



Chapter 1

Introduction

Many Americans born after 1980 have trouble distinguishing between broadcast and cable/satellite television channels, especially if they have lived in cable- or satellite-subscribing households all their lives. They can't remember a time when "channel surfing" meant switching among three, four, or five channels – all of which had more or less the same types of programs at the same times of the day and week. We take multichannel television for granted today; even if we don't subscribe to cable or direct broadcast satellite (DBS) services ourselves, we've surely heard of the content available through these media technologies. And although they sometimes don't like to admit it, most non-subscribers, at one time or another, have wished to see a non-broadcast program. This is hardly surprising. The array of television programs available through cable, DBS, and even the Internet in the twenty-first century is at least a hundred times greater than what is available using a broadcast antenna alone. There are channels to suit most people's interests. And where people once complained that "nothing" was on, now they are more likely to complain of not being able to choose from a mind-boggling array of possibilities.

Cable television has not always been a multichannel supplement to broadcast television, however. Cable actually was "invented" in the United States because of a combination of geographical conditions and regulatory uncertainty. Many initially perceived it as a temporary, makeshift technology. Yet such disparate factors as an extraordinarily cohesive trade organization in the early years, a fickle regulatory climate that called for a great deal of individual ingenuity, and the parallel development of complementary technologies such as communications



2 Introduction

satellites and enterprises such as pay-television all helped to mold cable into a distinct and prominent media industry. Thus the project of this book is to weave together the varied threads that offer an account of how multichannel television came to be what it is today – both in the United States and throughout the world.

Until the late 1970s, cable's almost exclusive function was to re-transmit broadcast television signals to communities where residents would have been unable to receive those signals using home antennas (whether the set-top “rabbit-ear” antennas or rooftop antennas). All broadcast signals can be received relatively clearly 60–100 miles from a broadcast station's transmitter – provided there are no obstacles such as mountains or skyscrapers. However, many communities *do* need to contend with these sorts of obstacles blocking television reception. Moreover, many communities in the United States are simply too far away from broadcast stations to receive their signals at all. Thus cable television got its start in the United States as a means of bringing television to these sorts of communities by using a very tall antenna, known as a community antenna. Community antenna television, or CATV, was the first name for cable television.

Additionally, CATV began during the FCC's 1948–52 licensing “freeze,” years in which policy-makers suspended the assigning of new television frequencies in order to examine their practices for allocating licenses to prospective new television stations. This was ostensibly to ensure equal availability of television service nationwide, regardless of community size or remoteness from centers of population. During this time television was known to virtually all Americans, even though its availability was very uneven: a few areas of the country were very well served by television while many others lacked reception entirely. In a number of communities, particularly on the east coast, CATV systems were built to extend the reach of existing television stations. The technology was considered benign by policy-makers, most seeing it as nothing more than a stopgap technology that would disappear once more television stations had been granted licenses and begun service. Of course this never happened, as we now realize.

Since no widespread alternatives to commercial support emerged during US television's early years, only medium and large cities have the populations to sustain television stations of their own. The four-year licensing freeze was just long enough for the fledgling CATV



Introduction 3

industry to gain a foothold. There continued to be a role for that industry long after the freeze had ended; in fact CATV's role even grew due to the post-freeze granting of frequencies in the UHF (ultra high frequency) band – which were much weaker than those in the VHF (very high frequency) band. By the mid-1960s, CATV was desired even in communities with one or two stations of their own, since community antennas (and related technologies) made it possible to bring in additional channel choices.

In the ensuing decades, new technologies – most notably communications satellites – and changes in policy brought about even more enhancements to CATV's basic function. The medium became known as *cable* television and began to offer channels that were not available from broadcast television stations at all. From the 1970s through the 1990s, many dozens of satellite-delivered cable networks came on the scene and changed what was essentially a broadcast-enhancement technology into a form of television all its own.

By the early twenty-first century, it is no longer possible to consider the broadcast and cable/satellite television industries in isolation from each other. Even those households that still receive television exclusively via home broadcast antennas are at pains to avoid series or movies originally produced for cable/satellite networks. Popular cable/satellite networks such as CNN can be viewed in airports and other public places. And icons from popular cable programs (e.g., SpongeBob SquarePants or the Soprano family) circulate freely within popular culture. Moreover, cable technology, now merged with computer and telephone technologies, offers consumers an array of services beyond simply television programming – including high-speed Internet access, digital telephone services, and video-on-demand (VOD).

Today's multichannel television is hardly limited to the context of the United States. In fact, at every stage of US cable/satellite history there have been related – sometimes even intertwined – developments in other nations. Two different trajectories need to be pursued in this regard: the one in which nations other than the United States have discovered and developed television-related technologies suited to their unique needs and the one in which the popular, successful, and controversial US-derived model of television service has made its way into other national media scenarios.

The challenge in capturing and relating the history of today's multichannel television, therefore, is to determine how many different



4 Introduction

“histories” to draw into the picture. Not only must we consider the existing media landscape into which a new technology enters; we must also look at the ways in which the capabilities of the new technology play a role in the future of that scenario. All media technologies are affected by engineering breakthroughs, government policy at all levels, economic fluctuations, and dominant ways of doing business. There are also considerations related to the individuals involved in the industry – ranging from risk-taking entrepreneurs to innovative program producers. And the audience cannot be overlooked, for even the most groundbreaking business or programming innovations can succumb to the whims of fickle and often conservative consumers.

What I offer here is a historical overview of these industries. I do not intend to treat any aspect of cable/satellite history exhaustively or in a way that would add a great deal to a media historian’s existing expertise. Rather the book is aimed at the beginning-to-intermediate media student, someone working in the media industry, or the general reader. I’ve attempted to compile this history in as comprehensive, representative, and interesting a way as possible. I’ve drawn from a range of primary and secondary sources: published histories of broadcast media, books specifically on cable (including some very good histories for the time periods in which they were written), surveys of national media industries, government documents, trade press articles, policy studies, biographies, oral history transcripts, and personal interviews.

While a number of books have been published on the cable industry over the years, these have tended to be biographies or autobiographies, journalistic accounts, or visionary treatises. Though useful in most cases, especially for capturing individuals’ motivations and personality factors, most of these books are both out of date and out of print. There are some more recent academic books on cable. For example, Parsons and Frieden’s *The Cable and Satellite Television Industries* (1998) offers a detailed overview of cable/satellite technology, policy, and industry structures. However, only one chapter covers history specifically. Lockman and Sarvey’s *Pioneers of Cable Television* (2005) provides valuable discussions of selected industry pioneers from Pennsylvania. Laura Linder’s *Public Access Television* (1999) looks at one important and often overlooked part of cable television history. And there are a number of scholarly articles as well as book chapters that contribute to the understanding of multichannel





television history. The history of multichannel television clearly is a growing area of scholarly interest. And yet there is still a role for a book that surveys the range of topics to be pursued.

When I first started researching cable television history a little less than two decades ago, the challenges were different than what they are today. It was definitely easier to keep track of developments in the industry, programming innovations, and new technologies. The industry seemed very large back then, but it was tiny by today's standards. New programs and programming strategies were easy to observe, record, and analyze on a few dozen cable networks that came with my subscription (and perhaps a dozen more that were available where my parents lived). And cable television had barely begun to intertwine with other media and telecommunications industries.

But it was much harder at that time to research the industry's history. I used inter-library loan services extensively and made numerous trips to archives – or even to visit some of the actual cable pioneers who were still living at that time (most of them no longer are). Today, most of the out-of-print books are available via the Internet from secondhand booksellers. And a portion of the archival material I use is available online. Convenience notwithstanding, I must admit that I miss all of the travel, not to mention the excitement of meeting the individuals who “made” the history I study. Sometimes I still visit what I call the “early cable towns” – places such as Shenandoah, Lansford, Pottsville, and Schuylkill Haven in eastern Pennsylvania's anthracite coal region; Meadville in western Pennsylvania; and of course my hometown, Oneonta, New York. I should point out that all of these communities (and many others) are tied up with my own personal history, many being places where either I or my ancestors have resided, and this has been a major draw for me in researching this area of media history.

Outline of the Book

The purpose of this book is to examine the history of multichannel television, as we know it in the twenty-first century, beginning with its origins in the late 1940s and continuing through today's range of television-related technologies. For the most part, the book focuses on cable television in the United States specifically, although each





6 Introduction

chapter also includes a brief survey of developments in cable and other multichannel television technologies in other nations throughout the world at that stage of history. The latter is intended not to provide a comprehensive overview of multichannel television around the world – a project yet to be taken on – but rather to offer a sense of how the multichannel television industry in the United States compares with, affects, and intersects with those in other nations.

The remainder of Chapter 1 looks at how cable, satellite, and related technologies function. It considers the structures of multichannel television industries and how those industries make money. And it examines the various sources of programming available through one or more forms of multichannel television.

Chapter 2 begins with the pre-history of US cable television, including the rise of the telegraph as the first electronic communication medium in the nineteenth century, radio's transition from "wireless telegraph" to broadcast medium, and the beginning of broadcast television. This material is included to help explain the technology and policy precedents inherited by the cable industry as well as the need for its advent in the first place. The chapter then looks at the origins of cable in the late 1940s and 1950s. This was the community antenna phase of multichannel television's history. During these years, cable television was highly experimental, as small-town entrepreneurs tinkered with a variety of technologies in order to bring television to communities where its broadcast signals could not be received over the air. It was also during this time that a distinct CATV industry coalesced and formed the trade association that still dominates the industry today. Very little government regulation of CATV was undertaken during the 1950s (even though most realized it was inevitable in the future), leaving the emerging industry with a fair amount of latitude in defining itself.

The early to mid-1960s proved quite a contrast – as will be discussed in Chapter 3. Federal government policy-makers became much more involved with CATV at this point, their stated main concern being how to keep CATV systems from usurping the fortunes of fledgling broadcast television stations (especially those in smaller markets). It was much less costly to operate a community antenna system than a broadcast television station. And CATV was proving to be at least as well received by the public, especially as new technologies such as microwave relays increased the variety of channels available to



Introduction 7

subscribers. The 1960s saw the implementation of policy that severely restricted the conditions under which CATV could operate in the United States. Meanwhile, a handful of CATV-type services were starting to flourish elsewhere in the world, particularly in Canada.

Chapter 4 covers the years from 1968 to 1974, when CATV started to be known as cable television. Oddly enough, during these years US policy-makers made an almost 180-degree reversal of the stance taken earlier in the decade. No longer fearing that cable would put broadcast television out of business, they (along with various other constituencies) began to cast cable as the potential rescuer of local, educational, and special-interest television programming. This was the era in US cable history known as “Blue Sky.” These years saw the rise of local public-access channels on cable, as well as pay-cable services – most notably Home Box Office – that would develop into today’s satellite-carried cable and DBS networks.

Chapter 5 covers the rise of commercial communications satellites and the non-broadcast-derived cable services (networks) they helped bring about. At this point, US cable was starting its transformation from a retransmission technology into a multichannel supplement to broadcast television. These were deregulatory years for cable, and while the concept of local public access did not disappear entirely, it became clear that what most of the US public wanted to watch (and pay extra money for) were cable channels that brought more of the sorts of programs and genres that already had a home on broadcast television’s “big three” networks (ABC, CBS, and NBC). For a variety of reasons, by this point there was more television programming flowing across national borders. Of course the United States was sitting comfortably in its role as the overwhelmingly dominant exporter of television programs, but other nations’ programs (particularly from the British Commonwealth) were becoming more available to American audiences.

By the 1980s and early 1990s, as covered in Chapter 6, there were many more satellite-delivered cable networks, including such “standards” as CNN, MTV, and ESPN. For this reason, markets already well served by broadcast television were being wired for cable. Large amounts of money were at stake as cable companies vied for exclusive rights to provide service to these cities. The cable industry, once a small-town operation, was by this stage largely under the control of the same entertainment industry corporations that dominated other



8 Introduction

media industries. Cable was starting to play a major role in the increasing synergy enjoyed by those corporations. The federal government, especially Congress, was also taking notice. The 1984 Cable Act was the first piece of legislation to deal specifically with cable. It would be followed quickly by the very different 1992 Cable Act. Meanwhile, competition for the cable companies was emerging in the form of, first, home receivers for the signals of satellite networks and, later, DBS. The former were the very large dishes people would put in their yards, while the latter are the small dishes people now attach to the sides of houses or apartment buildings. By the end of the 1980s both cable and DBS companies were also gaining a foothold in countries other than the United States.

Chapter 7 deals with worldwide developments in cable and DBS during the 1990s and the early part of the twenty-first century. By this stage, particularly in the United States, most satellite networks begun in the 1970s and 1980s had recovered start-up costs and were able to devote more resources to original programming. Multichannel television was again on the agenda of the US Congress, with the far more comprehensive (and deregulatory) 1996 Telecommunications Act. By the end of the decade, cable and DBS were in head-to-head competition, with other technologies, both complementary and competing, on the horizon. Also by the end of the decade, nations throughout the world were contending with the persistent, large-scale influx of US-style multichannel television businesses.

By the early twenty-first century, it would be clear that the key to the cable industry's future success lay in its ability to integrate its technological and business structures with those of other media, telecommunications, and computer industries. As will also be discussed in Chapter 7, a variety of telecommunications technologies, including satellites, contributed to the collapse of the Soviet bloc during the late 1980s and early 1990s. Satellite transmissions have also presented huge challenges to communist governments in nations such as China and Cuba.

Chapter 8 then provides a reflection on the material covered in this book – from cable television's community antenna years through the era of satellites, Internet, and other converging multichannel television technologies. This final chapter also invites the reader to engage in some critical speculation about the future of multichannel television in the United States and throughout the world.





How Cable Television Works

The first step in understanding how *cable* television works actually involves understanding how *broadcast* television works, since retransmitting broadcast television signals has been cable's first and most prominent function. Broadcast television – like its predecessor, broadcast radio – relies on a powerful transmitting antenna to send programs through the airwaves to area households, which then access that programming using a household receiving antenna (either a set-top “rabbit-ear” antenna or a larger rooftop antenna). The receiving range for a transmitting antenna is typically 60–100 miles, depending on both signal strength and terrain. The programming transmitted is the product of local stations, which have either acquired it specifically for this sort of distribution or produced it themselves.

The next step in understanding cable television is the technology that enables delivery of the broadcast signals discussed above beyond the reach of the transmitting antenna – as well as a host of complementary technologies that allow cable to offer more than broadcast signals alone. Since its very beginning, cable's central component has been the headend. This is the site (often on top of a community's highest hill or mountain) where all signals are gathered. In the early days, the headend was nothing more than a large tower with antennas on top (one for each broadcast signal to be received). By the early 1960s, many headends also included microwave receiving dishes (typically attached to the antenna tower) to enable reception of more distant signals via microwave relay. Microwave is a point-to-point transmitting technology. In other words, a broadcast signal is “bounced” from one transmitting tower to another until it reaches the place(s) where it will be used. Because microwave is a “line of sight” technology, meaning that signal strength diminishes over distance due to the earth's curvature, multiple transmitters are needed along the route – which can range from around 50 miles to over 1,000 miles in length.

In the 1970s, satellite dishes (also known as earth stations) for receiving satellite-carried program services or networks became part of many headends as well. The satellites that carry cable network signals are in geosynchronous orbit 22,240 miles (35,784 km) above the earth's surface. At this precise distance, the satellites remain



10 Introduction

positioned above the same area of the planet, providing continuous signals to that area. This area is called the satellite “footprint” and its size varies depending on the receiving and transmitting technologies. Any dish located within the footprint can receive the satellite’s signals. Signals of individual networks are carried on portions of satellites called transponders.

A headend also has a building where signals of all origins are processed (i.e., cleared of interference, amplified, and sometimes descrambled). In some communities this building is located near the antenna tower, as it was when cable first began, but increasingly it is located adjacent to the system’s business office, with a direct line feeding signals from the various antennas. This building also houses various playback technologies (videocassette players, DVD players, etc.) so that any locally produced programming can be



Figure 1.1 Photo of headend—outside. Aside from the presence of satellite receiving dishes, many of today’s mountaintop headends look much the same as they did in the 1950s. [Author photo]





Figure 1.2 Photo of headend–inside. Although headend buildings are seldom elaborate on the outside, inside they contain an array of sophisticated processing and transmitting equipment. [Photo courtesy of ATX]

added to the line-up of channels going out to subscribers. In recent years it has also begun to house technologies related to other services offered by cable companies, such as broadband Internet service, cable DVRs (digital video recorders), and cable telephone service.

After signals have been processed at the headend, they are sent into the community via the trunk, a line of either coaxial or fiber cable. The trunk then carries the signals to feeder lines, which extend into quadrants or neighborhoods in the community. The line of cable that extends from the feeder to a cable subscriber's home is called the





12 Introduction

drop. On the way from the headend to subscribers' homes, the cable signals need to be amplified multiple times owing to attenuation or signal fading. Over the years, cable engineers have developed increasingly sophisticated amplifiers for this purpose. Another technology along the modern-day cable line is the tap, a device that controls which signals a subscriber will receive. It may or may not contain a descrambler. Traditionally the lines of cable were carried on utility poles. Nowadays they, like other utility lines, are often run through underground tubes called conduits.

Inside a subscriber's home, a converter box is often needed. Most of cable's analog (i.e., non-digital) channels are converted at the headend into frequencies outside the VHF and UHF bands used by broadcast television. This allows more channels to be carried, and since coaxial cable is enclosed, there is no need for concern over interference with other over-the-air technologies (e.g., police radio) that use those frequencies. Historically, converter boxes either have allowed cable signals to be tuned using the VHF dial or – when more than twelve cable channels are available – have provided an alternative tuning device. Today, virtually all television sets sold are “cable-ready,” meaning that they are capable of tuning all the frequencies used by cable. Many subscribers no longer need converter boxes. However, increasingly converter boxes are being used for new services such as digital channels, interactive services, and digital video recording. Cable-related services such as high-speed Internet and



Figure 1.3 Most types of transmission cable appear similar on the outside.
[Getty Images]





Figure 1.4 and 1.5 Inside configurations vary quite a lot. On the left is coaxial cable; on the right, fiber optic cable. [CommScope, Inc]

telephone service add even more varieties of “cable boxes” to subscribers’ homes.

The cable wire itself has also changed over the years. In the earliest days of community antenna television, twin-lead or ladder-lead cable was used. This consisted of two copper wires, usually connected by plastic. Twin-lead cable had several problems in outdoor use, however, including a tendency to lose signal during rain. In the community antenna industry, twin-lead was replaced (before the vast majority of systems even started) by coaxial cable. Coaxial cable (known to insiders as “co-ax”) is much more weather-resistant. It consists of a copper wire at the core, surrounded by foam, which itself is surrounded by woven copper. The woven copper is again surrounded by foam, and the entire cable is covered with plastic. While coaxial cable is still used extensively, it is increasingly being replaced by fiber-optic cable, which consists of numerous flexible glass threads wrapped in a plastic casing. Because fiber-optic cable uses pulses of light for





14 Introduction

transmission, thereby maximizing the amount of information that can be transmitted, it has made a number of new services available to cable subscribers. It is particularly well suited to digital programming and data services.

How Direct-to-Home and Direct Broadcast Satellite Work

Direct-to-home (DTH) satellite is a broad term referring to any satellite-delivered multichannel program service that reaches subscribers via a home receiving dish instead of cable service. The concept of DTH originally took hold in the early 1980s. At that point, some individuals – especially those living in isolated areas not passed by cable – realized that they could receive the same program networks as cable operators by erecting home receiving dishes. These were the 10–12-foot C-band earth stations that cable systems themselves were using to receive signals of the satellite-carried program networks they were delivering to subscribers along with broadcast signals. At first these home satellite mavericks seemed to be getting something for nothing, but as more and more people started doing this, cable networks began scrambling their signals and businesses sprang up to sell cable-type subscriptions (with descrambling technology) to home satellite users. As of 2007, C-band DTH has only a handful of remaining subscribers in rural areas of the United States, though the technology is used more extensively in other countries.

More common today is direct broadcast satellite (DBS): the 18–20-inch dishes that can be attached to the side of virtually any type of house, apartment, or other building. This technology transmits on the Ku band of the electromagnetic spectrum instead of the C band. The smaller wavelengths of the Ku band allow a signal to be focused on a much smaller point. When the licensing of Ku-band DBS was announced by the FCC in the early 1980s, there were thirteen applicants, eight of which were granted licenses. This was the number of orbital slots that had been allocated for this use. However, most of the original licensees, along with other aspiring providers who subsequently applied, either could not meet the initial start-up costs or went out of business shortly after launching. Today, two competing brand-name technologies and their accompanying program subscription



services, DirecTV and Echostar (DISH Network), vie for virtually all the DBS subscribers in the United States.¹ A challenge faced by these companies, as well as others that tried to launch in the 1990s, had been their inability to provide the signals of local broadcast stations – still the most popular channels on television. This situation was rectified by an FCC requirement, effective January 1, 2002. Both DirecTV and DISH now offer subscription packages that are competitive with cable service and are taking away a growing share of cable’s market.

Other Multichannel Television Technologies

It should be stated up front that cable and DBS overwhelmingly dominate the multichannel television marketplace both in the United States and internationally. However, there are a few other multichannel options that should be mentioned. First is SMATV (satellite master antenna television), a system in which multichannel programming is transmitted by satellite and received by a dish that serves an entire hotel, motel, hospital, or apartment building. The signals are transmitted from the receiving dish via coaxial cable. Second is MMDS (multichannel multipoint distribution service), also known as “wireless cable.” MMDS is essentially a way of distributing cable programming without actual cable connections. MMDS uses microwave technology for transmitting programming from satellite receiving dishes via a headend-type facility to subscribers’ homes. In recent years, potential users of MMDS – primarily households in areas not passed by cable – have opted instead for the more efficient DBS delivery systems. Other multichannel delivery systems are certain to emerge in the near future. For example, as Internet technologies increasingly merge with cable and satellite services, we are beginning to see new options for multichannel video delivery, including Internet-based streaming video services and the digital multichannel services being introduced by telephone companies.

Types and Sources of Multichannel Programming

Virtually every kind of multichannel television provider offers a variety of channel types. As discussed above, the most prominent type of





16 Introduction

channel historically has been the retransmitted broadcast station. But in the mid-1970s, with the rise of satellite technology, cable-specific program services or networks began to form as well. These include basic cable networks such as CNN, MTV, and ESPN that are “bundled”; in other words, subscribers are charged a flat monthly fee to receive several of them. With basic cable service, most networks are compensated by cable or satellite operators on a per-subscriber or “per-sub” basis, meaning that a fee from a few cents to a few dollars per channel is folded into each subscriber’s monthly bill. With bundling, subscribers wind up paying for channels they seldom or never watch. Thus there has been a great deal of debate as to whether basic networks should be offered on an individual or “à-la-carte” basis. This change has almost never been implemented, however, because doing so would be very likely to put less popular or special-interest networks out of business.

Another type of cable/satellite channel is the pay-cable or premium channel. This category includes networks such as HBO and Showtime, for which subscribers pay additional monthly fees that average \$20–\$25 per channel. Nowadays, a subscription to a premium channel typically includes access to more than one satellite feed (e.g., East Coast and West Coast) or sub-service (e.g., HBO Signature, HBO Comedy). There also are pay-per-view (PPV) channels that allow subscribers to pay directly for individual movies or special events (such as sports events). Traditional PPV, which required watching the program at a specific time, increasingly is giving way to “on-demand” PPV, which allows a viewer to choose when to watch a program (typically within a 24-hour period), as well as to start and stop the program as if it were being viewed on videocassette or DVD. On-demand PPV is made possible by the digital storage and transmission of video recordings. Another increasingly common part of digital cable packages are digital music channels.

Today, both cable and DBS providers offer multiple levels or “tiers” of programming selections. At cable’s most basic level, it is possible to receive only broadcast stations along with a few popular cable networks and any public access channels available in the community. People who watch little television but receive no clear signals over the air might opt for this level of service – even if only to receive local newscasts. This tier is inexpensive and not heavily promoted. More people subscribe to the next level of service, which for most cable



Introduction 17

systems consists of broadcast signals and public access, as well as around 50–100 basic cable networks (such as CNN, MTV, and USA). In the twenty-first century, most cable systems now offer digital service packages of various configurations as well. These include everything listed above, along with considerably more basic cable channels, all-music channels, and video-on-demand (VOD) channels. Digital services take advantage of increased bandwidth (i.e., the amount of signal that can be carried) made available by new technologies such as computer-operated cable boxes and fiber-optic cable. This is the level at which cable is most competitive with the multichannel array offered by the two major DBS providers.

Broadcast signals continue to be a popular source of programming in the multichannel age. While the look of broadcast-derived channels on cable and satellite is identical to that of other types of channels, it is important to note that they come from a very different source. Broadcast signals originate at broadcast stations located in medium to large cities. Their coverage is regional, extending as far as the signal can travel without fading or interference. A broadcast station in the United States is identified by a set of three or four call letters, beginning with “W” (mostly east of the Mississippi River) or “K” (mostly west of the Mississippi), that represent a license granted by the Federal Communications Commission (FCC). Today, many broadcast stations are better known by “nicknames” such as “News 12-Springfield” or “ABC 7-Chicago.”

A typical broadcast station is either affiliated with a national broadcast network (most commonly ABC, CBS, NBC, or FOX) or independent. If it has a network affiliation, it has agreed to air the programs distributed by a particular network in exchange for financial or other compensation. This is beneficial to the station since national network programming generally is the most popular, heavily promoted, and lavishly produced. And since the networks leave some commercial time for the local affiliate, that station can use the popular programs to draw local advertising revenues. The stations do not show network programming throughout the entire day, however. They also show local news and other locally produced programs.² If the station has no network affiliation (as is seldom the case anymore), it must rely on other sources of programming to fill its day. In a few cases, independent stations in large cities enjoy a great deal of success as outlets for major sports events (e.g., New York’s WOR, Chicago’s WGN, and





18 Introduction

Los Angeles's KTLA all serve as television "homes" for their local Major League Baseball teams).

Perhaps even more significantly, however, both network affiliates and independent stations, as well as many basic cable networks, rely heavily on syndicated programs – in the form of old movies, television reruns, and newly produced programs (such as some daytime talk shows or game shows). Syndication refers to the practice of distributing programs on a market-by-market basis instead of through an affiliation agreement. The station or cable network pays a syndication company or syndicator for the right to air a movie or episodes of a television series for a limited number of times. Essentially, a syndicator has an intermediary (or distributor) role: having purchased movies or programs from a studio (the producer), the syndicator then makes money by distributing that material to stations or cable networks.

While syndication has been a boon to broadcast stations needing inexpensive programs to fill out their schedules, basic cable networks have probably needed it even more. With the tremendous cost of renting space on a satellite transponder, along with the uplinking equipment needed to send programming to that transponder, start-up cable networks typically have not had a lot of money left over to produce new programs. Therefore they have relied on the fact that the population has an apparently endless appetite for reruns (both movies and TV shows) and many people are willing to subscribe to cable just to watch more of them. In fact, it is said that Ted Turner successfully launched his TBS superstation in 1976 in part by counter-programming the evening news with *Star Trek* reruns.

How Cable and DBS Companies Make Money

While premium cable and satellite networks such as HBO, Showtime, and Cinemax can offer schedules comprising exclusively recent movies, original TV series, and major sports events, this comes at a high cost to cable and satellite subscribers – who can pay as much as \$30 extra per network each month. There are three main reasons why basic cable networks are so much less expensive than premium networks. First, nearly all of them are partially supported by advertising. Those that are not (such as C-SPAN) have alternative revenue sources.





Second, most carry per-sub fees that are folded into the total subscription cost (a notable exception being home shopping channels, which of course have another revenue source). Third, basic networks are bundled, as discussed above, meaning subscribers cannot select individual networks to receive.

At another level, the cable industry has grown wealthier as it has also grown more and more concentrated over time. Through the 1950s US cable was dominated by small, locally owned systems. However, during the 1960s a trend was beginning in which large corporations began to buy out the small systems (often when their local owners wished to retire or move on to other business ventures). These corporations are known as multiple-system operators, or MSOs. The logic driving MSOs is that the more systems one company owns, the more it enjoys economies of scale. In other words, it costs much less for a single company to operate multiple cable systems from one central headquarters than it would cost, cumulatively, for a number of individual systems to be operated separately. Today, two corporations, Time Warner and Comcast, control the vast majority of local cable systems in the United States. Additionally, cable MSOs have tended to be owned by other media or telecommunications conglomerates, thereby contributing to and benefiting from the synergy generated within those corporations (see Box 1.1).

Today's US direct broadcast satellite (DBS) industry is similarly concentrated, with two companies – DirecTV (owned by the News Corporation media conglomerate) and Echostar – providing all of the equipment and distributing nearly all of the programming. With DBS, however, the concentration has been more an effect of the daunting start-up costs than of capital accumulation over time.

Other National Media Scenarios

As discussed above, this book gives some brief attention to select multichannel television scenarios outside the United States. In order to fully understand the development of US television, it is essential to recognize that television developed differently in other nations. Some countries, particularly in Latin America, developed their television infrastructures according to the US model of commercial sponsorship. In fact, the US broadcast networks and other US-based media





20 Introduction

Box 1.1 Time Warner and Media Synergy

The 1989 merger of Time, Inc. (book and magazine publishers and owners of Home Box Office) with Warner Bros. (producers of movies and recorded music) heralded a new era for the entertainment and information industries. Not only was the newly merged Time Warner corporation able to combine its existing businesses, but it was in a better financial position to pursue newer media such as cable television, home video, and internet. Time Warner and similar merged media corporations that followed are called media conglomerates.

Media conglomerates are particularly well suited to benefit from the phenomenon of synergy, in which the effect of all of the components working together is more powerful than the cumulative effect of individual components working in isolation from one another (put more simply, “one plus one equals more than two”). Synergy usually results from a combination of windowing and repurposing. In windowing, a single media product such as a movie or television program can be “recycled” indefinitely through multiple distribution or exhibition venues (a movie, for example, appearing in theaters, then on home video, then on cable or DBS, and then on broadcast television). Of course, a media product needs to be produced only once, even though it can be used forever. And because a media conglomerate is likely to own many of the distribution or exhibition outlets that product passes through, the conglomerate has the potential to make money at each stage of the life of a media product.

Repurposing is similar to windowing, except that the recycling occurs not just with the actual media product, but also with the entire theme surrounding that media product. Thus the synergistic circle is broadened to include, for example, books related to a popular movie, television programs that use the movie’s characters in new stories, and video games based on the movie. With the rise of media conglomerates, people in the entertainment industries became interested in both the movie itself and its “franchise” – in other words, the ancillary opportunities brought about by windowing and repurposing.

In terms of synergy, it might be said that Time Warner hit the ground running in 1989. That was the year the movie *Batman* was





released (directed by Tim Burton and starring Michael Keaton, Jack Nicholson, and Kim Basinger). A glance at the home-video version of the movie's opening credits shows how much synergistic potential the movie had due to the holdings of the new conglomerate: story based on a DC Comics character, soundtrack released on Warner, records, and released for home viewing on Warner Home Video. In addition, the home video includes a commercial for the Warner Bros. catalog (featuring products with Bugs Bunny and his cartoon friends) prior to the start of the credits. Of course this movie has continued to benefit from its original synergy – not least in the form of subsequent Batman movies, each of which has been a franchise in its own right along with building the larger franchise.

Then in 1996, Time Warner merged with Turner Broadcasting, thereby adding several popular cable networks (including CNN, TNT, TBS Superstation, and Cartoon Network) to its already respectable stable. In 2001 it merged again, with America Online (AOL), to add a large array of internet services. These sorts of synergistic mergers and acquisitions will be discussed at length in Chapter 7.

companies were heavily influential in the launch of commercial television broadcasting entities in nations such as Mexico, Brazil, and Venezuela. Though it would hardly be correct to claim that television in these nations has developed similarly to that of the United States in the ensuing years, these nations rank high among the world's exporters of non-English television programming.

Other nations developed broadcasting under direct government control, sometimes as a mouthpiece for communist or totalitarian regimes. The persuasive, propagandistic potential of broadcast media is well known and has been relied upon heavily by those seeking either to gain or maintain political power. Not surprisingly, governments in these nations have faced more challenges as satellites (whose messages cannot be stopped by border patrols) make it possible for their citizens to receive programming from outside.

When nations in the developing world began to sever their colonial ties (political as well as economic), many quickly became totalitarian





22 Introduction

states. Others, though, sought to build more democratic broadcasting systems – only to end up filling much of their program schedules with inexpensive imported programs, primarily from the United States (and to a lesser extent, Western Europe). This planted the seeds for the cultural imperialism that would only be exacerbated as multichannel television technologies made it ever easier to import and export programs.

More prosperous nations, particularly those in western Europe, the British Commonwealth, and Japan, adopted some sort of “public service” model, in which broadcasting has a great deal of government oversight, but nonetheless has developed with a degree of autonomy from the government. The goal in this model is to make television service as universal and democratic as possible. Common features of the public service model include the following:

- Support through some form of taxation.
- Universal service regardless of population density.
- Efforts to make program selection reflect the ethnic composition of the population.
- A balance of entertainment with educational/informational programs.
- A goal of social improvement through the effective selection and balance of programs.
- Assured compliance with programming mandates through dedicated regulatory bodies.

Interpretations of the public service model vary among the different nations adhering to it. Because the public service type of media system operates independently of the particular government in power, or at least has provisions to reflect more than one political position, it has been somewhat resilient to changes brought by new media. Today satellite and cable television options exist alongside the traditional broadcast television channels in these nations. However, the newer media tend to conform more to the advertiser-driven model than to the public service model. The newer television options have caused the public service systems to make some compromises regarding their original mandates in order to remain viable, and many analysts doubt that the public service model has much of a future in the era of satellites and broadband communication.



Introduction 23

For many years, the public service model stood as an ideal for nations in the developing world as well. Not surprisingly, more democratic media began to be perceived as both vehicles for and products of more democratic forms of government. Unfortunately, nations desiring this sort of media reform faced huge economic obstacles that made indigenous programming prohibitive. It was much more feasible to import programs.

Multichannel television technologies have been both a boon and a burden to these nations. On the one hand, they can be an economical way to distribute indigenous programming where it is being produced. This is particularly true of nations with large territories such as Brazil, India, and South Africa. Countries such as these have been successful enough with indigenous production in recent years that they have become programming exporters. On the other hand, multichannel technologies have enabled cultural incursions on a scale previously unimaginable. National governments have attempted, with very little success, to stem the flow of transborder broadcast and satellite signals. The more alluring foreign programming is to people living in poorer countries, the less likely those countries will be to develop successful national television infrastructures.

This sort of globalization is probably inevitable – and not entirely lamentable. Those nations able to produce movies or television programs in any quantities at all now have the potential to have them seen all over the world, perhaps leading to greater cross-cultural understanding. Information products do, after all, flow both ways across national borders. However, historically these flows have been very uneven, with developed Western nations – particularly English-speaking nations, and more particularly the United States – providing a disproportionate amount of the programming. Moreover, by this stage precedents set by wealthier nations for what is popular and lucrative have become deeply entrenched.

Globally, multichannel television has tended to develop according to the American model of advertiser-supported programming, a model in which, critics have claimed, there is little room for taking artistic risks, addressing minority interests, or celebrating indigenous cultural traditions. Yet at the same time, television is crossing national borders more than ever before. Diasporic communities around the world have more access to television programming from their native countries, and the plethora of new cable/satellite channels, especially in the



24 Introduction

United States, increasingly fill their schedules with imported programming. It clearly is a different era from the one when cable was invented – both technologically and conceptually – in North America, as will be discussed in Chapter 2.

NOTES

- 1 A third subscription service, Sky Angel, also exists.
- 2 Interestingly, cable systems in communities without television stations of their own often carry the signals of network affiliate stations from more than one city. Thus a cable subscriber might be able to watch the same episode of *ER* on two different channels at 10:00 PM (Eastern and Pacific) and then find that at 11:00 PM those channels are carrying two different local newscasts.

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