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The Popcorn Economy

Once the studios open their films in theaters across the United States and Canada, they have little control over how their products will be exhibited, since the chains that operate the multiplexes have their own economic considerations.

Back in the era of the studio system, the theaters, owned or controlled by studios, had a single purpose: to harvest admissions for studio films. To this end, they were vast palaces capable of seating several thousand ticket buyers at a single showing—the Paramount in New York, for example, could seat four thousand people—and to lure audiences to these films, they also featured on their stages live performances of famous singers like Frank Sinatra, big-name bands like Duke Ellington's, and chorus lines like the Roxy Ice Show. They could also extend the tenure of a film for as long as it generated money for the studio—sometimes nine months or more. Even the neighborhood theater, under this arrangement, acted as an outlet for studio products.

The multiplexes that replaced these theaters, most of which are owned by a handful of national chains, have a very different relationship with the studios. They are in three different, and sometimes conflicting,

businesses. First, they are in the concession business, keeping for themselves all the proceeds from the sale of popcorn, soda, and other snacks. Second, they are in the movie-exhibition business, showing movies and paying out a large share of the admission proceeds to the films' distributors. Finally, they are in the advertising business, selling time on their screens prior to movie showings.

Their principal profit comes not from selling tickets or screen advertising but from selling refreshments. Popcorn, because of the immense amount of popped bulk produced from a relatively small amount of corn kernels—the ratio is as high as sixty to one—yields more than ninety cents of profit on every dollar's worth sold. It also makes customers thirsty for sodas, another high-margin product, especially if it is heavily laden with salt. As one theater executive pointed out, adding extra salt to the topping is the "secret" to running a successful multiplex chain.

It is no accident that most theaters are designed to shepherd ticket buyers past the concession stand on their way to the auditorium. "We are really in the business of people moving," one theater owner explained. "The more people we move past the popcorn, the more money we make." He described the cup holder mounted on each seat, which allows customers to park their soda while returning to the concession stand for more popcorn, as "the most important technological innovation since sound."

This lucrative popcorn traffic is threatened whenever ticket sales decline. No matter what other merits a movie may have, or how favorable its reviews, multiplexes cannot afford to keep it in a premium auditorium if it does not generate enough traffic. Multiplexes usually move such movies to smaller auditoriums (if they are contractually bound to play them), reduce the number of showing times, or cancel them entirely. Here the interest of theater chains in maximizing their popcorn traffic and the interest of the studios (which do not share in the popcorn business) often conflict. Studios, who have already spent tens of millions of dollars in prints and advertising, want to keep their films in the larger auditoriums as long as possible so that they can earn back this investment. Even having their films and trailers shown in partly filled auditoriums is better than having them replaced by those of their competitors.

Studios therefore provide theaters a monetary incentive to extend films' showings, giving theater owners a progressively larger share of the

box-office take for every week the film plays. The usual arrangement is for theaters to keep only 10 percent of the box office the opening week in addition to a "house allowance," which amounts to a flat rental fee for their theater. With the house allowance factored in, the studio generally winds up with between 70 and 80 percent of the box-office revenue for the first two weeks. The theaters' percentage then increases, often by 10 percent per week, until by the fourth or fifth week the theaters are getting most of the box office.

Despite their smaller share of the opening-week's box office, multiplex chains generally stand to make much more money during that week because the studios' television advertising tends to attract a larger proportion of the main popcorn consumers: teenagers. After the advertising blitz stops—usually after the opening week—popcorn sales often begin to diminish. As a consequence, theater chains often move films out soon after the opening. In 2001 the average time a studio film remained in multiplexes was only three weeks.

No matter how strong—or weak—the opening, if the audience declines substantially by a film's second weekend, multiplex owners assume that the word of mouth is not sufficiently positive, and move quickly to either switch those movies to smaller auditoriums or replace them with newly opening films. This harsh fate applies even to films that had near-record openings—as was the case with *Godzilla*—and is even harsher for films that don't open well. Even when studios contractually mandate a minimum number of weekends, multiplexes can usually manage to cancel showings without any legal consequences, especially given that studios need to maintain good relations with them for the sake of their future films. (Occasionally, as with the movie *My Big Fat Greek Wedding*, the word of mouth continues to create an audience even after the publicity and talk-show interviews have petered out. But in most cases the audience wanes, and the multiplexes arrange to return the prints to the studios' film exchanges. For such films, it is the beginning of the end of their domestic distribution.)

For their audience-maximizing strategy to work, multiplexes require many auditoriums, or "screens," of different seating capacities. A film that generates a high volume of traffic can be shown on multiple screens at staggered times to produce a constant stream of consumers past the popcorn stand. *The Lost World: Jurassic Park*, for example, opened at

many multiplexes on four adjacent screens, with a starting time of every half hour.

Many multiplexes now have twenty or more "screens" of relatively small seating capacity. This development was greatly influenced by the Americans with Disabilities Act of 1990, which requires that theaters with more than three hundred seats provide wheelchair access to all the seats. Since providing such access requires about one-third more space for the necessary ramps, theater owners usually do not build auditoriums with more than three hundred seats. The minimum size is determined by the distance between the projection booth and the screen. Because this usually requires at least ten rows of ten seats, multiplex theaters rarely have fewer than one hundred seats.

Even with multiple screens, theaters are able to keep costs down by using a single projectionist for a number of films. Not uncommonly, one projectionist services up to eight movies, an economy of scale that saves seven salaries. While these projectionists are able to change reels for one film while other movies go unattended, in doing so they run the risk that the other films might momentarily snag in the projector and get burnt by the projector lamp. To prevent such costly mishaps, multiplexes frequently have their projectionists slightly expand the gap between the gate that supports the film and the lamp. As a result of providing this margin of safety, films are often shown slightly out of focus. "Efficiency requires trade-offs," in the words of one multiplex owner, who found in the case of his eight hundred screens that "audiences of teenagers don't care about blurry pictures so long as films are action-packed and loaded with special effects." The same assumption often leads multiplex managers to delay changing projector-lamp bulbs that do not produce the specified level of brightness on screens. By less frequently changing these bulbs, which cost over $1,000 apiece, multiplex chains can save hundreds of thousands of dollars a year. The result, of course, is that movies are darker than the directors intended.

While these "efficiencies" benefit the theaters, they can harm the studios, which depend heavily on positive word of mouth once a film opens. If the picture quality is degraded by out-of-focus and darkened projection, audience enjoyment—and therefore word of mouth—may suffer, and the movie will be less "playable" as a result. Studios, however, are dependent on theaters' cooperation and their standards when it comes to the quality of projection.

The theaters' advertising business also presents a potential conflict with the studios. Theaters earn substantial profits by selling screen ads that are shown during the twenty or so minutes between movies. A single firm, such as Coca-Cola, may pay chains more than $50,000 a screen annually to advertise its products. Since there are virtually no costs involved in showing ads, the proceeds go directly to the theaters' bottom line.

For their part, studios also have an obvious interest in advertising their upcoming films on the screens of theaters during that same brief period between showings. Since the studios do not pay the theaters to play trailers—an arrangement that dates back to the time when studios owned theaters—they are "free advertising," as one chain owner termed it.

Some of these trailers directly benefit the chains, since they promote films that are scheduled to open in their theaters, but others may not. For example, as noted earlier, teaser trailers may be for films that will open in rival theaters. Not only do such trailers potentially put theaters in a position of giving free screen time to advertising a film that they will not show, but they take up time that might otherwise be profitably sold to paying advertisers.

In any event, most films at the multiplexes produce rapidly diminishing returns as far as the studios are concerned. Not only does their share of box-office receipts decrease with every succeeding week, while the cost of repairing and servicing prints increases, but it becomes progressively more difficult for studios to collect their rental fees. Not uncommonly, theater owners, claiming grievances—real or imagined—withhold payments and ask the studios to renegotiate the deal. Since legal redress is generally impractical, and the chains' screens are needed for trailers to advertise future films, a settlement is usually reached or the debts just remain on the studios' books. As one former Fox executive noted, "At some point, it's cheaper simply to recall the prints."

Since theaters owners operate according to their own, popcorn-based economic logic, studios have to take this into account in making their movies. One concern is running time. If a movie's length exceeds 128 minutes, theater owners will lose one show an evening. On weekends this reduces the number of their evening audience "turns" from three to two,

on its word of mouth once the initial audience leaves the theater. Studios find negative word of mouth greatly diminishes future audiences, even the next night of opening weekends—a falloff that is especially pronounced with critical teenage audiences. Moreover, audience studies show that much of the negative reaction traces directly back to moviegoers' dissatisfaction with the way the story resolves itself at the end—for example, whether the hero's fate is life or death, love or rejection, capture or freedom. To avoid such potential badmouthing, studios test-screen early versions of their movies, often with different endings, among their target audiences. *Fatal Attraction*, for example, was test-screened with no fewer than four different endings. When a test-screen audience shows appreciably more dissatisfaction with the original ending than alternative endings, studio executives often require that directors change the ending.

For all its tensions, the popcorn economy is a reality studios have learned to live with. Indeed, in accommodating multiplexes, studios largely serve their own interests—especially if they manage to get the large opening-weekend numbers they've been hoping for: a large audience turnout is widely reported in the trade press and manages to impress the gatekeepers of foreign, video, and other ancillary markets.

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Alien Territory

Since a film's earnings from the domestic market are largely offset by the massive cost of the initial advertising campaign, studios have to look abroad to begin to earn back their immense investments. While they distribute their films in more than one hundred countries, just a few of those account for the lion's share of their overseas earnings. In 2003, eight countries—Japan, Britain, Germany, France, Spain, Mexico, Italy, and Australia—provided most of the foreign revenues for the major studios (Table 4). Consequently, the studios' principal focus is on these eight countries.

To ensure that their films are well situated in these markets, studios rely on distribution arms under their control. Two studios, Paramount and Universal, jointly control the largest overseas distributor, United International Pictures (UIP). This joint venture distributes, aside from the two studios' own films, the films of DreamWorks, USA, Lion's Gate, and other independent producers. The other studios have their own distributors—Disney's Buena Vista International, Sony's Columbia TriStar Film Distributors International, News Corporation's Fox International, and Time Warner's Warner Bros. Pictures International (which also distrib-

which means 33 percent fewer customers. Aside from losing revenue from the box office (which they divide with the studios), the theaters also risk losing a significant portion of the popcorn-and-beverage sales on which they depend for their profits. In the case of a major "event" film, such as Disney's *Pearl Harbor*, which is accompanied by massive publicity, multiplex theater owners may willingly take this risk, but in other cases they may elect to show films longer than 128 minutes in their smaller auditoriums, thereby reducing the chance that these films will draw a large opening-weekend audience. Consequently, studios often ask the director to cut the film so it will not exceed 128 minutes.

Another concern is ratings. For virtually every film, the MPAA issues a rating that theaters must abide by. Its G ("general audiences") and PG or PG-13 ("parental guidance") ratings permit anyone to buy a ticket to theaters. Its restricted ratings—R (for "restricted"), which excludes all children and younger teenagers who are not accompanied by an adult, and its NC-17 (no children), which excludes anyone under the age of seventeen—are usually assigned to a film if the rating board deems that the nudity in it is too graphic, the violence excessive, or the language too profane.

Restricted ratings can present a major problem for multiplex theaters, because they are legally responsible for excluding part of the audience. In practice, this means that some number of theater employees, who might otherwise be selling popcorn and soda, are required to check the identity documents of the teenage audience. These restrictions not only reduce the size of the theater's audience but can cause disputes with its regular patrons. To avoid this loss of business and the attendant inconvenience, especially during holiday periods when the audience is at its peak, many theater owners resist booking such films—at least in their larger auditoriums. In addition, if a film receives a PG-13, R, or NC-17 rating, Nickelodeon, Disney, and the other children-oriented cable networks will not accept TV ads for it. As a result, studios have found that the more restrictive the rating, the less money a film is likely to generate in the theaters.

So, before approving the release, studio executives consult with the rating board. Through negotiations that can be prolonged and arduous, they determine the words, images, or even entire scenes that may have to be deleted to get the rating they want. They then demand that the director or producer make the necessary cuts. Even directors who claim the right to make the "final cut," such as Oliver Stone, often comply. In the case of *Natural Born Killers*, for example, the producers received a detailed memorandum from the studio, Warner Bros., specifying objectionable material. Stone made the specified cuts, and the film was resubmitted, but the MPAA board then had further complaints. "In the end we had to go back to the MPAA five times and make a hundred and fifty cuts in the film in order to get the R rating that we were obligated to deliver," producer Jane Hamsher noted. "It completely destroyed the whole pace and rhythm of the film." In some cases these modifications are extremely expensive. To get an R rating for Stanley Kubrick's *Eyes Wide Shut*, Warner Bros. had to pay for a CG studio to digitally insert figures that obscured the full frontal nudity in an orgy scene. The bill for these digital fig leaves was anything but modest: it reportedly ran to more than $500,000.

A third concern for the studios is ensuring that films aimed at the critically important teenage male audience have enough action sequences not to disappoint it. Part of the studio's "mission," as one Universal executive put it, is to provide multiplexes "with movies, when school is out, that deliver the teenage male audience they need for their concession stands." Since the observation of test audiences of youth over many years has demonstrated that this particular audience heavily prefers action to dialogue, studios may require that directors add dialogue-free sequences to summer movies that lack the requisite quota of pure action. For example, after Universal had scheduled *The Bourne Identity* to open in June 2002, its executives discovered from test-group results that the film lacked the number of action scenes necessary to pull in a young, male summer audience, so they ordered director Doug Liman to reassemble the cast in Paris and shoot additional scenes, including a taut confrontation on a bridge, a blazing fire, and a gun battle on a digitally created five-story staircase. The additional studio-mandated scenes, which took two weeks to shoot, replaced almost twenty minutes of more cerebral scenes and gave the film the action-packed finale necessary to qualify it, at least in the view of multiplex owners, as a summer film.

Finally, beyond the goal of accommodating theater owners, studios also have a concern in creating a favorable perception of their products with moviegoers themselves, since the successful launching of a film depends not only on recruiting an initial audience through advertising but

TABLE 4. MAJOR STUDIO REVENUE FROM 8 TOP FOREIGN MARKETS, 2003
(MILLIONS OF U.S. DOLLARS)

Country	Theater Rentals
Japan	450
Germany	392
Britain	344
Spain	248
France	242
Australia	166
Italy	154
Mexico	124
Total, 8 Countries	2,120
Total, All Overseas Markets (Excluding Canada)	3,272

utes New Line and HBO films). These five international distributors, working either alone or through local companies, distribute almost all American films abroad. The only exceptions are so-called presales, instances in which a particular market is sold to raise financing. For example, the producers of *Terminator 3* sold the Japanese market to Tojo Films for $12 million, while the rest of foreign distribution went to Sony.

Like their domestic-distribution arms, the studios' international distributors book theaters, organize marketing campaigns, circulate prints, and collect money abroad. But unlike their domestic counterparts, they must design separate campaigns for each of the eight major markets. These markets, while potentially lucrative, are also far more complicated to service. For one thing, the distributors have to make sure that their films meet local standards. For example, in Germany, where American films accounted for over 85 percent of the box office in 2003, local censorship laws restrict theaters from showing realistic violence, though not nudity. In Italy, on the other hand, local censorship laws allow violence but not graphic nudity. Aside from attending to government censorship, distributors also have to make sure that no parts of the film conflict with religious,

social, or political taboos in any of the cultures in which they will be shown. Not uncommonly, the studios custom-edit films for different markets. In some cases, they may also add material—for example, Fox added a scene of a Japanese press conference for the Japanese version of *Independence Day*—but usually the reediting involves no more than deleting scenes that may possibly offend moviegoers in a particular country.

The distributors also have to deal with language barriers in most foreign countries. Not only do they have to dub or subtitle the films, but they must have the publicity material translated as well. These translations must be carefully vetted to make sure that the words or idioms do not carry any unintended meanings. The soundtracks then have to be remixed for each version.

Next the distributors need to make hundreds of new prints for all the major markets (with the possible exception of English-speaking countries, such as Britain and Australia). They need to insure them, ship them via air freight, and clear them through customs. This involves a huge advance investment. For *Gone in 60 Seconds*, the cost of foreign prints, shipping, translations, and customs clearance was $12.7 million.

Scheduling is also complex. Distributors have to take into account weather, holidays, and other particulars of different parts of the world. For example, in countries in Asia, Africa, and Latin America, which have many open-air theaters, rainy seasons can create what one executive termed seasonal "wastelands." Even in Japan, which has the highest admission prices in the world, many theaters lack air-conditioning, making them inhospitable venues in the torrid summers. As a result, distributors in Japan aim their films with the largest potential at dates in the holiday periods that occur during the cooler months, such as the winter New Year and the springtime Golden Week.

To get the choicest play dates, distributors often have to deal with theater chains that have a near monopoly in their region. In Japan, for example—which in 2003 provided American studios with one seventh of their total foreign revenues—two theater chains, Tojo and Schokeda, control about 90 percent of the theaters suitable for international films. Not only do they have what amounts to a duopoly of theater ownership, but they both also produce films for their own theaters. To persuade them to yield the better holiday dates to Hollywood films, the international distributors must offer them films with proven appeal to their principal au-

dience, which is teenagers. (To provide an alternative to the terms offered by the duopoly, one distributor, UIP, began building its own theaters in Japan in the 1990s.)

Finally, once the films are booked, the distributors have the Herculean task of organizing separate advertising campaigns in Europe, Asia, and Latin America. In each country, media buyers, advertising agencies, publicists, and a message or "hook" must be found for each film. Moreover, distributors have only limited resources for this job. Studios generally budget to foreign marketing only a fraction of the amount they budget for the United States and Canada. For one thing, advertising is less efficient at reaching foreign audiences than it is at reaching American audiences. "To get the same coverage of an audience abroad as America by television," one Fox executive said, "we would have to spend an extra fifty million a picture, and that would wipe out our profits overseas."

Consider again the instructive example of *Gone in 60 Seconds.* For North America, Disney spent $42 million on advertising and publicity. For the rest of the world, it spent $25.2 million. This latter sum included $6.5 million for Japan, $3.1 million for Germany, $2.5 million for Britain, $1.4 million for France, $1.1 million for Australia, $997,000 for Spain, $915,000 for Italy, $820,000 for South Korea, $769,000 for Brazil, $648,000 for Mexico, and $520,000 for Taiwan. The remaining $6 million was spent in sixty other markets. To increase these foreign expenditures to the level of American coverage, Disney would have to have spent, according to a producer's estimate, another $60 million.

Even in the most important markets, like Japan, Germany, and Britain, distributors rarely have enough money to blanket their target television audience the way they do in the United States. Overseas, even on their most promising films, studios usually cannot afford such exposures.

Consequently, the international distributors have little choice but to rely on unpaid publicity to supplement their paid advertising. The most effective vehicle for this is the fame of—and, ideally, appearances by—the films' stars. Not surprisingly, if films do not have major stars with international appeal, they often do not receive favorable play dates and consequently lose money abroad. Consider, for example, the 1997 drama *Midnight in the Garden of Good and Evil,* directed by Clint Eastwood. The film's principal actors—John Cusack, Jude Law, and Kevin Spacey—had only limited recognition in a number of foreign markets. The $39 million film opened in only a handful of theaters in Japan, Australia, Korea, Italy, Brazil, and other major markets; and even though the distributor, Warner Bros. International, spent $6 million for foreign advertising and prints, it produced only $3.1 million at foreign box offices, leaving Warner Bros. with a $2.9 million loss on its foreign distribution.

Stars with name recognition are the principal means by which studios can increase their share of revenues from abroad, especially if the stars are willing to make personal appearances. Often such appearances are stipulated in a star's contract. Arnold Schwarzenegger's contract for *Terminator 3,* for example, required that he "shall make himself available for at least ten days, including travel days (a minimum of seven days for foreign and three days for domestic) of publicity and promotional activities in coordination with the initial theatrical release of the Picture in both the domestic and foreign territories." The contract further specified that these promotional appearances would include "television and radio appearances, photo sessions, interviews, appearances at premieres, Internet appearances (i.e. online interviews and chat room sessions), and similar activities." (Even when contracts stipulate "without limitation," stars usually have the right, as Schwarzenegger did, to approve "the selection and scheduling of all promotion and publicity activities," a provision that gives them considerable discretion over when and where they will satisfy their contractual obligations.)

When studios cannot exert contractual pressure on stars to make foreign appearances, they must resort to an appeal to the stars' self-interest. Stars who have a share of the gross rentals, or even of the net profits, obviously stand to make more money if the film does well worldwide. In trying to make the case for stars' participation in foreign publicity, a senior executive at Fox used a PowerPoint presentation to demonstrate to stars' agents why studios could not afford to buy the same eightfold coverage of target audiences overseas that it bought in the United States. His message was that if stars did not cooperate by supplementing this limited advertising budget with their own free appearances, their earnings, and those of their agents, would be greatly diminished.

Whether or not this logic is accepted by stars, studios have been increasingly successful in recruiting them for publicity tours in some, if not all, foreign countries. "Studios now expect that for the twenty million

dollars they pay stars, the stars will help them open their films abroad," the head of a major talent agency explained. "Even if it's not written in the contract, it's part of the deal." When stars commit themselves in advance to such trips abroad, it helps not only with the publicity but also with distribution, since star attendance is an inducement for getting better opening dates.

A further wrinkle in the foreign-marketing game plan is that overseas publicity trips often occur a year or more after films have been completed, and overseas openings may occur many months apart. For stars, this usually means interrupting their work on newer productions to travel to far-flung parts of the world to publicize characters that may be no more than a distant memory to them. Even when they are supplied with private jets, large hotel suites, and other travel amenities, many stars find this aspect of their work "onerous," as one agency head put it.

Even with the strenuous demands of today's foreign markets, with all their particular requirements—not the least of which is finding stars who are willing and able to cooperate in complex marketing schemes in a half dozen countries—the benefits are deemed well worth the costs. Not only do successful foreign openings bring revenue into a studio's clearinghouse—indeed, in 2003 foreign revenue exceeded domestic revenue—but they also constitute a crucial part of the groundwork for the global video, television, and other licensing sales that follow the theatrical release.

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The DVD Revolution

In the days of the studio system, movies would play in first-run theaters and then, months later, migrate to neighborhood theaters. In the present system, movies play in multiplexes for only a few weeks and reopen months later in video stores. In an average week in 2002, some 50 million Americans—more than twice the weekly movie audience—went to one of the country's more than thirty thousand local video stores to rent a movie, spending some $24 billion, approximately four times what they spent on movie tickets. (The ratio was even higher abroad.) In addition, videos are now sold in supermarkets and other retail outlets. Sumner Redstone described it as "the bonanza that saved Hollywood from bankruptcy."

Although few would now dispute Redstone's assessment, initially the major studios did not view videos in such a favorable light. Indeed, when videocassettes were introduced in the mid-1970s, it will be recalled, the studios, led by Lew Wasserman at Universal, viewed the home video player (VCR) as a threat to theater attendance, which had fallen from 90 million a week in 1948 to less than 22 million a week in 1978. Concerned that home videos would further divert potential moviegoers from the-

aters, the studios attempted to strangle the new medium with litigation. They still failed to appreciate that the shift in the audience from theaters to home viewing was irreversible and consequently their future was in home entertainment. In 1979 Fox sold the video rights to its library for a mere $8 million to a company called Magnafilm (which it then had to buy back); Columbia, after rejecting a proposal to create a video division after its president, Fay Vincent, equated the video business with "pornography," assigned the video rights to its library to RCA; MGM sold the video rights to its library to Ted Turner; and Disney put its library of animated features off-limits to video.

If not for the iron-willed determination of Sony's Akio Morita, who fought the studios through the American courts and won, the VCR might not have become a ubiquitous part of American homes and there might not now exist a massive video market to support the very studios that tried to kill it.

The Video Revolution

Before that 1984 Supreme Court decision, less than 10 percent of Americans owned VCRs, and a large proportion of the videos they watched were either pornography or exercise tapes sold by small stores (often located in low-rent areas, which did not concern themselves with the legal nuances of the appellate process). As the video business developed over the next two decades, the studios adapted their marketing strategies to accommodate it. Initially, the studios had little choice but to accept the fact that most Americans preferred to rent videos for a night from neighborhood stores rather than buy them. Nor could they exercise any real control over the pricing policies of the stores, since the first-sales doctrine, which had been upheld by American courts, gave buyers the right to rent, share, or resell goods they had bought. The studios therefore priced their titles so high—often $100 or more—that, although few individuals could afford them, stores could buy them as rental copies and make back their investment by renting them over and over again to consumers. Typically, stores would order titles only once from wholesalers, which would buy large quantities of titles soon after the openings at a discounted price of between $60 and $85 a copy. Since it cost only a few dollars to manufacture and package a video, and orders for popular films could amount to

hundreds of thousands of copies, the rental business, despite Steve Ross's early doubts about a business in which studios had little if any control over the renting of its products, proved highly profitable for the studios.

By the late 1980s, Paramount experimented with an alternative strategy for selling videos by pricing them low enough for consumers to buy rather than rent them. Its first success, *Top Gun,* was priced wholesale at only $12—about one sixth of the price that rental stores usually paid for rental videos. To make up for the lower price, Paramount obviously had to sell at least six times as many copies of *Top Gun* as the 200,000 or so it would have sold in rental copies priced at $72. As it turned out, the gamble paid off: *Top Gun* sold 3 million copies. This "sell-through" strategy, as it came to be known, was usually reserved only for enormously popular films, which held the prospect of selling millions of copies. Even though the right title could sell more than 5 million copies, studios preferred not to take such a risk on most of their films. (The exception was Disney, which found it could sell enough copies of its children's films in its theme parks, Disney stores, and other outlets to justify the risk.) As a result, except for a handful of films priced as sell-throughs, video stores continued to buy movies at the higher price, and they seldom bought enough copies to service the huge demand when titles were first released.

By the late 1990s, it will be recalled, Sumner Redstone introduced yet another strategy, called revenue sharing, to address this bottleneck in supply. Under this new system, in which the studios license—or, in effect, lend—large numbers of copies to video stores for a cut of the rental fees. Redstone's innovation, which he persuaded all the other studios to implement, finally gave the studios a large measure of control over the rental business.

Enter the DVD

The digitized version of the video, or DVD, was the result of a happy marriage between American studios and Japanese electronics manufacturers. The same laser technology that Sony and Philips had developed in 1982 to read indentations and nonindentations on a CD as either a 1 or a 0 was not limited to music. It provided the high-tech equivalent of a cooking recipe to store any information in a way that it could be used over and over again without diminishing its quality. Although Sony had succeeded

in digitizing images on tape by the mid-1980s (marketing a professional digital video recorder in 1986), it confronted a formidable stumbling block in putting a full-length movie on a CD-size optical disc: storage space. To get the huge amount of information to fit in digital form on a six-inch disc, it had to be compressed through a technology called digital signal processing in such a way that there would not be a noticeable loss in picture quality. This digital wizardry, in turn, required powerful computer chips and circuitry that in the mid-1980s was still too expensive to be incorporated in products for the consumer market. So while Norio Ohga, Morita's brilliant protégé and successor, recognized the "limitless possibilities" of video digital technology—and even moved to acquire content for it in the late 1980s—its full implementation would have to wait until the 1990s, when the exponential growth in computer power—and falling prices of chips—made practical a home player for the audio-video digital disc or, as it would eventually be called, the DVD.

Even though Sony (with its partner Philips) held the crucial patents on the digital audio portion of the CD, it was not alone in pursuing the DVD. Sony's rival Toshiba was on a similar track. Its research engineering team had envisioned the possibility of the DVD as early as 1982, and in the early 1990s, Toshiba entered into negotiations to buy part of Time Warner Entertainment for $1 billion. Such a "strategic partnership" would give Toshiba access to one of the largest libraries of Hollywood movies, which would greatly facilitate the successful launch of a new video product. To further this alliance, Toshiba dispatched Koji Hase, the executive who had been largely responsible for Toshiba's huge success with a similar optical disc for computers, the CD-ROM. Hase then met with Warren Lieberfarb, the president of Time Warner Home Entertainment, in his office in Los Angeles.

Fortunately for Hase, his proposed disc answered a concern that Lieberfarb had independently identified: the inferior picture quality of VHS compared to the new digital satellite broadcasting that had recently been introduced in the United States. Hase explained that the digital disc not only could produce as good a picture as satellite television but that it would contain features that satellite broadcasting could not offer, such as pausing the film, skipping to scenes, and replaying. Lieberfarb recounts, "I asked if they could get 135 digital minutes [on a disc]?" When Hase answered affirmatively, Lieberfarb extended the meeting by nearly five hours and invited Hase for dinner. By the time Hase returned to Tokyo, he had managed to get Lieberfarb's commitment to put the full weight of Warner Bros. behind the project.

Toshiba still had to meet Lieberfarb's requisite of squeezing an entire movie on a two-sided six-inch disc, which took until 1993. By this time, however, Sony and Phillips had also developed a six-inch digital disc for video that, although it had less storage capacity, had the advantage for personal computers of being single-sided. Meanwhile, another Japanese electronic giant, Matsushita, which had bought Universal (and therefore also had access to a large library of movies), likewise had plans to launch a version of the DVD.

Lieberfarb concluded that a digital format war between Japanese hardware manufacturers would be disastrous. Not only would it confuse consumers but stores would resist carrying two versions of the same movies. If the DVD was to succeed, it had to have a common format. So he personally called the heads of the home entertainment divisions of the major studios and asked them to join Time Warner in a common front called the Ad Hoc Studio Committee. All accepted, although Fox declined to meet with the other studios because, as one executive later explained, "it could be considered an antitrust violation." Such concerns did not stop Lieberfarb. He had the group not only demand a single format but issue a "wish list" that favored the Toshiba format. He then warned Sony that the U.S. Department of Justice might intervene if Sony used its control of its CD audio patents to block acceptance of a common format. Under this pressure, Sony and Toshiba (as well as other Japanese manufacturers) convened in Hawaii in August 1995 and agreed on a single format for the digital versatile disc, or DVD, on which they would all share the patents.

The introduction of the DVD in 1996 was, as one studio executive put it, "the beginning of the end of the video rental system"—a system that had dominated the home video business since its inception. The appeal of renting a DVD is diminished both by its vulnerability to dirt particles and scratches from mishandling (since, unlike videos, it is not contained in a cartridge) and its relatively low retail price (which a consumer can weigh against the hassle of returning rentals as well as the cost incurred by late fees). In addition, unlike VHS tapes, which must be recorded, DVDs are stamped out, allowing them to achieve much greater economies of scale if millions of copies are sold for the global market. To get this volume, Time Warner and Sony, which together supplied almost all the titles dur-

ing the initial year, elected to price DVDs as a "sell-through"—typically $14 to $18 apiece—and that strategy was adopted by the industry. The studios therefore now earn all their money on DVDs from sell-through sales (although video stores can still rent the DVDs they buy at this price).

At Viacom, this DVD-pricing strategy created a direct conflict between its Blockbuster Entertainment division and its Paramount division. Blockbuster executives, fearing that the sell-through policy threatened the viability of its ten thousand video stores, opposed Paramount issuing any titles on DVD. Consequently, Paramount movies did not appear on DVD for over two years.

In 1999, DVDs represented 11 percent of the studios' home entertainment revenues, and video rentals represented 30 percent. By 2003, DVDs represented 76 percent of the studios' home entertainment revenues, and video rentals represented only 6 percent. As Table 5 demonstrates, the video rental business was rapidly eroding (though it still produced more than $1 billion in revenue for the studios in 2003).

With home entertainment now mainly a sell-through business, the video (either DVD or VHS) is usually announced only a month or so after the film ends its run in theaters, with the release scheduled some three to six months later. Aside from the posters and other paraphernalia provided to video stores, the studios spend little money advertising videos, and stars are rarely, if ever, called on to publicize them. Instead, the studios rely on the lingering awareness created by the theatrical advertising campaign. Since studios assume that this residual awareness will diminish over time, they have a powerful incentive to get movies into video stores while some residue of the television advertisements and publicity appearances still exists in the public's memory. "It may seem perverse," a studio marketing executive said, "but the more successful the marketing campaign, and the bigger the opening-weekend gross at theaters, the greater the pressure to move the movies to video." *Terminator 3*, for example, opened in theaters in early July 2003 in the United States and Canada and in other major markets around the world in July and August—and was released on video and DVD on November 4, 2003.

The quick move to video is, if anything, even more pronounced with less successful films. Warner Bros., after spending $27.6 million on television advertising for *Midnight in the Garden of Good and Evil*, truncated

TABLE 5. THE STUDIOS' VIDEO INCOME, 1999–2003
(BILLIONS OF DOLLARS)

Year	DVD	VHS Sell-through	VHS Rental	% Rental
1999	1	5.2	3.4	35
2001	5.7	4.1	2.6	21
2002	10.4	4.1	1.8	11
2003	14.9	2.7	1.3	7

the theatrical run of the film—which produced only $10.3 million in ticket sales—to move it speedily into video stores, where it brought in $24 million. Unlike in the bygone studio system, when a film's success could be measured by the length of its run in theaters, now a film depends for success on its video release, which often benefits from following close on the heels of the theatrical release. Thus, both the studios and theater-chain owners, who, it will be recalled, seek to improve popcorn sales by getting new films, benefit from shorter theater runs for movies.

The international market for videos works much like the domestic market, with the video released in foreign countries keyed to the theatrical release. Since translations, dubbing, subtitles, reediting, and customs clearance usually have already been done for the theatrical release, there is little additional expense entailed in preparing the foreign videos; advertising is mainly left to the stores.

Although DVD players are still establishing themselves in American households, they have already proved the most successful new consumer product since television (see Table 6). Even before the DVD had completed its penetration of American homes, it had "radically changed the equation of the movie business," as one Viacom executive put it. Although less than a decade earlier Sumner Redstone had made the case that the Hollywood studios depended for their survival on the video business of Blockbuster Entertainment, Viacom moved in 2004 to divest itself of that business. With fewer potential buyers coming into video shops to rent and return videos, they were becoming far less important than mass

TABLE 6. DVD PENETRATION, 1998–2003

Year	TV Households (millions)	DVD Households (millions)	Penetration (%)
1998	99.4	1.2	1.2
1999	100.8	4.6	4.5
2000	102.2	13	12.7
2001	105.2	24.8	23.6
2002	106.7	38.8	36.4
2003	108.4	46.7	43.1

merchandisers for studio sale of DVDs. The studios now needed sought-after shelf space from retailers such as Wal-Mart, Best Buy, and Circuit City.

These retailers have different interests than video shops, however. They often use DVD sales not as an end in themselves but a means to an end: building "traffic" for other items in their stores. Indeed, DVDs are often sold for less than their wholesale price as "loss leaders." For this strategy to work, retailers select titles that they think will attract shoppers likely to buy other, more profitable store offerings. For example, Wal-Mart makes it a policy to vet DVDs, videos, and CDs according to its own standards with regard to profanity, sexual imagery, or anything else that it deems potentially offensive to "family values." If studios want the premium shelf space at Wal-Mart—which sold over $5 billion worth of DVDs and videos in 2003, making it the studios' single largest source of revenue—they have to take into account its standards. According to a top executive at Warner Bros.' home-entertainment division, these standards sometimes can be accommodated by simple changes in scripts, such as "substituting bloodless kung fu fights for more realistic ones" or, in some cases, "slightly modifying the story line." Still, this means that studios are now altering their products not just for theater chains but for retail chains as well. As the Warner Bros. executive further explained, "Movie producing can no longer be directed solely at theater audiences."

The immense storage capability of a DVD disc has further changed the home entertainment business. For one thing, studios can include on a

DVD material not in the movie itself, including music videos, trailers for other movies, games, deleted scenes, and director's commentaries. (Some "extras" are now shot just for the DVD.) By adding such features to past releases, studios can label them "special editions" and sell them as new products. In 2003, Disney, for example, added to the DVD "special edition" of its 1994 film *The Lion King* two hours of new material, including a second version of the film (only one minute longer than the original), an "all-new song," four animated games, deleted scenes, a director's commentary, and the music video "Can You Feel the Love Tonight," performed by Elton John. The DVD sold 11 million copies (and brought over $200 million in new revenue into Disney's clearinghouse).

The DVD also gave new value to the studio library. Initially, when studios controlled the theaters, their libraries made their money by redistributing major movies in theaters. Television largely put an end to reruns in movie theaters and, by the 1960s, the studio library's main business was licensing old movies—and later the television programs they produced or acquired—to local television stations. The VCR then provided studio libraries with another source of income: selling older titles to video stores. But since video stores bought very few copies of older movies (which they then could rent out thousands of times without any additional payments), it provided little profit.

The DVD proved to be a very different story. Because of the ease with which a viewer can navigate to any part of the disc, they provided studios with a ready market for collections from their libraries. Paramount, for example, combined its 1972 film *The Godfather*, its 1974 film *The Godfather Part II*, its 1990 film *The Godfather Part III*, and a 1971 promotional documentary entitled *The Godfather Family: A Look Inside* into a new DVD boxed set. The permutations for combining such material—including sequels, publicity interviews, featurettes, trailers, screen tests, and deleted scenes—provides endless possibilities for finding new profits from library titles. One top studio executive explained to *The Wall Street Journal*, "We realized we could drive the value of the library by constantly repromoting and repackaging titles in new ways."

The DVD format also offers studios a new means for mining new gold from their television libraries. The "season-in-a-box" DVD sets have allowed them to extract huge profits from both recent seasons of series, such as *The Sopranos*, as well as from decades-old material, such as the

1966 season of *Star Trek*. As a result, library sales have surged, accounting for nearly one third of the enormous stream of DVD revenues by 2003. "It is found money," one executive explained, especially because "older titles don't generally have big talent payments."

The dawning of the DVD format greatly brightened Hollywood's big picture. Although the now ineluctable transition from videotape to DVD was still only barely past the halfway point in 2004, it had already enhanced the fortunes of the studios by generating a raft of lucrative new products repackaged from bygone movies, television series, and other intellectual properties they had amassed in their libraries. Indeed, since the introduction of the DVD, Time Warner's library had appreciated by an estimated $7 billion by 2004, according to an executive of its HBO unit. Other studios with large libraries have presumably enjoyed a similar windfall. That this multibillion-dollar enrichment may be less visible to the outside world than the highly publicized losses proceeding from box-office failures does not detract from the increasingly important role it plays in the new Hollywood.