the eventual conversion to digital RTV were announced in 1997.

7. TV broadcasting has switched from analog to digital broadcasting. TV stations may use the digital signal to broadcast high-definition television or lower-definition programs among which viewers may choose. HDTV sets are in more than 50 percent of U.S. homes.

8. TV is universal, dominant, and expensive. Its audience is currently fragmenting into smaller segments.
9. The broadcast TV industry consists of program suppliers, distributors, and local stations.

10. Big conglomerates own the major TV networks, and large group owners control most of the stations in large markets.

11. Public broadcasting relies less on tax revenues and more on private sources of funding.

12. The Nielson Company compiles both network and local-station television ratings.

For most of its early history, television’s signals were broadcast and received via roof-top antennas. Then came cable, satellite, and the Internet. Most people don’t care how their TV signals are distributed, but there are areas in which the distribution channel makes a difference. Over-the-air broadcast is regulated differently than the other distribution channels. The other channels also have different revenue streams from broadcast TV. Importantly, they are all coping in different ways with the digital revolution. This chapter will examine traditional broadcast TV, and the next chapter will look at the newer forms of transmission.

### A BRIEF HISTORY OF BROADCAST TV

During the 1920-1930s, two American inventors helped lay the foundations for television in its early development: Philo Farnsworth and Vladimir Zworykin. Picture quality was poor, sets were expensive, there weren't many programs to watch, and public response was lukewarm.

The FCC halted development of TV during WWII. After the war ended, TV got a big boost as technology developed during the war was applied to the new medium. Equipment was better, more content was available, networks appeared, and the number of new stations grew dramatically. In 1945 there were only eight stations and 8,000 homes with TVs, but just ten years later there were 100 stations and 35 million TV households. Growth was so rapid by 1948 that the FCC imposed a freeze on new station licenses. The freeze lasted four years, and by 1952 the FCC established technical rules to minimize station interference and decided that 12 VHF and 70 UHF channels would be reserved for TV.

**The 1950s: Television takes off**

**Networks, Tape, UHF, and Color:** TV's early structure was modeled after radio. Local stations provided service to their communities and, in turn, might be affiliated with networks (CBS, NBC, ABC, DuMont). Most programs were broadcast live from New York or filmed in California. In 1956 the Ampex Company developed videotape, and by 1960, most programs had switched to tape.
The new UHF channels didn’t do well because TV sets made in the 50s did not incorporate UHF receivers and UHF stations had smaller coverage areas than VHF stations did. Public attention and advertising dollars remained with the more powerful VHF stations. By 1960, the networks began broadcasting in color for about three hours a day.

**The Golden Age of Television:** The growth and experimentation period of the 1950s became known as TV’s "golden age." Pioneering programs included Ed Sullivan’s *Toast of the Town* variety show, Milton Berle’s *Texaco Star Theater*, and high-quality drama such as that from *Studio One*. TV later introduced a new genre: the adult western. In adult westerns such as *Gunsmoke*, character and motivation overshadowed gunfights.

**Coming of Age: Television in the 1960s**

By 1960 TV sets were in more than 95 percent of all American homes. In 1963 network news expanded from 15 to 30 minutes. TV journalism earned praise during the 1960s for its coverage of the assassination and funeral of President John F. Kennedy. Network news also got high marks for its coverage of the Civil Rights movement and the 1969 live coverage of Neil Armstrong’s historic moon walk.

About 69 educational stations were on air by 1965. Two years later Congress passed the **Public Broadcasting Act of 1967**, which set up the Public Broadcasting Service (PBS). Cable TV was also growing during this time.

After the Kennedy assassination, escapist and fantasy shows such as *My Favorite Martian* and *Bewitched* dominated prime time.

**The 1970s: Growing Public Concern**

Public concern over TV content grew dramatically during the 1970s, highlighted by a Surgeon General’s Office study that investigated the impact of exposure to TV; the panel found a modest connection between heavy TV viewing and violence among some children.

The 1970s marked the first time that citizen groups, such as Action for Children’s Television and coalitions of minority groups, became influential in shaping broadcasting policy.

Though the three networks dominated TV, the 1970s also saw the emerging cable TV industry compete with the networks. Programming trends during the 1970s started with a heavy emphasis on crime drama (*Charlie’s Angels*), then switched to adult situation comedies (*M*A*S*H*, *All in the Family*), and finally ended with the emergence of prime time soap operas (*Dallas*, *Dynasty*).

**The 1980s and 1990s: Increased Competition**

The biggest trends in the 80s and 90s were the continuing erosion of the three big networks' audiences and the increased competition from new networks and cable channels. New networks and cable channels pulled viewers away from the traditional networks; in the early 70s the networks received 90 percent of the prime time audience, but only 60 percent by the mid-1990s.
Cable’s Continued Growth

By 2000 cable reached more than 68 percent of the population. As channel capacity increased, new cable programming services emerged, including six national pay-per-view services, six premium channel services, and more than 75 separate cable networks. Many cable systems provided more than 100 channels to their subscribers, and cable is now a full-fledged competitor to traditional broadcasting.

New Technologies

More than 90 percent of US households had VCRs by 2000. The VCR has had a major impact on both broadcast and cable TV. Among its effects:

- cassette movie rentals became a multibillion-dollar business, vital to the motion picture studios
- the VCR encouraged time shifting -- taping a program for later viewing (however, the ability to bypass commercials when viewing taped content created new problems for advertisers, since viewers fast-forwarded through commercials)
- the proliferation of handheld remote-control devices caused additional problems for advertisers, as they have encouraged the tendency for grazing -- rapidly scanning all channels during a commercial

The 1990s also saw direct broadcast by satellite (DBS) make serious inroads, when DirecTV and United States Satellite Broadcasting (USSB), offered subscribers about 150 channels using 18-inch diameter receivers.

The Telecommunications Act of 1996 also introduced a TV program rating system and the V-chip. The Act also encouraged competition between cable and phone companies, and eased ownership restrictions on TV stations.

CONTEMPORARY BROADCAST TELEVISION

The traditional broadcast television industry is changing. Audiences are shrinking, and advertising dollars are going to the Web. The Big Four broadcast networks – ABC, CBS, NBC, and Fox – have made programming available on the Internet.

Digital video recorders (DVRs) such as Tivo allow viewers to record programs and watch them at their convenience, fast-forwarding through commercials. In 2011, more than 40 percent of U.S. households were equipped with DVRs, and the number is expected to climb.

The DVD player has replaced the VCR as the preferred playback medium for home video, with nine out of 10 households equipped with one. DVD players are increasingly connected to big-
screen HDTV players, which offer better picture and sound quality than ordinary standard definition TV.

Audiences are now watching less network TV, and more cable, Web and video game programming. Revenue from advertising has dropped while costs have increased, resulting in profit declines. The networks are cutting program development and trimming production costs. One way they’ve done this is to increase their offerings of reality series (such as *American Idol* and *The Biggest Loser*), which cost less to produce than scripted programs.

**TELEVISION IN THE DIGITAL AGE**

**Transition**

As of June 2009, all TV stations began broadcasting digital television (DTV). Advantages of digital over analog TV include clearer pictures, better sound quality, HDTV and an aspect ratio more like a motion picture screen. Digital signals can be compressed to take up less space in the electromagnetic spectrum, so the broadcaster can subdivide the digital channel and offer several simultaneous programs.

**3-D TV**

After the success of the film *Avatar* in 3-D, the TV industry hoped that 3-D TV would also become popular. Consumers didn’t respond as hoped, as 3-D TVs were expensive, required special glasses, and not much content was available. If those issues are solved, 3-D may become popular.

**Broadcasters and the Web**

Broadcast networks put a lot of effort into making their Web sites attractive in order to increase the network program viewership. However, they can hurt a network affiliate -- if people watch programs on Hulu.com or another Web site, they probably won’t tune into a local station.

Local stations were slow to realize the importance of a Web presence, but have started improving their Web sites by adding breaking news stories, more video clips and social media.

**Broadcasters and Broadband**

A high-speed broadband connection, such as with a cable modem or a DSL, makes it possible for networks and local stations to create their own specialized shows distributed only through the Web site. Broadband series have yet to generate a profit, but they do represent a place where the networks can experiment with new programming without risking a lot of money.

**Mobile TV -- Apps**
Telecommunications companies pioneered early efforts in mobile TV viewing, but the recent trend has been for content providers such as the network broadcast stations to offer access to their programming through apps.

**User-Generated Content**

Broadcasters were the first to realize the potential of user-generated content. *America’s Funniest Home Videos* premiered in 1989. Aside from that program, network broadcasters use little user-generated content. Local stations are more likely to employ user-generated material, most of it consisting of photos and video of weather-related events.

**Social Media**

Broadcasters understand the importance of social media and use them for various purposes:

- to promote their shows
- to build communities of fans
- to encourage Tweeting during programs, which means that the audience is watching live, rather than on a DVR, so they can’t fast forward through commercials

Social media can also cause problems for broadcasters when upset fans use Facebook or Twitter to complain about a broadcast.

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**BROADCAST TV DEFINING FEATURES**

Like radio, TV is a universal medium, installed in about 99 percent of all U.S. homes. An average household has it turned on about eight hours a day. Tablet computers and smart phones make it possible to take TV anywhere. TV is the dominant U.S. medium for news and entertainment. And TV is an expensive business. A single one-hour scripted prime-time show can cost more than $2 million, and the total tab for the primetime programming on the four major networks is more than $2 billion. A 30-second network prime time ad averages above $100,000.

Broadcast TV’s audience continues to fragment, with audiences increasingly attracted to specialized or niche channels and cable networks.

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**BROADCAST TV INDUSTRY ORGANIZATION**

Stations in a **commercial television** system earn revenues based on advertising; stations in a **noncommercial** systems get their income from a variety of sources. TV stations are licensed by the FCC to provide services to a particular community, called a market. There are 210 markets in the U.S., and six commercial networks supply programs to local stations:
• ABC, the American Broadcasting Company
• CBS, the Columbia Broadcasting System
• NBC, the National Broadcasting System
• FBC, the Fox Broadcasting System
• The CW, Warner Broadcasting Network
• MyNetworkTV

PBS, the Public Broadcasting Service, serves the non-commercial television system.

When a local station signs a contract to be part of a network, the station becomes an affiliate of that network. Each of the three major networks (ABC, CBS, NBC) has about 200 affiliates, Fox has slightly fewer, and the other networks have still fewer. Local stations that do not have any affiliation are called independents.

Like the film industry, television is divided into three segments, production, distribution and exhibition.

**Production**

Stations can get programming from three types of sources.

• *local production*: programs produced by the local station itself -- local news is typically a big revenue source, other forms include local sporting events, interview shows, and public-affairs discussion programs
• *network programs* (available only to affiliates): networks supply 60-65 percent of the programming carried by affiliates; programs are produced by the networks, independent production companies, or TV divisions of major motion picture studios
• *syndicated programming*: created by independent producers for sale to local stations,
  • include *Wheel of Fortune* and *Inside Edition*; shows that have already aired on networks (*off-net series*) are also distributed by syndication companies, as are movie packages

**Distribution**

The three major distribution outlets are:

• broadcast networks
• networks
• syndication companies

The affiliation contract between a local station and the network is an agreement that specifies the terms by which the station agrees to carry the network’s programs. In the past, networks
compensated the stations for turning over their air time so that the networks could air network commercials. Now the networks are asking for “reverse compensation,” charging the local stations a fee to carry net programs. This is increasing costs for local stations that are already struggling to stay profitable.

Syndication companies lease taped or filmed content (from themselves or from other independents) to individual stations in local markets. Stations that buy a syndicated program receive exclusive rights to show that program in their market area. Syndication also serves as a profitable aftermarket for prime time TV series; some original network series are even produced at a deficit, hoping to earn profits in syndication. Usually a syndicator wants at least 100 episodes of a series before sending it back out to the market.

**Exhibition**

As of 2009, all U.S. broadcast stations switched from analog to digital transmission. Prior to the switch, analog stations were divided into VHF stations (channels 2-23) and UHF stations (channels 14-69). With the digital transition, existing stations were assigned new digital channel numbers.

More than 90 percent of commercial stations were affiliated with CBS, NBC, ABC or Fox; most of the remaining 10 percent are affiliated with CW or MyNetworkTV.

Stations not affiliated with networks are called **independents**. The emergence of cable gave independents a competitive advantage with a larger audience reach. Most independent stations have signed on with either the CW or MyNetworkTV; there are few “pure” independents.

### TELEVISION INDUSTRY OWNERSHIP

As of 2009, all major networks were owned by conglomerates:

- NBC is owned by Comcast
- ABC is owned by Walt Disney Company
- CBS is owned by part of CBS Corporation, a company spun off in 2005 from media conglomerate Viacom
- Fox is owned by Rupert Murdoch’s News Corporation
- CW is a joint venture between CBS Corporation and media giant Time Warner
- MyNetworkTV is owned by Rupert Murdoch’s News Corporation

The Telecommunications Act of 1996 allows an organization to own as many stations as it wishes, provided that their combined reach does not exceed 35 percent of the U.S. population (later amended to 39 percent). The FCC announced plans to increase this cap, but the proposal
received much opposition. Still, by the end of 2010, big groups controlled most of the TV stations in the top 100 markets.

**PRODUCING TELEVISION PROGRAMS**

**Departments and Staff**

There are many different staffing arrangements, but one common arrangement for a television station is as follows:

- *station manager*: ultimately responsible for all station activities
- *sales department*: sells time to local and national advertisers
- *engineering department*: handles technical equipment
- *production/programming department*: puts together the local programming and procures programming from outside sources
- *news division*: handles the regularly scheduled news programs
- *administration department*: handles clerical, accounting, and personnel to help in the day-to-day running of the station

Network organization is somewhat similar to that of a local station:

- *sales division*: handles the sale of network commercials and works with ad agencies
- *entertainment division*: works with producers to develop new programming
- *owned and operated stations division*: handles stations owned by the network itself
- *affiliate relations division*: supervises contracts and maintains good relations with affiliates
- *news division*: is responsible for network news and public-affairs programming
- *sports division*: is responsible for all sports programming
- *standards division*: checks network programs to insure they don’t violate the law or the network’s own guidelines for appropriate content
- *operations division*: handles technical aspects of actually sending programs to affiliates; *digital operations* include maintaining the web site, developing apps, managing social media.

**Getting TV Programs on the Air**

On the local level, the biggest efforts go into the newscast. Usually a local station produces no programs other than its own local news, interviews, and sports shows.
On the network level, the greatest efforts go into prime time programming (8-11 p.m., EST). A good program idea starts the process, and each year networks must sift through hundreds of ideas. At the end of the trimming process (program ideas now down to 50-75), sample scripts and potential story lines are called for. If the idea still looks promising a pilot (a program’s first episode) is then produced. In a typical year a single network will produce about 25 pilots.

ECONOMICS OF BROADCAST TELEVISION

The TV industry has been profitable since 1950, and ad revenues have increased every year since 1971. In 2010, the industry’s total advertising revenue amounted to $45 billion. However, the changing structure of the industry affected the bottom line of networks and local stations.

Commercial Time

Three types of advertisers buy time on TV:

- national advertisers (36 percent of revenues) sell general-consumption items such as soda, cars, and deodorants, trying to reach the largest audience possible
- national spot advertisers (about 32 percent of revenues) sell products of regional interest (snow equipment, pools, farm implements) that appeal mainly in one region
- local advertisers (about 32 percent of revenues) are local businesses buying airtime to reach people in their immediate area

The bigger a station’s audience (program rating) and market, the more advertisers pay for the airtime. Some TV shows are finding novel ways to generate revenue, including product placement and text messaging fees. Broadcasters also receive payments from cable systems in return for retransmitting broadcast programs.

Where Did the Money Go?

At the network level, programming is the biggest expense. A 30-minute episode of a sitcom costs about $1.5 million to produce. An hour-long show approaches $3 million. Quiz and reality shows are much cheaper to produce.

PUBLIC BROADCASTING

A Brief History

Throughout its 40-year history, and despite a major reorganization by the 1967 Public Broadcasting Act, public television has faced several perennial problems:

- inadequate funding
• political infighting
• a lack of clear purpose

Before 1967, noncommercial TV was known as educational television. The 1967 Public Broadcasting Act authorized money for new facilities and established the Corporation for Public Broadcasting (CPB) to oversee noncommercial TV and to distribute funds for programs. The government also created the Public Broadcasting System (PBS), whose duties resemble those of commercial networks.

This seemed to work well, but internal disputes soon arose regarding programming control. Additionally, cable channels started to compete with public TV's audience, and the federal government reduced funding for public TV. Cable was helpful to public TV stations by increasing the reach of their programming; public TV became the primary cultural channel in the nation. However, over the past 10 years, public TV ratings are down 37 percent.

By the 1990s, PBS funding had become a major political issue, and stations looked for other funding sources. The 2010 CPB budget was just about what ESPN collects every two months in subscriber fees. Public TV faces significant challenges if it is to remain a viable alternative for viewers.

Programming and Financing

Much of PBS’s programming history can be described as a civil war between the local public stations and the centralized PBS organization. In 1990, the balance of power moved in favor of a centralized authority when PBS created an executive position for national programming, with the power to develop and schedule new programs. The results have been far from stellar, with PBS stations pulling down an average prime time rating of less than 2 percent.

PBS programs such as Sesame Street and Nova have earned substantial praise from critics. However, PBS programs have been criticized too, for a perceived liberal bias.

PBS stations are licensed by the FCC. As of 2009 there were more than 350 PBS stations operated by 168 licensees: community organizations (about half), universities and colleges (about one-third), state-operated networks (about 12 percent), and the rest mostly municipalities. The audience is substantial, though average viewing time is significantly shorter than for commercial TV.

Funding for PBS is about one-third from federal, state, and local governments, about one-quarter from viewer contributions, about 15 percent from businesses, and the rest from grants, auctions, and other miscellaneous sources.

Public broadcasting has moved into the digital age. Previews of upcoming shows are streamed on its Web site, which also contains blogs and links to PBS’s Facebook page. Portions of its popular News Hour show are available on iTunes, and the network recently started a video-on-demand service.
HOME VIDEO

The growth of the home video industry parallels the growth of VCR use in U.S. households. By 2005, it was in about 92 percent of U.S. homes. The VCR gave way to the DVD (digital videodisc). DVD offers a better picture and sound than videotape, and can contain bonus material. Sales of DVD players, which are used to play back prerecorded purchased or rented discs, have skyrocketed.

Another entry into the home video market is the DVR, or digital video recorder (such as TiVo). These devices store TV content on a hard drive. About 40 percent of U.S. households have DVRs.

Home video functions can be divided into three segments: production, distribution, and retail. Production companies sell to distributors, who form the bridge between production and retail.

The DVD has opened up a new aftermarket for television. Boxed sets of seasons from contemporary series have generated increased revenue for production companies. Netflix has also contributed to the aftermarket for TV series. The company pays a fee to broadcasters so that subscribers can stream past episodes of series.

DVD sales have been declining as more consumers move to video-on-demand or live streaming as their first choice for home video. Yet, there will always be some individuals who prefer to have a hard copy of a movie or TV show to store in their video library.

GLOBAL TV

International video is more popular than ever. Global video traffic consists of TV signals sent by satellite or over the Internet designed to cross international borders and discs or films that are physically shipped from one country to another. International video involves both public and private broadcasters. Public broadcasters include Voice of America, the BBC, China Central TV.

On the private side, international news, sports and entertainment channels are growing more numerous. CNN was a pioneer in this area and its news channels are seen in more than 170 million households and thousands of hotel rooms worldwide. CNBC offers business news to 70 countries. Russia Today, a 24-hour news channel, began broadcasting in 2005. Sports network ESPN International is seen in more than 140 countries.

Foreign domestic TV networks are widely available both via cable/satellite and online. DirecTV offers channels from Brazil, Greece, Russia and Viet Nam, along others.

U.S. TV series are still popular throughout the world, but the economic downturn has prompted many countries to produce cheaper local programs rather than buy expensive imports. In many
countries, prime time is dominated by local productions and U.S. shows are seen in the daytime or late at night.

The lack of new hit series has also weakened the U.S. position. Currently, international buyers of TV programs are more interested in buying scripts or formats of U.S. shows and turning them into local dramas, comedies and game shows.

American-made films often show up on foreign TV systems. Local versions of HBO are available in more than a dozen countries.

**FEEDBACK FOR BROADCAST TELEVISION**

**Measuring TV Viewing**

**Network Ratings:** Nielsen Media Research, which serves both Canada and the U.S., provides networks with audience data through its Nielsen Television Index (NTI). To compile these ratings, Nielsen uses a device called a *People Meter*, a clock-radio size device that sits atop the TV. After gathering demographic data about each household member, each is assigned a number. While watching TV, members periodically punch in viewing data on the People Meter's remote control unit. There are more than 12,000 households in the Nielsen People Meter sample, and the sample size will increase to 37,000 by 2012. About 90 percent is normally useable. The sample is replaced every two years. Nielsen is testing other systems, such as the *Portable People Meter* (PPM), which requires less effort on the part of the respondent.

**Local-Market TV Ratings:** Nielsen surveys more than 200 U.S. markets at least four times a year by using a combination diary and electronic metering technique. A computer randomly selects phone numbers from local area directories to get diary participants. Diaries (one issued for each TV set) have space to record demographic data about each household member as well as their viewing habits for each quarter hour. Diaries are kept for seven days. About 40-50 percent of the diaries submitted end up being useable.

Nielsen hopes to phase out paper diaries eventually, replacing them with a combination of people meters, electronic meters and Internet diaries. Advertisers buy time based on Nielsen’s reports.

**Ratings Reporting**

TV viewing data is reported in essentially the same radio it is for radio: ratings and shares.

**rating:** number of households watching a particular program divided by number of TV Households in a given market (A TV household is any household that has a TV)

**share:** number of households watching a particular program divided by the number of households using (watching) TV

The acronym HUT refers to “Households Using (watching) TV”
Four times a year (February, May, July, and November), Nielsen conducts a **sweep period** in which every local TV market in the country is measured. Local stations use these ratings to set their ad rates. As Nielsen moves away from diaries to local market people meters, demographic audience data will be available all year round, making the traditional sweeps periods less meaningful.

**Determining the Accuracy of Ratings:** In response to Congressional concerns about the accuracy and integrity of the TV rating system, the television industry established the Electronic Media Ratings Council (EMRC), subsequently renamed the MRC, to monitor, audit, and accredit broadcast rating services. Despite the MRC's efforts, some criticisms still remain. One common criticism is with the sample size of 37,000. This is not a problem, however; statistical theory indicates that this sample size will generate tolerably accurate results within a specified margin of error. Other criticisms deserve closer attention:

- Do people who initially agree to participate have different viewing habits than people who decline?
- Do survey "returners" have different viewing habits than "non-returners?"
- Do people who know they're being monitored alter their viewing habits?
- What about the industry's self-acknowledged problems trying to measure minority viewers?
- What about sweeps period programming distortions and hype?

**Television Audiences**

The TV set is firmly entrenched in American life:

- TV sets are in 99 percent of all homes; 75 percent of households have more than one set
- an average set is on for about eight hours a day; each person watches more than three hours
- audience changes throughout the day, increasing steadily from 7 a.m. until it peaks during prime time hours (8:00-11:00 EST)
- viewing is heaviest during the winter, lightest during July and August
- preschoolers and females dominate daytime weekday TV audiences, the 18-49 year old category dominates prime time
- low-income households tend to watch more TV than middle-income households
- teenagers watch the least amount of TV
- people with more education tend to watch less TV, and women watch more TV than men
Career prospects in the broadcast industry have not been bright, but are improving in 2011. Job opportunities seem to be better at the local level than at the networks.

-- End of Chapter 11 --