CHAPTER 4

TEMPORAL ASPECTS OF MEDIA DISTRIBUTION

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Time is a scarce resource that is becoming increasingly significant to the media environment and media research. The temporal demands of modern society are placing increased pressure on individuals’ leisure time and media use, and simultaneously placing more pressures on media and their operations.

Ironically, these temporal pressures run counter to the milieu of the god of time and watchmakers, Chronus. In Greek mythology, Chronus was a Titan who ruled the universe during the Golden Age, a period noted for its tranquility and harmony, in which no work or other pressures interfered with contemplation and perfect happiness. But because that ideal state does not exist today, there is a good deal of concern in media circles about the time spent by consumers using media and media time use as a component of other time use (see, e.g., Becker & Schoenbach, 1989; Dewerth-Pallmeyer, 1996; Neuman, 1992; Nixon, 2000). Temporal issues

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also play a significant role in dictating the markets, substitutability, and productions of media.

This chapter focuses on the relations of time to the preparation for production and distribution of media products and services. In this regard, time is an economic factor that is limited by its scarcity. That temporal factor affects industry and company structures and costs in media industries.

In our discussion, we approach time in its linear conceptualization, extending backward and forward, as a measurable concept. We accept that the perception of time is highly structured by social conventions, and that its impact and meaning in terms of media markets and operations is affected by the dominant collective view of time in developed Western society.

We do not engage in a broader discourse of the nature of time. Thus, we lay aside the philosophical debates of Aristotle of whether time is motion, Plato and St. Augustine that time came into existence with God’s creation of the world, of Hegel and Kuhn that time is an illusion or a subjective part of perception, of Newton that time exists independently of events, and of Einstein that time is a means of understanding distance between events. Our use of the concept of time employs a determinate construct and how it affects the preparation and distribution of media products.

TEMPORAL ISSUES OF CONTENT PREPARATION TIME

Temporal issues regularly affect the preparation of content for distribution. The first and most evident issue is the deadline. The deadline, of course, is that hour at which content must be moved from those who write, edit, lay out, and design it to the actual processing and production for distribution.

In magazines, for example, this means the day on which content must be sent to the printers. In newspapers, it is the hour in which content must leave the newsroom so that printing activities can take place. In television news, the deadline means the point at which no changes will take place in a newscast unless an extremely important story is breaking and can be included. The issues of deadlines are probably more crucial in newspapers than in any other medium, because moving a deadline back to accommodate a major story immediately removes a deadline in those media that result in delays in production and distribution, but does not immediately incur costs in most cases. Similarly, moving a deadline in news agencies is done not by postponement of the general news or feature bulletin, but instead adding the delayed story at a later point. A similar mechanism is used in broadcast media.

When a newspaper moves a deadline back, however, the change increases the work time of content creation, editing, and layout for personnel, and nearly always, the printing, typesetting and circulation personnel to work beyond their scheduled hours. This creates additional—and often significant—wage costs. An hour’s delay can easily incur thousands of dollars of cost for even a small newspaper or tens of thousands for a large one.

4. TEMPORAL ASPECTS OF MEDIA DISTRIBUTION

Another significant temporal issue involves the effects of work shifts on when content is prepared for distribution. These work shifts create production and distribution cycles for individual media units at which specific activities take place at specific times (see Picard & Brody, 1997). In domestic newsrooms, work shifts are scheduled to meet the local demands for covering daytime events, contacting sources of news during regular office hours, and preparing content for distribution at its appointed times. International newsgathering is based on the activities that must take place at domestic bureaus or domestic media that provide coverage for news packages, so the work shifts of those bureaus or media play a role in when information is disseminated.

Except for extraordinary coverage, magazines, newspapers, television stations, and radio stations do not fully staff their content offices 24 hours a day. Even news services rarely staff bureaus throughout the day and partly staff regional news distribution centers on a full-day basis.

As a result, news that occurs overnight in Santiago, Chile, may not be prepared at a news bureau there and forwarded to a regional news center in Buenos Aires until the morning of the following day, unless it is the very large story warranting overnights efforts by the staff. Similarly, that news may be forwarded to media in Tokyo, Japan, but not prepared for broadcast or printing until the next day because it may arrive between deadlines due to time zone differences.

ISSUES OF PHYSICAL DISTRIBUTION TIME

Significant temporal factors affect the time required for media content to be transmitted to users. Print media face significant temporal issues in distribution, because physical products are involved and the issues are especially strong for newspaper and magazines. These issues also affect physical audio and visual materials such as CDs, tyles, and DVDs, but to a lesser degree than they do media providing contemporary information.

Daily newspapers, for example, require same-day distribution if content is to be current and competitive with other media information sources. In terms of distribution, this means that newspapers must be delivered in a timely manner to kiosks, newsstands, and other distribution points so that they are available to customers at the expected morning or afternoon period.

In many locations, reading and lifestyle habits require home delivery of newspapers. The simplest and easiest method that can be employed for this purpose is the use of the post. If local post offices require morning delivery, postal distribution can be problematic because local systems are unable to guarantee delivery prior to commuting or working hours. In many nations, including developed nations in Europe and North America, the postal systems are unable to guarantee delivery even same-day, much less early morning, distribution locally or nationally.

This presents a significant problem for newspaper firms, because the news content is typically 12 to 24 hours old when the paper is printed. If the
sions will be produced, and the subtitling or dubbing of video products. The temporal delays create problems for both industries. Recordings of popular artists made available for sale in the United States and Europe prior to their release elsewhere are often transformed into digital files that are available on the Internet and violate the copyrights of the songwriters, publishers, artists, and recording companies. These digital files lower demand for the recordings once they are officially released. Sometimes these Internet files include not merely single songs but all the songs on a CD. These files can be used to create counterfeit recordings for sale in regions where they are not yet available in stores, as well as cheaper recordings than the authorized versions available in shops.

The delays also promote pirated copies of motion pictures that are achieving success in the United States and elsewhere. These regularly appear in video or DVD form worldwide before their global theatrical release. Sometimes pirated video recordings of popularly anticipated films appear even before their initial release, because of the time between final edit and transportation of copies to theaters.

The temporal problems creating these delays are being addressed by major media firms and are an impetus toward greater globalization by major media firms.

THE PRICE OF PHYSICAL DISTRIBUTION TIME

As noted earlier, there is a link between distribution time and cost for media with physical form. This economic factor in distribution involves both costs for distribution services and the fact that providing distribution in less time is more expensive. As illustrated in Fig. 4.1, when the time available between completion of production and delivery is short, distribution costs are highest, but they decline as the time available increases. This occurs because when it is possible to take more time, the materials can be combined with other materials being shipped, to gain savings by efficient use of truck, rail, aircraft, ships, and other transportation methods.

A German book publisher who needs to deliver 20 boxes of books to a bookstore in London by 9:00 a.m. tomorrow morning illustrates this problem. To ensure on-time delivery, the publisher will need to use either an express delivery service or its own delivery personnel and truck to send the shipment by early morning. However, if the books are not needed for 5 days, a traditional freight delivery service can be used at great cost savings.

ISSUES IN DISTRIBUTION TIME OF NONPHYSICAL MEDIA

The actual distribution of physical products is not a problem for nonphysi-
cal media based on analog and digital signals. Nevertheless, such media encounter a variety of temporal issues. In broadcast media such as radio and television, for example, the broadcast distribution and reception of material by audiences is simultaneous, so broadcasters create and distribute material intended for certain audiences available at different times of the day. The possibility of targeting materials to those available in various dayparts allows broadcasters to seek audiences who are preparing to go or are already traveling to work in the morning, those who are at home or in their workplaces during the day, those who are traveling home in the evening, and the more general audience at home in the evening.

A certain amount of time shifting is possible if consumers use recording devices such as videocassettes or recorders, but temporal constraints essentially mean that most audiences receive materials when they are broadcast. Even when VCRs are used for time shifting, advertisers are wary of the value of the audience. This limitation has led to efforts by the broadcasting industry to find ways to create digital television on demand that will increase the agility and ease with which audiences can accomplish time shifting of reception. Thus, audiences can be more effectively measured for advertisers.

Broadcasting is also affected by time zones. A major sporting event, such as the Formula 1 race at Suzuka, Japan, will be run and broadcast in the day-
time in Japan, but the live broadcast will be received in the very early morn-
ing in Europe. These types of temporal issues are usually overcome by rebroadcasting later in the day or using a tape delay in which video of the event is received live by broadcasters but not distributed to their viewers until later.

The problems of time zones are problematic for media in nations that are geographically large on the East-West axis, cross more than one meridian of longitude, and have multiple time zones. In the United States, for example, when it is 7:00 p.m. in Washington, D.C., it is 4:00 p.m. in Los Angeles and 5:00
P.M. in parts of Alaska. Russia suffers similar problems in Yekaterinburg. When it is 7:00 P.M. in Moscow, it is 2:00 A.M. the following morning in Vladivostok.

These problems make it difficult to broadcast news and entertainment nationally without using local tape delays. Although tape delays are not a particularly significant disadvantage when entertainment programming is involved, they date the information involved in news programming. When the national evening news is broadcast in the United States, for example, it is broadcast live for the Eastern and Central portions of the country but then rebroadcast for the West Coast, Alaska, and Hawaii. In order to make the news more current, the rebroadcasts make the initial live broadcast, have dinner, and then return to broadcast both updated stories as well as tape-delayed portions of the original broadcast.

For global broadcast media, the differences in time zones present even more difficult operational problems when news and other time-sensitive information is involved. If the broadcast firm is large enough, such as CNN, it has the opportunity for 24-hour operations. Even then, because most news is created during daytime hours across time zones, global operations with a fixed broadcast base create work-shift and production cycle problems as the site of the global broadcast and separate the base from the daytime region in which news is occurring.

One answer to this issue is the creation of regional broadcast centers in three locations, each corresponding to a group of 8-hour time periods. These might be, for example, located in New York, London, and Tokyo. As the workday ends in one location, the primary broadcasting can be passed off to the next location. This process, borrowed for multinational corporations and some superpower government agencies, permits global 24-hour operations with primary staffing only during normal working hours but allows the full range of company services to be offered simultaneously everywhere in the world. This pattern of operation is increasingly being integrated into Cable News Network (CNN) and may appear more strongly in BBC World, Sky News, Deutsche Welle, NHK, and other operations at attempting to provide global, round-the-clock news operations.

News agencies—such as Reuters, Associated Press, and Agence France Presse have not yet adopted the revolving global operations model, although they distribute analog and digital nonphysical products. This is because the structure-tic news operations that feed regional news operations, and ultimately service global operations. As a result, the primary sources of news and information preparation and distribution are often in the same time zone as their centers rather than a global center that produces material for the regions and nations. As noted previously, this structure creates some delays in global distribution — unless the news is a highly significant story that incurs a special bulletin.

The Internet also presents temporal issues for major content providers. It has some of the immediacy of live broadcasting, but the age of its news and contemporary information typically falls somewhere between that of broadcasting and newspapers. This occurs for three reasons.

4. TEMPORAL ASPECTS OF MEDIA DISTRIBUTION

First, the time of distribution and time of reception are not simultaneous for most Internet media providers and audiences. Even active users of the Internet check for material primarily in the morning or evening, and sometimes during the day if they have computers with Internet access at their workplace. This means they go for hours at a time without attending to contemporary news or information that may be distributed by Internet content services. The hours of use is compounded by the physical connection required for use. Electronic manufacturers, however, are developing wireless applications to allow for mobile connectivity that can be used by individuals to acquire information when they are away from their computers.

Second, news and other contemporary information available on the Internet, with the exception of real-time financial data, is distributed by news services that gather and distribute information in a manner similar to their distribution of scheduled news bulletins to other media. As a result, news available by the Internet becomes dependent on the work shifts and work flows of media, so information may have been distributed as much as 24 hours prior to the report's Internet publication, depending on the news service. Admittedly, the majority of major news providers for Internet portals—such as the world's top news agencies—update material more frequently, but it is not unusual for the news to have been originally distributed 2 to 8 hours before.

Third, both commercial and institutional Internet service providers have been struggling with issues of service interruptions and reliability. Although the major service providers tend to have the best systems and servers, and often have backup systems that are used in the event of problems, service disruptions have not been uncommon in recent years. These typically delay the arrival of content material. Institutional service providers, such as universities and companies offering access through their networks, are not hampered by customer service demands of commercial service providers and tend to have fewer backup systems. As a result, it is not unusual for those who rely on such institutional service providers to find servers down for maintenance or other problems for significant periods of time.

Because of its global nature and the manner in which it spans time zones, the Internet presents temporal problems with regard to scheduling online meetings and events, downloading material, and other Internet-based applications. To help overcome this problem, an alternative time measurement, Internet Time, has been introduced. Internet Time is not based on time zones, and is not affected by daylight savings time changes. Instead, it divides the day into 1,000 beat counts. Although not quite the "star date" of Star Trek notoriety, Internet Time provides a workable means of overcoming some of the global temporal problems (http://www.swatch.com/intertime/).

TEMPORAL ISSUES IN MARKETING

The time required to market media products and services is related to the relations of media with consumers and the frequency of their publication or re-
lease. Marketing and promotional efforts for motion pictures, for example, begin prior to the beginning during filming, and increase in intensity during postproduction and release. Thus, the marketing of motion pictures is often a 2-year activity. This lengthy lead time for marketing is required because each film is an individual product and the audience for each film differs from that of previous films.

Similarly, the marketing time for TV programs ranges from 3 months to 2 years prior to broadcast. Depending on the nature of the program.

For programs resulting from acceptance of initial concept pitches to broadcasters, marketing the program to consumers will begin concurrently with the production of initial episodes. For a large-scale costume drama, miniseries, or similar production, marketing will also begin with production. A syndicated off-network program is made available to other broadcasters 1 to 2 years prior to broadcast, and consumer marketing may also begin 3 to 6 months prior to broadcast. As with films, television programs are individual products and need individual marketing. This requirement combines with the lead time for production and broadcast scheduling to result in long marketing periods for the products.

Books, audio products, and video media also offer individual products to consumers. These media require separate marketing efforts that typically begin 2 to 3 months prior to release, and continue if the release enjoys prolonged success.

Two types of print media do not enjoy significant lead time for marketing: newspapers and magazines. Because of the frequency of their appearance and the need to keep content contemporary, it is difficult for either to engage in significant marketing of the content of individual editions. The print media is engaged in counteracting this problem is circulated circulation.

By marketing subscriptions, these print media reduce the specific content choices of audiences and instead sell a branded consistency of type and quality of content. Most marketing efforts in such media go toward establishing and nurturing the brand image, subscription sales, and single-copy sales based on the brand rather than specific content. These activities help overcome the temporal problems of marketing media products that are frequently available.

Only a small amount of marketing effort goes to promotion of specific content, such as posters of the day's most intriguing headlines that are delivered to news agents along with newspaper copies, or posters of a magazine's cover that are delivered to kiosks and other sites that sell single copies of magazines.

CONCLUSIONS

Although a number of temporal issues affect the market structure and operations of media, the primary contributor is the time sensitivity of the medium or, more specifically, the content that is conveyed. Media industries vary greatly in terms of time sensitivity, reflecting the different roles they play for audiences. Differences in their relative sensitivity are shown in Fig. 4.2. These differences in sensitivity affect the locations from which audiences can be served; the production and distribution operations of media, and the substitutability of media.

The lessened substitutability of media is an important contributor to the structure of units of both a medium and media overall. Audiences desiring information when necessary are not well served by news magazines, books, or informational Cds. Individuals wanting contemporary information through news magazines are not well served by news magazines from other nations or regions because of the distribution time involved. Likewise, individuals needing a daily newspaper before 7 a.m. would probably not find newspapers from distant localities useful.

Temporal issues, then, are significant economic factors that affect the structures, competition, and marketing efforts of media firms. An understanding of their impact is needed to better comprehend the intricacies of media economics and the effects they have on the availability of content.

![FIG. 4.2 Time Sensitivity of Selected Media](image-url)
REFERENCES


