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Entertainment Product Decisions, Episode 2: Search Qualities and Unbranded Signals

As we have argued above, the quality of the entertainment experience is important because it determines the “playability” of a product. However, it is only one piece of a more complex commercial-success puzzle. Playability is complemented by the “marketability” of entertainment, which is not determined by experiential product quality (at least not solely, and not even directly)—because the consumer has yet to experience that quality first-hand when making a decision about its adoption. Instead, marketability is driven by the information about a product that is available to consumers when making that adoption decision.

In addition to holistic “substitute cues,” such as word of mouth and expert reviews, consumers can glean information from some observable elements of the product itself to make such consumption-related decisions. Among the very few “true” search quality attributes that entertainment products possess, we will study the role of technological attributes (such as 3D and virtual reality features) in this chapter.¹⁵³ But there are other

¹⁵³One other product element that constitutes a search attribute for some kinds of entertainment deserves a special mention here: the *packaging*. An entertainment product’s package can add value on its own, such as the utility and coolness of a special DVD box set (Plumb 2015 lists some impressive examples). Packaging may also be a hidden force that contributes to the current revival of vinyl albums—one of this book’s authors (guess who!) has a history of collecting vinyl soundtrack albums for his most beloved films. The topic of packaging in this section overlaps with our discussion of digital technology when we describe the value of the physical package for haptic qualities that digital versions lack. But the main commercial relevance of packaging in entertainment comes from its informative and communicative capabilities, which we discuss more thoroughly later in the context of communication.

informative elements beyond such search qualities that are much more interesting to us here and, hopefully, also to managers: *signals* of an entertainment product's quality that scholars often refer to as "quasi-search attributes." These signals are not part of a product's actual, "objective" quality, but rather serve as inferential cues for consumers about this quality.

What exactly are such signals, or quasi-search attributes? The present chapter focuses on categorical attributes of entertainment products, such as a product's genre and country of origin—attributes for which consumers can hold strong cognitive and emotional associations and which differ between alternative offerings. Whereas these categorical attributes provide information and orientation, they are, unlike specific brands, rather broad and abstract quality "categories," which somewhat limits their influence on consumers, as we will see. In addition, their categorical nature prevents managers from shaping an attribute like this as is possible for brands, but their inclusion can still take an essential part in an entertainment marketing strategy. In the chapter after this one, we analyze what we consider "branded" signals of entertainment quality, including sequels and stars.

But first, in this chapter, let's now take a look at technology and its role as a rare "true" search quality, followed by a discussion of a number of key "unbranded" signals of entertainment.

Technology as a Search Attribute in Entertainment

"It's not the technology that entertains people, it's what you do with the technology."

—*Director and Pixar executive* John Lasseter (2015)

One notable element of entertainment products that is observable before consumption and that conveys useful information to consumers (and, therefore, can function as a search attribute) is the use of technology. The histories of entertainment and technology are tied together closely; each of the entertainment products we discuss in this book has undergone fundamental technological changes since its invention. Our goal here is not to provide a historical overview of such changes, but instead to highlight *Entertainment Science* research that helps to explain more recent technological developments and help managers to assess the relevance of such technologies and their potential impacts on the commercial success of entertainment products.

So, what factors influence whether a newly created technology will pay off for a producer of entertainment? Let us first clarify that in entertainment almost any new technology (at least any successful one) diffuses across products and companies, becoming generic and industry-wide. For example, 3D technology is not exclusive to a single movie but utilized by many of them. The Fusion 3D Camera System developed by James Cameron in cooperation with his business partner Vince Pace and with help from Fujifilm and Sony has been used in more than 20 major movies (*Wikipedia* 2016). The reason is the short life cycle of entertainment products which prevents product-specific technology from being lucrative; this is a major difference that contrasts with industries with longer life cycle products, such as in health care. But nevertheless, technology is almost always first developed with a specific product in mind, just like Cameron created the Fusion cameras for his *AVATAR* film. And quite often, this first product's success determines not only the career paths of its makers, but also the technological innovation's licensing potential.

We identify three key factors that influence whether a new technology as part of an entertainment product will facilitate that product's success. Because our perspective in this book is one that puts customers at the core of all things, the first factor that determines whether an entertainment product can profit from a new technology is the *customer benefits* it offers. Does the new technology offer consumers meaningful increases in the level of pleasure they derive from experiencing the entertainment product, compared to alternative products that use the existing technological solutions instead? Technologies (in entertainment and elsewhere) are developed by engineers who tend to be biased toward optimizing the "objective" quality of products, but it is the "subjective" character of quality—as perceived by consumers—that determines whether a technology can influence a product's success.

Technological innovations are effective if they heighten the level of sensory stimulation and trigger sensations (Holbrook and Hirschman 1982), making entertainment experiences richer and more engaging (Netflix's Gomez-Uribe and Hunt 2015). Technologies can offer consumers pleasure by intensifying already existing sensory stimuli (e.g., better sound quality) or by adding new sensory stimuli (e.g., adding the sound element to silent movies).

As large parts of the entertainment industry lack a customer focus, we consider this factor the primary reason why so many seemingly promising technological developments have failed to change the game—they have been embraced by entertainment managers for their "coolness" or engineering quality, but not for their potential to make movies, games, or novels more fun.

Hollywood legend George Lucas appears to agree when he says that a “lot of the hype on new technology is overhyped” (quoted in Patton 2015).

A second important factor is the technology’s *costs*: are the incremental revenue potentials associated with the new technology (i.e., higher sales volumes and/or higher prices) sufficient to cover the costs for its development and implementation, not to mention to compensate for risk? Depending on the creator’s time frame, costs can be considered for a single product, a slate of products, or (if the technology is to be licensed to other producers) an industry-wide rollout of a new technology—as it eventually happened for Cameron and Pace’s camera technology.

Third, the *infrastructure required* for the benefit-generating use of a new technology needs to be considered. Even if consumers tend to like a new technology, in general, the technology’s effective usage can suffer from insufficiently developed framing factors. A new CGI-producing software might be limited by the capabilities of the hardware it requires (“production infrastructure”—think of the early low-quality computer-generated special effects), the network of consumers that own the required hardware (“network/platform infrastructure”—see our discussion of indirect network effects in our chapter on entertainment market characteristics), and the “supply/distribution infrastructure” (i.e., is the number of movie theaters equipped with 3D projectors sufficient to exhibit my 3D movie? Are consumers able to stream movies in HD over the Internet?).

Director James Cameron delayed his *AVATAR* film for several years, advancing the motion capture technology so essential for his film. In contrast, the producers of *THE POLAR EXPRESS*, while being able to use a well-developed animation method, had to face severe supply limitations—very few movie theaters were able to show the digital 3D version of the film, which was the first of its kind back in 2004, so that the film’s rollercoaster attractions appeared pretty flat for the majority of audiences.

In what follows, we discuss a number of key findings from *Entertainment Science* scholars that shed light on the role and contributions of new technologies for the different forms of entertainment that we feature in this book.

Technology and the Quality of Games

No entertainment product category is more closely tied to technology than games. Technology is the very essence of video games; their inherent nature is embedded in technology and they cannot be consumed without a proper

device at hand. Technological innovations began with vector graphics (versus pixels) in LUNAR LANDER and then proceeded to range from the use of a three-dimensional perspective (first employed in 3D MONSTER MAZE) to the motion-capture capability used for Wii SPORTS. Today, crucial technologies include Augmented Reality (AR) and Virtual Reality (VR). Whereas AR uses technological means to add to and/or modify consumers' perceptions of the real world, VR replaces the real world with a fictitious one into which the consumer is transported/immersed.

Regarding VR effects, research evidence demonstrates that virtual reality hardware devices, such as head-mounted displays, can increase consumer immersion when used for games. For example, Nichols et al. (2000) compared the immersion perceptions of 24 students who played a "duck shoot" game in a virtual reality setting (using a head-mounted display) versus those who played the game in a desktop setting. The scholars found reflex responses to be higher and background awareness lower for the VR condition; VR players also rated several measures of immersion more highly (differences ranged from around 15% to over 25%).

But there's a catch: other studies of VR have observed nauseogenic or disturbing reactions by players, particularly after consumers have been exposed to the VR condition for more than 45 min. For example, Cobb et al. (1999) report "serious" sickness symptoms for seven out of 148 participants across a number of VR experiments, and "minor" and "short-lived" symptoms for the majority for the rest of the participants. Nichols and her colleagues also ran a study with a 20-minute "virtual house" simulation, noting substantial feelings of nausea and disorientation among participants. Finally, Lin et al. (2002) report similar findings from a study using a driving simulator. Note that these findings tend to be rather old, so that the observed negative reactions might be triggered at least in part by lower-resolution and -frame rate devices which have been replaced today.

So, how will VR impact consumer enjoyment, and for which consumers—what is the net result of VR's presence-enhancing capability and potential negative effects? A recent experiment by Shelstad et al. (2017) offers some insights: when the scholars let 40 undergraduate students play in sequence a VR-enhanced and a standard version of the commercial "tower-defense strategy game," DEFENSE GRID 2, using a state-of-the-art Oculus Rift headset and a 24-in. monitor, respectively, they find that the overall satisfaction with the experience and the participants' enjoyment are significantly higher for the VR-enhanced game version (by 6 and 10% on average). It is unclear though how closely these results are tied to the specific game and hardware used in the experiment and the people that participated in it.

Producers will have to continue to improve the technology, reducing potential sickness effects (which Shelstad et al. did not measure separately) with even higher-resolution tools, while increasing the fun of using VR. But higher levels of realism are not necessarily a good thing in this context: in Lin et al.'s study, enjoyment does not increase with higher realism, while sickness increases. A challenge for the technology might be the way it was presented in extant works of entertainment: we doubt that consumers' expectations toward the performance of VR, shaped by uber-impressive science-fiction versions (think: STAR TREK's holodeck, the MATRIX's *deja vues*, but also the limitless virtual "OASIS" simulation in the novel READY PLAYER ONE and its big-screen adaptation by Steven Spielberg), will be met by real life products anytime soon. Thus, satisfaction and the benefits consumers' perceive might be limited by those unrealistic expectations for quite a while (*The Economist* 2017a).

The commercial potential of AR technology is even more difficult to isolate empirically. Designing an authoritative, generalizable study is a challenge because of the endless range of possible applications of the technology (which part of the real world should be enhanced? How?) and the difficulty of choosing a meaningful alternative condition (i.e., non-AR). But the release of the POKÉMON GO app game on Android and Apple smartphones in July 2016 indicates that AR can offer attractive benefits for consumers: in the week after its release, the game, which lets consumers search their "real-world" neighborhoods to track down virtual creatures, was installed on more than 10% of all North American Android smartphones and played by more than half of the users on a daily level (Perez 2016).

In an analysis of the POKÉMON case, Tang (2017) attributed the game's success to the fact that the AR technology enabled users to "fulfill their [childhood] dreams [of becoming Pokémon trainers] in reality"—in other words, combining the AR sensations with the attractions of high familiarity. In a rare scholarly experiment, Avery et al. (2016) tested consumer reactions to a self-developed outdoor AR game ("SKY INVADERS 3D") and compared them to consumer reactions to a desktop version of the game. Their results, based on 44 student participants, showed a higher level of enjoyment for the AR version, but the difference was not significant; however, replay intentions were significantly higher for the AR version.

Overall, whereas AR's immersive potential might be limited compared to VR, its adoption does not appear to be accompanied by the negative side effects that scholars have observed for VR, a difference that might be important for a broad acceptance of the technology. In predicting that AR "is going to become really big. VR, I think, is not gonna be that big, compared to AR," Apple's CEO Tim Cook is not alone (quoted in Strange 2016; see also *The Economist* 2017b). And the analysis by Ailie Tang which suggests that partnering AR

with strong, emotion-laden brands can offer consumers strong benefits, may guide the way for future adaptation of the technology in entertainment. The rather short-lived nature of the POKÉMON GO hype might raise some questions, though; in November 2017, the search volume for the game was only about 2% of what it was four weeks after its release 16 months earlier.

Finally, can the enjoyment of games also be enriched by olfactory stimuli (i.e., smell), maybe in combination with VR? Howell et al. (2016) ran a very small-scale within-subjects experiment with six consumers, who participated in a VR simulation (using the Oculus Rift head-mounted display) showing a bowl of oranges. The researchers found that adding the scent of oranges to the environment resulted in only small increases in immersion for four participants, with no increase for the other two. Future studies might trigger different results, but these very preliminary findings do not instill much hope that entertainment's somewhat less-than-impressive history with olfactory stimuli will change anytime soon.

Technology and the Quality of Movies

Technological advances have also played a big role in movie producers' (and distributors') efforts to increase the sensory stimulation (and, eventually, consumer pleasure) from the movie-watching experience. Some of those attempts have been highly successful: consider the addition of sound ("talkies") to what was before a visual-only experience, then the subsequent progression through mono soundtracks, stereo, and surround sound (Block and Wilson 2010). The addition of color to a medium that had consisted of black-and-white images was also a game-changer.

The success of many action, science-fiction, and fantasy films has been tied to innovative special effects—which enable consumers to be transported into mythical worlds (the dinosaurs in JURASSIC PARK, the movie), but can also serve as attractions on their own (the same could be said for games, by the way). Innovative special effects can also facilitate the transfer of heroes and visions from other entertainment categories, as has been experienced with the superhero genre since the late 2000s: "All that changed was visual effects. When IRON MAN came out, visual effects had caught up so that going to see a superhero movie was worth it to see for the spectacle, and not [only] worth to see it because you were a pre-existing fan" (movie director James Gunn, quoted in D'Alessandro 2017a).¹⁵⁴

¹⁵⁴Please also see our discussion of the role of technological resources for entertainment firms in the market characteristics chapter.

Several other so-called “advances” have turned out to be short-lived, however. Remember “Sensurround” sound? It was an attempt to add a “physical” element to the viewing experience, as a movie’s soundtrack was played through specially developed, low-frequency bass speakers so the sound could be “felt,” not only heard, by the audience. It ended up being used only for a handful of action films, such as *EARTHQUAKE*, because it caused damage in some theaters and it disturbed audiences of films shown in adjacent screening rooms; Fuchs 2014). But we assume that the main reason was that the technology simply did not offer substantive benefits to consumers, particularly taking the quite substantial implementation costs into account.

Another failed attempt to use technology to enhance the audio-visual experience introduced a smell element. In the 1960s, “Smell-O-Vision” blew thirty different odors, synchronized with the action of the film *SCENT OF MYSTERY*, into specifically prepared theaters, involving non-trivial costs. In contrast, the “Odorama” approach required much less preparation: cards were handed out to audience members, who were then asked to scratch a certain spot on the card when a corresponding number was shown on the screen; the card then released a specific smell (including one of a *fart*; Nowotny 2011). Again, we doubt that the audience saw a major benefit in those approaches.

Nevertheless, some companies believe that digital technologies can enhance the benefits for moviegoers provided by physical and smell elements, developing approaches that turn movie going into a truly multi-sensory experience. By the end of 2017, Seoul-based CJ E&M ran about 400 theaters, mostly in Asia and the U.S., which combine physical sensations (moving chairs and exposure to “wind,” “rain,” and “mist”) with smell in an attempt to “draw you into the movie as if you’re living inside its world” (CJ 2017). The technology, which tracks the on-screen movement scene-by-scene and thus requires involvement of the producers, has been compared with theme-park rides, which might point at its future role as a niche attraction for *some* kinds of effects-heavy film content. It is unclear though how sustainable its attractions are (how often are we in the mood for roller coasters?) and how appealing the experience is considered by consumers in general. As one wrote, “on the whole, being shaken isn’t very fun” (Grierson 2014).

Other current key technologies for filmed entertainment include 3D and higher frame rates.¹⁵⁵ 3D, a stereoscopic presentation technology, has received uneven reactions from consumers over several decades, but is

¹⁵⁵Some movie executives have also articulated interest in the use of VR as a means to enhance the movie-watching experience, such as by using VR headsets as “virtual movie theaters” (Busch 2017). In addition to enormous (and costly) technological requirements, the consumer value of such applications appears questionable at best, however.

enjoying more lasting success since the early 2000s when digital presentation technology became available.¹⁵⁶ Whereas film makers and marketers have focused on the immersion-enhancing power of (now digital) 3D, and studios and theaters have invested enormous amounts in it, the long-term perspectives for the technology are subject to a controversial debate (see, for example, the letter from film editor Walter Murch in Ebert 2011).

With 3D being an expensive technology for those who produce films, the core issue once more is whether 3D offers consumers benefits that outweigh the higher costs. When marketing research firm YouGov asked 3,000 consumers in the UK whether a 3D screening “makes the cinema experience better” for them, 22% agreed. But more reported no difference (28%), and nearly the same number (19%) felt that watching a movie in 3D even *worsened* the experience (Follows 2017). These being self-reported judgments, however, what can scholars tell us about consumer reactions? Rooney and Hennessy (2013) conducted a survey of 225 consumers who had just seen Marvel’s THOR in cinemas either in 2D or in 3D. The scholars find that those who watched the movie in 3D reported a greater degree of perceived realism and self-reported attention (during the film), but no more emotional arousal or satisfaction than 2D viewers. Results by Ji and Lee (2014), who showed 102 consumers a 15-minute segment of a Hollywood movie on a large TV screen, also found no difference in terms of enjoyment between 2D and 3D audiences; in their case 3D did not even imply higher levels of immersion and flow.

But Ji and Lee’s results are interesting for another reason: they point to a potential moderating role of movie genre for these effects, as the levels of immersion and flow tend to differ between film genres.¹⁵⁷ Cho et al. (2014) also stress the role of potential moderating forces. When they showed a 15-minute self-produced 3D film (for a \$100,000 budget!) to 188 participants in a theater,¹⁵⁸ the results indicate that 3D effects vary with consumers’ seat locations: consumers who were seated in the front or the back of the theater were less satisfied with the film than those in the middle.

But Cho et al.’s study also points to another pattern that we consider to be critically important for film producers: consumers’ previous experiences with 3D screenings were accompanied by reduced arousal and immersion, an insight

¹⁵⁶Previous historical periods in which 3D films bloomed were the early 1950s (with films including Alfred Hitchcock’s DIAL M FOR MURDER from 1954) and the early 1980s (e.g., JAWS 3-D).

¹⁵⁷This result needs to be treated with care though, as the authors do not report a formal moderation test.

¹⁵⁸The \$100,000-budget the authors used for producing the film was remarkable and indicates a high level of professionalism.

which indicates a “wear-out” or satiation effect of 3D.¹⁵⁹ Understanding such satiation was focal for our own study in which we examined the economic consequences of the 3D presentation format based on actual market data (Knapp and Hennig-Thurau 2014). Specifically, we collected box-office results for all 73 digital 3D movies that were widely released in North American theaters from 2004 to 2011, starting with *THE POLAR EXPRESS*. We compared the box office of each of these films not with the box office of all other films, but with those of what we call a “statistical twin”—a 2D film that is similar across other key movie characteristics that drive a movie’s success, as we argue at various points in this book.¹⁶⁰ Such a selection process is necessary to avoid comparing apples with oranges, or what econometricians call a “treatment bias” that results from an independent variable being not truly independent (or exogenous), but endogenous.¹⁶¹ 3D movies are often treated differently (better!) than other films made in 2D. An econometric technique named “propensity score matching” helped us identify those movie twins.

Then we compared the performance of the 3D movies with those of their twins. The results were somewhat sobering: across all 73 3D movies in our data set, the 3D movies did, on average, not generate more revenues than their 2D lookalikes. Even worse, they attracted *fewer* attendees than did their 2D twins, and they were significantly *less* profitable (they had a lower average ROI). Follow-up analyses revealed a more fine-grained picture though, with time being the essence: while 3D movies blew up the box office in the early years of digital 3D, they no longer provide an advantage.

This is the main message of Panel A of Fig. 8.1, which shows the development of the average financial effects of 3D on the box office over time, per our estimations.¹⁶² Please note that this refers to box-office results: the

¹⁵⁹For more on satiation in entertainment, please refer to our discussion in the chapter on entertainment product characteristics.

¹⁶⁰These other determinants of movie success included genre, production budget, advertising spending, number of opening screens, participation of stars, and being a sequel. In essence, these other determinants of movie success helped us to rule out the possibility that the 3D movies in our data set differed systematically from their 2D movie “twins” with regard to any criterion that could cause a potential difference in success. Not controlling for the relevant determinants could have resulted in wrongly attributing a difference in success between our 3D and 2D movies to their 3D versus 2D nature. Let us add one methodological note: the twin identified by the approach we used here is not a “real” movie—instead, it is a “hybrid” movie that represents a weighted combination of all 1,082 2D movies in our database that were released in the same time frame as the 3D movies (from 2004 to 2011).

¹⁶¹We explain the general problem of such endogeneity in regression models in our introductory chapter. “Treatment biases” in entertainment are by far not limited to the use of 3D, but hamper our understanding of how several other product characteristics, such a product being a sequel, a remake, or featuring a star, influence product success. We will get back to this issue in the respective chapters and sections of our book.

¹⁶²The estimates are the result of a polynomial weighted least squares (WLS) regression model in which we included the linear and squared interaction terms of the 3D variable and a film’s production year.

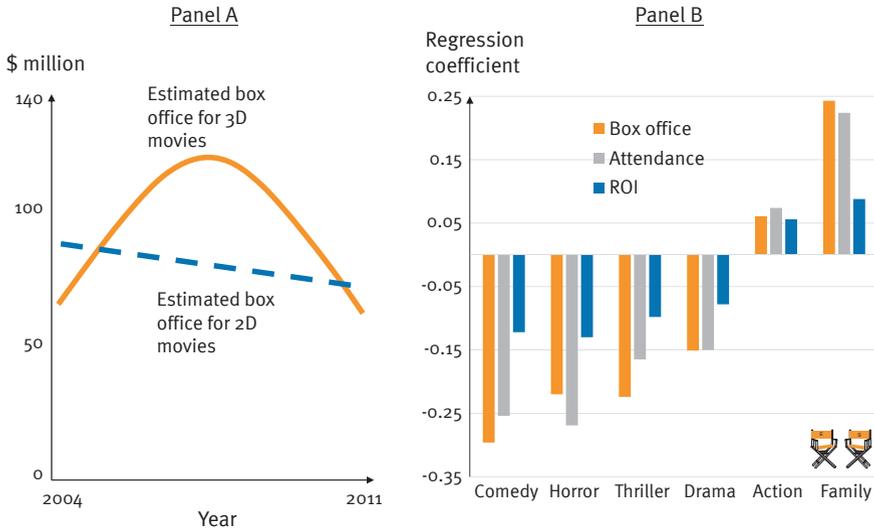


Fig. 8.1 The impact of 3D on movie success

Notes: Authors' own illustration based on results reported in Knapp and Hennig-Thurau (2014). The parameters in Panel B are unstandardized regression coefficients for a $3D \times \text{genre}$ interaction from a WLS regression with North American box office as dependent variable and the 3D variable, the respective genre, and controls as independent variables. Weights are taken from a matching procedure that accounts for the different treatment 3D films receive from producers.

estimates suggest that the higher revenues per ticket are neutralized by the fewer tickets sold for a 3D movie, and this does not take the extra costs for producing a film in 3D into account.

However, the figure's Panel B show that the effect of 3D differs between movie genres: the regression coefficients for a 3D film are positive for action movies and much more so for family films, informing us that movies of these genres tend to perform better in 3D, on average. The box office performances of thrillers, drama, horror, and comedies instead tend to suffer from the 3D format—a finding that is well hidden under the higher budgets and heightened attention these 3D movies usually get from their producers. Our study is restricted to data up until 2011, but the pattern we found seems to not have changed more recently. Follows (2017) reports that the North American box office share of 3D movies has declined from more than 20% in 2011 to just 7% in 2016, despite the number of released 3D movies being at an all-time high.

Compared to 3D technology, we know much less about the financial impacts of higher frame rates and screen resolutions. Audiences' evaluations of movies that are filmed with a higher-than-usual frame rate (i.e., a film

recorded at a higher number of frames per second—up to 60 instead of the traditional 24) have been linked to the psychological theory of the “uncanny valley” (Yamato 2012). This theory, which goes back to robotics scholar Masahiro Mori’s work in 1970, suggests that consumers react much more negatively to aesthetic stimuli that look *almost* real than they do to stimuli that are either very real or are very unrealistic (see Mori 2012).

Mori’s logic, which he developed with robots in mind, has been studied by a number of scholars, but little is known about it in entertainment. Empirical findings tend to support his argument that the depiction of a face generally increases likability the higher its “humanness” (and the less “mechanical” it is); however, likability falls to low levels if humanness is presented in “close-to-realistic,” but just not *fully* realistic ways. Figure 8.2 shows this pattern as theoretically proposed by Mori (Panel A) and as empirically found (Panel B) in a study of 80 faces whose humanness varied from “fully mechanical” to “fully human” by Mathur and Reichling (2016). It has been argued that “close-to-realistic” depictions seem eerie to consumers and make it difficult for them to empathize with characters—reactions that we assume will hamper immersion.

According to such “uncanny-valley” logic, a higher frame rate can let fantasy movies appear *almost* real for audiences, but not quite; such “failed attempt at reality” would be disliked by most consumers. This argument is consistent with Michelle et al.’s (2017) finding of a “hyperreality paradox” for audiences of Peter Jackson’s *HOBBIT*. In a qualitative study, they observed that some consumers found the movie’s visuals to be spectacular and immersive, but at the same time “experienced this same visual aesthetic as unconvincing and distracting and as undermining suspension of disbelief.” They perceived the effects to look “fake.” As with other technologies, entertainment producers must be aware of these potential negative effects and learn more about them, hopefully in fruitful collaboration with *Entertainment Science* scholars.¹⁶³

¹⁶³Let us add that the “uncanny valley” theory might be of value beyond the understanding of higher frame rates and even beyond filmed entertainment. By building on the immersion-related argument above, the theory could help to better understand the impact that CGI elements in visual entertainment have on audiences. For example, Itzkoff (2016) discusses it in conjunction with audiences’ reactions to the digital revitalization of dead actors, such as Peter Cushing as evil Grand Moff Tarkin in the *STAR WARS* film *ROGUE ONE*. But given the huge commercial success of clearly imperfect animation tricks in commercial super hits such as the initial *STAR WARS* movie (and also those recent entries which use digital revitalization), the link between realism and immersion/success is certainly not a trivial one and requires a thorough extension of Mori’s original thinking.

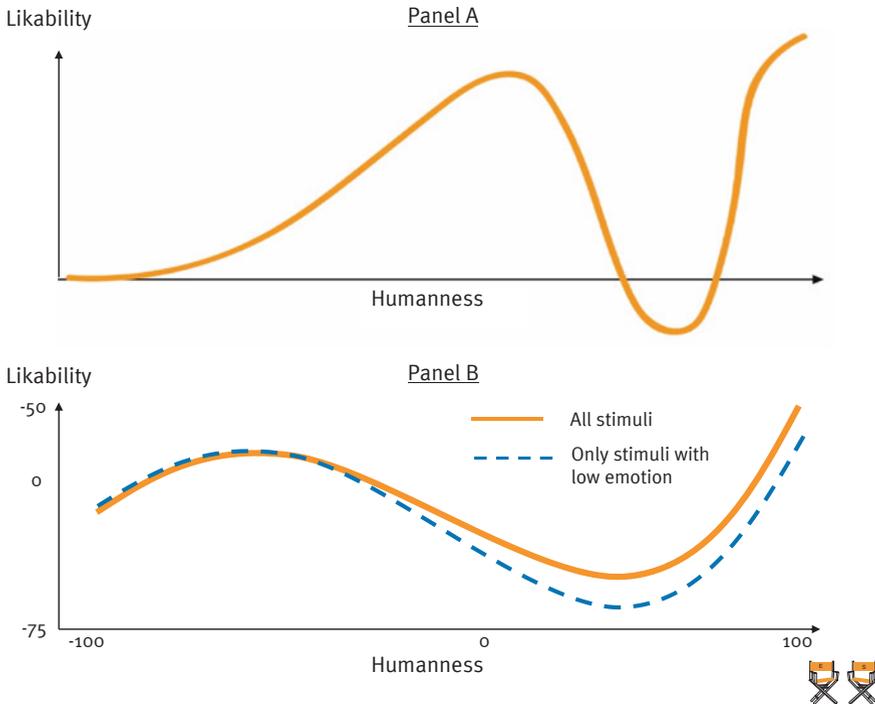


Fig. 8.2 The “uncanny valley” as theorized and empirically observed

Notes: Authors’ own illustration based on Mori (2012; Panel A) and Mathur and Reichling (2016; Panel B). The results from Mathur and Reichling are based on a coding of the “humanness” of 80 faces by 66 consumers; the average scores of this exercise were used as the “humanness” ratings. Likability of the different faces was collected by asking 342 consumers to rate a random subset; overall, each likability rating is the average of 64 individual ratings. The course of the function is a third-degree polynomial which had a better fit than other functions (R^2 of 0.29 for all stimuli; not reported for only low-emotion stimuli). Graphical contributions by Studio Tense.

Technology and the Quality of Books

Books have been a low-tech entertainment medium for most of their 500+ years existence; with the exception of some special, niche-targeted high-quality print editions, the content dominated its presentation mode. Digitalization and the rise of e-readers, with Amazon’s Kindle eco-system having led the way, are in the process of changing that, offering readers the choice between a printed book and a digital version. Digital versus print constitutes a search quality for readers. In contrast to the technologies we discussed for games and filmed entertainment (e.g., VR and 3D), the creation of the digital ebook version of a novel entails very limited marginal production costs, so that today almost all novels are available in both formats.

Nevertheless, we find it informative to examine the potential differences in impact that the technological format might have on consumers and their reactions to novels. Is the consumer's reading experience different if the text is on paper versus on an electronic screen, which lacks the haptic and olfactory sensations of printed books? Anne Mangen and her colleagues conducted a series of experiments in which they address this question by comparing reader reactions to text on paper versus reactions to text on iPads. Specifically, for a sample of 145 readers of the dramatic fiction short story *MURDER IN THE MALL*, Mangen and Kuiken (2014) find no difference in terms of narrative transportation and empathy levels between the two forms of reading. Quality ratings were consistently higher for the digital device, even though the authors did not control for participants' previous digital experience.

In another experiment with 72 high-school students, Mangen et al. (2013) compared reading comprehension between a paper version of a (non-fiction) text and a version shown on a computer monitor with "HD ready" resolution. The results of a regression analysis, in which the authors control for gender (but not e-reading/computer experience), show comprehension to be higher for the paper condition, pointing at possible differences in the cognitive processing of texts by consumers.

But iPads and computer monitors are certainly not the best-suited and most-used devices on which to read novels digitally these days. It thus remains unclear to what extent these insights can be generalized to specialized e-readers such as Kindles or Kobos. Let us also keep in mind that these analyses are based on the assumption that the medium differs, but the context does not. Findings might thus change if this assumption is challenged by new literary forms, such as hypertext novels.

Technology and the Quality of Music

For music, similar to books, it traditionally has been the content that mattered, much more so than the technological production format. Except for the occasional format switch (from shellac to vinyl in the 1950s, then from vinyl to CD in the 1990s after some flirtations with cassettes), the music business was dominated by one single production standard at a time, not counting technological extravaganzas such as Katy Perry's *TEENAGE DREAM* album, which was scented to smell like cotton candy (Bauer 2010).

However, when music moved to the Internet, different formats began to co-exist, and consumers were enabled to choose among them. These formats

differed in the degree to which they provided haptic sensory features, but also in their compression level, which is tied to sound quality—factors which presumably are responsible for the recent revival of vinyl records.¹⁶⁴ As with books, the role of format for consumers' choices and consumption behavior has not received systematic attention from researchers or managers (in contrast to distribution-related issues which we discuss in that later chapter), probably because almost all titles are made available both in digital formats (where copies are produced for virtually zero marginal costs) and physical forms (which still provide substantial revenues).

Nevertheless, and particularly because of the decreasing demand for expensive-to-produce physical versions, better understanding the roles of format and production technology for consumer choices seems promising. Music research has found that compression affects quality judgments of consumers only after a threshold is exceeded (e.g., Croghan et al. 2012). But what is this threshold, and is it within a practically relevant spectrum? Existing studies are usually of limited explanatory power for assessing commercial impact because participants are highly trained music experts, rather than ordinary music consumers. For example, Pras et al. (2009) let 13 “trained listeners” (namely, musicians and sound engineers with 15 years of experience) rate pairs of the same music that varied systematically across seven sound criteria. Results showed significant differences between CD/WAV quality and lower bitrate formats in particular—listener ratings are higher for CDs versus 96 and 128 kb/s compressed formats and marginally higher ratings for CDs versus 192 kb/s from 96 to 320 kb/s. The scholars do *not* find differences between CDs and higher bit rates, though.

We don't know yet whether such differences would also be recognized by ordinary consumers and how such perception differences would impact enjoyment levels. Spotify users can choose between 96 kb/s and 320 kb/s, with the “normal” mobile usage being at the lower end of the spectrum; Internet chatter as well as sales trends do not suggest that this is a major hindrance for mass audiences to prefer the service. Our skepticism is somewhat fueled by a finding from Plowman and Goode (2009), who, based on a survey of 206 students and Spearman correlations, report that expectations regarding the sound quality of the music do not influence consumers' usage of file sharing as an alternative to purchasing music. So, are we consumers

¹⁶⁴For details, see the development of different music formats in Fig. 5.4 in our chapter on entertainment business models.

just musical ignorami? Remember that sound quality is determined by many factors in addition to the song material, such as hardware (playing or listening devices), as well as user and situational characteristics, so that recording (and compression) technology will hardly hamper the consumers' listening experience, at least not for higher bitrate formats, and at least not in an *objective* way.¹⁶⁵

But this does not mean sound technology has no influence on some consumers' enjoyment of music—the streaming service Tidal, for example, offers “lossless” music for twice the price as “compressed” versions. And several vinyl fans adore the vinyl format not for its perfection, but for its *lack* of it—the pops and noise, the smooth crackles, the tighter bass (which is basically an engineering artifact; Richardson 2013), all of which are considered as parts of an active, intense, aesthetic “high-quality” experience (for a list of subjective examples, see TRCG 2015).

Signals of Quality for Entertainment Products

We have shown that the *experience* quality of entertainment has little ability to drive the early sales of a new product's release, and dedicated search qualities are generally rare in entertainment: the previous section has illustrated that managers should not place too much hope in the power of superior technologies as a search quality because they usually provide only limited *enduring* competitive advantage (and are quite often double-edged swords in terms of customer value). But the early adoption decisions of consumers account for a non-trivial share of entertainment success, particularly for those products marketed in line with the “blockbuster concept,”¹⁶⁶ and their role is further intensified by cascading effects in which a product's initial success sends a distinct quality signal to consumers regarding whether or not they should adopt it.

Under these conditions, “pseudo-search” qualities that serve as signals from which consumers can infer a product's quality (that's also why we also call them “inferential cues”) play a powerful role. In this section, we discuss

¹⁶⁵In case you want to test your own ability in distinguishing between different compression formats, we recommend the little test that NPR has put together at <https://goo.gl/wXJmHg>: for six songs from different genres, it asks us to judge three versions that differ only in compression levels. [At least one of this book's authors didn't recognize *any* differences with his Sennheiser PC headset.]

¹⁶⁶For a detailed discussion of the blockbuster concept as the dominant integrated marketing strategy for entertainment products, see our chapter on integrated entertainment marketing.

a number of such pseudo-search entertainment qualities and their respective link to (early) product success, including genres and themes, age ratings and the (controversial) content on which they are based, a product's country of origin, and the production budget (which, as we will see, sends not one, but various signals regarding a product's standard of execution). Our discussion of these factors will be followed in the next chapter by another category of specific pseudo-search qualities: those signals that carry a "brand label," such as stars or sequels.

When we dive into the realm of the different signals, keep the core learning from our study of consumer behavior in mind: that the effectiveness of *all* pseudo-search qualities, branded and unbranded, eventually depends on the degree to which they convince potential customers that the product will offer powerful aesthetic sensations and familiarity, the core drivers of consumers' enjoyment of (and demand for) entertainment.

Entertainment Genres and Themes

"Genre is one way movies have been pre-sold throughout the history of Hollywood."

—King (2002, p. 119)

The genre is often the first thing we hear about a new entertainment product. Let us inquire into the concept itself, before examining what *Entertainment Science* scholars can tell us about how genres impact product success. We then look into whether it is more promising from an economic stance to tie a product to a single genre or to combine elements from different genres. And finally, we also take a quick glance at international differences in genre effects.

What, Exactly, is a Genre?

A genre, taken from the French term "type" or "kind" (King 2002), is an abstract concept that describes a certain category of entertainment or art. Any genre contains links with a semantic network of associations that is activated in the consumer's mind once they hear that an entertainment product belongs to that genre, i.e., a movie is a thriller or a western, a song is pop or jazz, or a game is a shooter or a role-playing game (e.g., Cutting 2016). A consumer will roughly classify an entertainment product in their very own hyperdimensional cognitive network based on information about its genre.

Each consumer’s network is unique, and it is these idiosyncratic differences between networks that explain why some of us become excited when we hear about a new horror movie that is coming out, others react with indifference, and still others are annoyed by the mere thought of another horror flick.

So, what kind of cognitive associations are we talking about? Genre associations are about basic types of characters, dramaturgic routines, and aesthetic patterns. In Fig. 8.3, we show a stylized semantic network for three major movie genres (westerns, thriller, and romance movies), based on the most frequently assigned key words for each genre by IMDb users. The thickness of a line shows how strongly a concept is linked with a genre. So, when we hear that a movie is a western, most people think of cowboys and sheriffs and outlaws as characters who will populate the film; they think about gunfights and fistfights as part of what will happen (i.e., the dramaturgic routine), and they think about rural Arizona or Texas landscapes as where the action will take place, framing the consumers’ aesthetic expectations.

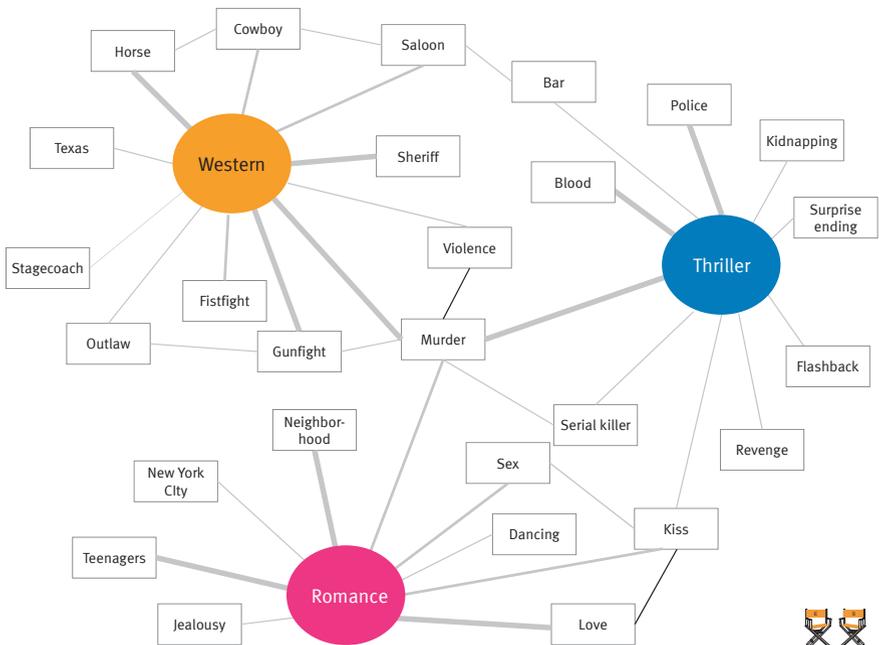


Fig. 8.3 Exemplary semantic networks for three movie genres
 Notes: Authors’ own illustration based on publicly available data from IMDb. The associations represent a selection of the most-named key words on IMDb for each of the genres in the figure. The links between associations are purely hypothetical and for illustrative purposes only.

The figure shows that the genres are linked with many unique associations, but also that the associations sometimes overlap. For example, murder is a prominent theme in thrillers *and* westerns; even romance movies are not free from murder, although topics such as love dominate. Thrillers and westerns have more in common than do westerns and romances. Sometimes genres' aesthetics involve a specific narrative style, such as thrillers often telling parts of the story through flashback scenes. The same logic applies to other entertainment products; when we hear that someone has recorded a bluegrass song, banjos and acoustic guitars will come to our minds, spurring aesthetic expectations in the form of acoustic imagery, and often also visual imagery (such as the rural south-east of the U.S.).

The assumed importance of genres for product success is mainly based on the fact that genres provide consumers with a first reference point for judging an entertainment product. The associations we hold help us to make quick judgments regarding what to expect, and whether or not we might like it (Zhao et al. 2013). As film scholar Geoff King (2002, p. 120) words it, a genre label “is an implicit promise” to the consumer. The genre concept is tied closely to the benefits that come from familiarity in entertainment; it is the promises that provide us with familiarity regarding something we otherwise do not know, allowing us to draw a mental picture of the unknown product. Genres give us “enough familiarity to generate a sense of comfort and orientation” (King 2002, p. 120).

But even beyond that consumer-related role, genres are important because they contribute to the organization of entertainment industries on many levels. Think of companies who define themselves as producers of “rock music” or offer a movie channel specialized in science fiction (such as the Comcast-owned “Syfy Channel”), teams which assemble around a genre (e.g., when musicians agree to form a “blues band”), and news media who structure their coverage of entertainment around genres, such as *Billboard's* genre-specific charts, like “Hot Country Songs” or “Hot Rock Songs” (Silver et al. 2016).

Are Some Genres More Successful Than Others?

“To pigeonhole a genre as being successful or unsuccessful is weird.”

—*Musician* Chester Bennington (2016)

When it comes to comparing genre performances, let us clarify one thing upfront: given the subjective nature of genres, there is no definitive genre typology for any of the products we study in this book. Genre definitions are blurred and overlap; whereas Boxofficemojo considers PASSENGERS to

be “Science Fiction,” The Numbers classifies it as “Thriller/Suspense,” and IMDb codes the movie as “Adventure, Drama, Romance.” Genres are also multilayered; they blend with sub-genres and themes with increasing levels of concreteness. So a comedy (the main genre) can be a romantic comedy or a slapstick comedy (the sub-genre), and a main theme in a romantic comedy could be “unrequited love,” a situation in which one character loves the other without his love being returned (e.g., Sarantinos 2012). Genres tend to be more consistently defined for narrative forms of entertainment, whereas genre typologies in music (beyond the broadest categories) are less clean and also less-consistently used.¹⁶⁷

Determining empirically how genres affect success across products is challenging because the concept’s basic nature means that genres differ massively—which is the logic behind our introductory quote in this section. Not only do genres differ with regard to the other quasi-search attributes we discuss in this book (such as casting a major star in a movie), but also with regard to further marketing variables, such as advertising budgets—action movies might have higher box office returns than dramas, but producers also spend more money to make and promote them. Thus, to determine a genre’s “true” commercial appeal, it is important to not only look at average success numbers, but also to examine the nature of a genre in terms of many individual attributes and variables. And of course, because costs differ between genres, revenues cannot be equated with profit/ROI.

When it comes to movies, a large number of studies have empirically linked genres with success metrics, mostly box-office results. For our own data set of more than 3,000 movies released in North American theaters between 2000 and 2014,¹⁶⁸ we calculate the mean North American box-office revenues for 13 key genres, as well as a proxy of each genre’s average ROI (using the same formula as for our risk analysis in the chapter on

¹⁶⁷Some scholars have tried to use empirical data and statistical techniques for developing music genre typologies by investigating common elements between music pieces. Schäfer and Sedlmeier (2009) use consumers’ preferences toward 25 popular music genres and condense them via factor analysis to six musical genres (i.e., sophisticated, electronic, rock, rap, pop, and beat, folk, and country music). Silver et al. (2016) employ a network analysis approach to discover patterns in how 3 million musicians presented themselves and their work on the social media site MySpace.com in 2007. They find three musical genre “complexes”—a *Rock* complex (encompassing what the authors refer to as “Countercultural,” “Mainstream,” and “Punk Offshoots” subgenres), a *Hip-Hop* complex (dominated by Rap, Hip-Hop, and R&B), and a *Niche* complex (which covers several less popular musical styles, such as Electronic, “Dark/Extreme” Metal, and World Music). Whereas these attempts can be applauded, the biggest problem with the empirical determination of music genres is about *selling*: gaining industry and consumer acceptance for such typologies is tough, but indispensable for having a “real-world” impact.

¹⁶⁸For more information about the data set, please see our earlier Fig. 5.10 in our entertainment consumption chapter.

entertainment business models). When doing so, we adapt the IMDb’s genre coding for our analysis because it does not restrict a movie to a single genre but allows movies to be assigned to multiple genres—an approach that better fits the realities of today’s hybrid entertainment world (and avoids arbitrary genre assignments).

Panel A of Fig. 8.4 shows that movie genres differ strongly in revenues and ROI. On average, fantasy, animated, and thriller movies generate the highest revenues, about three times higher than those of drama and romance movies—and almost ten times higher than those of documentaries. The same basic order holds for our measure of movie profitability, with the exceptions that documentaries (because of their *lower* costs) are as profitable as more popular genres, and crime movies (because of their *higher* costs) have lower ROI than dramas.

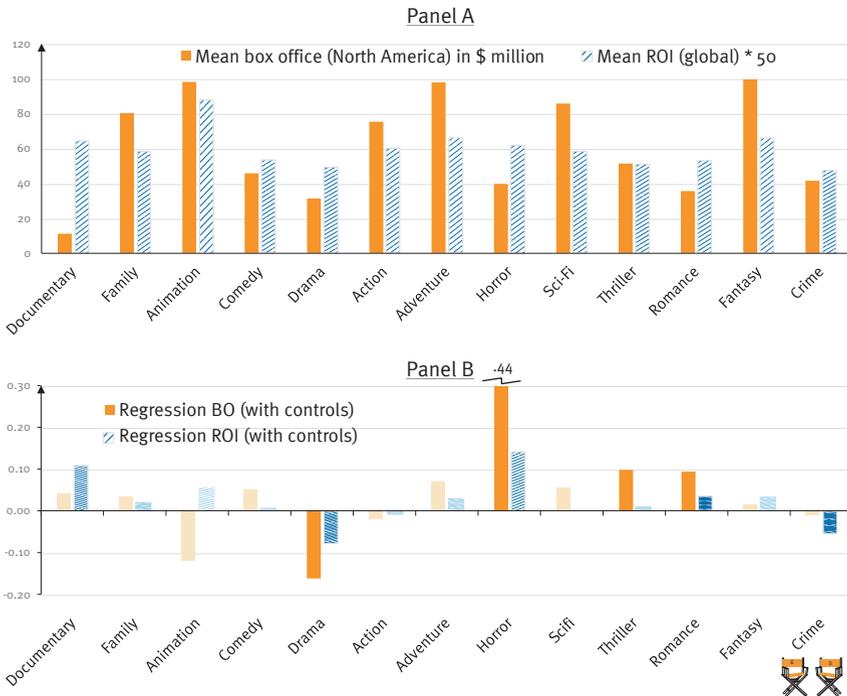


Fig. 8.4 Revenues, ROI, and regression parameters for key movie genres
 Notes: Authors’ own illustration based on data from various sources, including The Numbers, Kantar Media, and IMDb. Numbers in Panel B are unstandardized regression parameters from OLS regressions, with movie box office and ROI as dependent variable, respectively. In the analyses, we log-transformed the dependent variables to approximate a normal distribution. The true regression value for horror is actually as high as 0.44; it is capped in the figure. In Panel B, shaded bars indicate that a parameter was not significant (at $p < 0.05$).

In Panel B, we show the effect of each genre on a movie's box office and ROI when controlling for the existence of several other "success drivers."¹⁶⁹ These results paint a different picture: only three genres lead to a higher-than-average box office (horror, thriller, and romance) and drama is the only genre that results in a lower-than-average box office. The two genres that generate the highest average revenues (fantasy and animation) do not exert any significant impact on movie box office. With regard to ROI, horror, romance, and documentaries are also effective, while crime films and dramas tend to lower a film's profitability. Here, none of the three genres that we found to generate the highest average ROI are significant, not even thriller. Because the dependent variable is a log-transformed measure, the coefficients tell us that, everything else equal, the average increase in box office for horror movies against other films is an impressive 55% ($=e^{0.44}$) and +15% in ROI, whereas dramas underperform at the box office by about 15% (and have an 8% smaller ROI). You can do the math for the other genres yourself.

Why do we see these differences between the descriptive analyses (Panel A) and the predictive analyses (Panel B)? According to the analysis, it is not the fantasy genre's own attractions (like orcs and elves and magicians) that draw people into see movies of this genre. Instead, people are drawn in by other characteristics, such as the popular novels on which fantasies such as LORD OF THE RINGS are based, along with production and advertising budgets that promise a visual spectacle. Our regression results suggest that thriller, horror, and romance attractions stand out for luring audiences to the theater among the films in our data set, and the latter two genres create these attractions in a way in which the incremental revenues exceed the costs of producing them. And why are documentaries profitable? Probably because of a "selection effect" that takes place outside of our data set, on the "supply side" of the film industry. Out of the numerous documentaries that are produced, only a few outstanding ones end up being shown in a movie theater, and we find these few to perform quite profitably.¹⁷⁰

¹⁶⁹Specifically, we control in the analyses for whether a movie was distributed by a major studio, the advertising budget, the production budget, whether a film featured a star (based on the annual "Quigley" star ranking—see footnote 232 on p. 417), was a sequel, a remake, or a version of a previous movie, was based on a novel, book, or bestseller, was produced in the U.S., and ratings of the film's quality by critics and IMDb users.

¹⁷⁰Our data set is limited to those films that made at least \$1 million in North American theaters—whereas this barrier will hardly matter for films of other genres, it might contribute to the high ROI of documentaries which are often produced for a small budget. Separately, researchers have pointed to the role of distribution as a *mediator* of the effect of genres on success. According to such logic, genres not only impact consumers directly, but also via an influence on movie theater owners and their screen-allocation decisions for a movie (e.g., Clement et al. 2014).

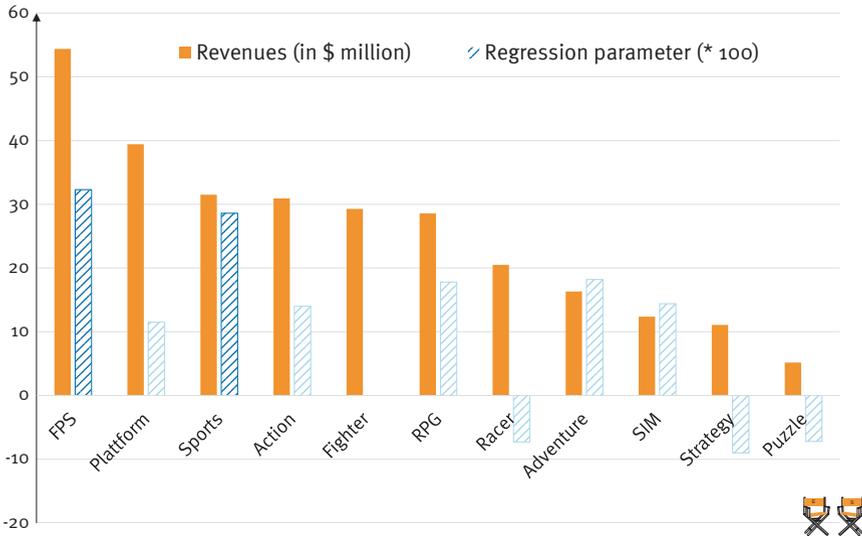


Fig. 8.5 Revenues and regression parameters for key game genres

Notes: Authors' own illustration based on results reported by Marchand (2016) and data from VGChartz. FPS means first-person shooter. The regression parameter for fighter games is missing because that genre was left out of the regression analysis for methodological reasons. Bars in light blue are not statistically significant at $p < 0.05$. The dependent variable was log-transformed.

For video games, we find a similar pattern: average sales differ substantially between genres. Figure 8.5 shows the average revenues for 11 video game genres (the orange bars in the figure) across the seventh generation consoles Microsoft Xbox, Sony PlayStation, and Nintendo Wii, based on a data set of 1,898 games released between 2005 and 2014. First-person shooters are, on average, the most successful (a finding that does not change even if one uses the median instead of the mean to account for “outlier” titles, such as the *CALL OF DUTY* games), with average revenues of \$55 million in North America. Next come platform games (such as *LITTLE BIG PLANET*) and sports games (e.g. *WII SPORTS* or *MADDEN NFL*).

And again, when we account for the fact that genres differ in other product characteristics (which also impact success), we see that few genres exert a direct effect, above and beyond those other characteristics. Specifically, in a regression with robust standard errors that includes not only the genres, but also a game's advertising budget, price, and several other factors, only first-person shooter (FPS) and sports game genres explain a unique share of a game's sales (Marchand 2016)—the blue-striped bars in the figure show

the respective coefficients.¹⁷¹ By transforming the coefficients, we see that FPS have 38% and sports games 33% higher sales than an “average” other game, respectively. But let’s keep in mind that these numbers are averages across the different consoles, and that the impacts differ between them quite strongly (see Marchand 2017 for additional insights).

There is less empirical evidence for the economic effects of genres for books and music. In an exploratory analysis of the decision-making process of 50 Dutch book buyers, Leemans and Stokmans (1991) find that a book’s genre and its theme are among the critical influencers of book choices. Genre and themes are named by *all* respondents as a selection criterion for reducing the choice set of alternatives, and they are noted more often than all other criteria for finally choosing one book out of the consideration set of titles. The scholars do not provide insights into the relative attractiveness of specific genres and themes, however.

Also examining books, Schmidt-Stölting et al. (2011) use a large data set of fiction books to understand the factors that impact sales of hardcover and paperback titles in the German market. Out of almost 38,000 releases between 2003 and 2006, the scholars study the market performance of 1,206 books (603 hardcover novels and their paperback versions). Regarding genres, they distinguish between “novels” (i.e., drama titles), thrillers, fantasies, (fictional) biographies, and a catch-all category of “other” genres. They analyze hardcover editions separately from paperbacks, while accounting for their related nature by estimating models for the two formats using a seemingly-unrelated-equations regression (SUR) approach, controlling for the impact of many other “success factors.”¹⁷²

Schmidt-Stölting et al.’s results show that genres matter in both formats, above and beyond the other book characteristics; interestingly, the attractiveness of a genre varies with a book’s format. For hardcover editions, biographies exert a stronger positive impact on consumers than do drama novels, whereas neither fantasy, thriller books, nor “other” genres make any difference in sales. For paperbacks though, biographies have *lower* sales than drama novels (as do fantasy books), whereas thrillers, on average, are more attractive to consumers. In other words, (German) consumers snap biographies up at

¹⁷¹The other factors included in the analysis are: the platforms on which a game was released, price, number of previous versions, published by a major studio, advertising budget of the game and its competitors, consumer and expert evaluations of its quality, hardware variables (the installed base and console age), and existence of a multiplayer feature. For details, see Marchand (2016).

¹⁷²Specifically, they also include measures for the stardom of the author, whether the book is a sequel, publisher status, and the books’ price (which is set for each book by the publisher in Germany and must be respected by *all* retailers).

their initial releases, despite the usually higher price for hardcover versions, whereas consumers' demand for thrillers is biased toward the cheaper paperback format—an effect that the authors attribute to the genre's lesser symbolic value.

Finally for music, Lee et al. (2003) analyze the North American success drivers of 245 music albums, using weekly sales from SoundScan as dependent variable. Their prediction model, based on ambitious Bayesian statistics, suggests that positive genre effects exist for the rhythm and blues (R&B) genre, even after controlling for the artist's previous sales, the record's quality, and the advertising budget. In the model, sales for R&B are 35% higher relative to the other music types in their data set (country, pop, rap, alternative, rock, and hard rock).

We assume you agree with us that these are exciting initial insights, but we would love to learn much more about the role of different genres for the success of entertainment products, particularly for books and music.

The More Genres the Merrier?!

Most of us think of STAR WARS as a science fiction film. But others have argued that it is actually a collage of multiple genres, combining elements of fantasy (the Jedis' mystical powers), western (did Han Solo shoot first?), war (the final battle), samurai movies (the lightsaber battles), and romance (who gets the girl?); it also offers connections to many other genres (the Mos Eisley Cantina scene made many people think of *Rick's Café Américain* from CASABLANCA). Let's turn this observation into a question of managerial relevance: does it help or hurt the success of an entertainment product when it contains elements of *more than one* genre?

Using a data set that encompassed almost 3,000 movies released on North American screens between 1982 and 2007, Zhao et al. (2013) found that the number of genres in a film (as measured by movie sites such as the IMDb) has a negative impact on opening box-office results. The scholars argue that this is because high “genre spanning” makes it troublesome for consumers to cognitively categorize the entertainment product—and so we simply don't know what to expect (and thus don't watch/read/play). In other words, the potentially success-enhancing effect of genres seems to be countered if multiple genre labels are attached to a product, at least in the first weeks of availability.¹⁷³

¹⁷³Let us mention one statistical caveat: the authors do not include the genres themselves in the equations. The same limitation applies for Hsu's (2006) study we discuss below.

But do such negative effect also apply for the *total* success of a movie over its full theatrical run? Using a data set of 949 U.S. movies released between 2000 and 2003, Greta Hsu (2006) also found a negative parameter for a “number of genres” variable, but in her case, the link did not reach statistical significance. This provides at least suggestive evidence that genre-spanning effects might fade over a movie’s run. But take note: she also reported *other* negative consequences of multiple genres. Both audiences (on IMDb) and professional critics rate a film less positively as the number of genres increases.

In a follow-up study, this time looking at firm survival, Hsu et al. (2012) report evidence that a higher share of “hybrid” movies (i.e., those that are attached to more than one genre) increases the likelihood that the producing company will go out of business. In other words, producing multi-genre films impairs economic survival. But before you drop your plans to produce a genre-spanning piece of entertainment: the scholars also point to at least one potentially interesting *upside* of genre spanning. They found that doing so tends to increase the probability of producing the *most successful* film of the year—probably by attracting fans of all the different genres of the “hybrid” film.

Hsu et al.’s data in this study are quite historical, covering the years 1914–1948, but our introductory anecdote of the STAR WARS movies might suggest that this finding still holds today. Nevertheless, we would be interested in empirical testing with more recent data sets and ideally also for other entertainment products besides movies. Such studies might also reveal whether the genre-spanning effect is indeed linear (as existing studies imply). Or is there is an optimal number of genres that a movie should span, and what is that number?

International Differences: Not Everyone Loves Baseball

“You don’t say foreign, anymore. It’s ‘International.’”

—*Actor/director* Mel Gibson (*quoted in Fleming Jr 2016*)

Genres are deeply buried within a culture’s fabric of values, attitudes, and rituals. Take the western, which mirrors the foundational mythos of America, the conquering of wild and unexplored landscapes against all odds and by heroic loners. In contrast, a samurai film celebrates Japan’s iconic noble warriors. As a consequence of this cultural embeddedness, the attractiveness of a genre often differs between countries because of the (mis)match of the values celebrated by the genre and the values of the culture itself.¹⁷⁴

¹⁷⁴Regarding the specific values of a culture, please also note our discussion of country-of-origin signals later in this chapter.

Sometimes the desire to avoid a cultural mismatch has an immediate impact on how entertainment products are made. For instance, the sub-genre of invasion fantasies, in which brave resistant fighters defend their homeland against the country's arch enemies, is tied closely to the cultural value of American patriotism, but is hardly compatible with how Russian and Chinese audiences see the world. To avoid such a culture clash, the producers of the *HOMEFRONT* games and of the 2012 movie remake *RED DAWN* gave the invaders a North Korean background, instead of a Russian nor Chinese one, as originally planned (Totilo 2011).

How strong overall are such differences in genre preferences? In a descriptive analysis of the market shares of movie genres in different parts of the world, Follows (2016) demonstrates that they are quite substantive. For example, in his data set of 3,000 films released from 2012 to 2016, action films have 50% higher-than-average market shares in large Asian countries (e.g., China and Japan), but underperform in Italy. Comedies are twice as popular in Italy than in other countries, whereas South Korean and Japanese consumers show less appetite for humor (the market share of comedies is 65 and 45%, respectively, below the global average). Drama is also popular in Italy and in South Korea, but Japanese and Chinese audiences see only half as many dramas at the cinema than does the rest of the world.

Such insights are instructive, but one needs to be careful about interpreting them in a causal way. Consider the case of horror films, which Follows finds are not popular at all with Chinese audiences (with a genre market share that is 90% lower than the global average). Because horror films are heavily censored in China, their lower share is probably due to supply-sided factors instead of reflecting low demand. Clearly, there are other factors that will also influence the local genre market share; understanding them is crucial for making inferences about the popularity of a genre among *consumers* in a given country.

Accordingly, some *Entertainment Science* scholars have attempted to shed additional light on the international genre preferences of consumers by using more rigorous statistical methods and including more factors. Among them are Akdeniz and Talay (2013), who explore a data set of 1,116 U.S.-produced movies that were released in 27 countries between 2007 and 2011. They use a hierarchical linear regression approach in which they control for several other film elements, such as budget, participation of (American) stars, and professional reviews; they do not control for "local" variables (such as distribution in a given country), however.

The regression parameters for five main genres in 14 countries suggest that romance and action each exert a positive box office effect in

Scandinavia, Israel, and the Netherlands, above and beyond every other “success driver” the authors consider. Thrillers are only effective for Dutch audiences, and dramas are mostly negative across cultures (but mostly insignificant). The authors also find a negative effect of (American) comedies for South Korea (consistent with Follows’ market share analysis), as well as for Israel, Austria, and Germany.¹⁷⁵

We have argued that the genre concept is multilayered, and scholars have gone beyond the “main-effect” level to explore cultural differences in the appeal of more fine-grained themes. Specifically, Moon and Song (2015) compare the North American and “foreign” box office performance of 240 Hollywood movies from 2003 to 2005, distinguishing between movies that have what the authors name an “American theme” (such as dealing with American football; 120 such themes are identified and used in their study) and those who have a “non-American theme” (e.g., the Samurai culture).

The authors then determine for each movie the degree to which it features American and/or non-American themes; they do this by applying machine-based text categorization to more than 100,000 consumer movie reviews. Using OLS regressions, they find no influence of the presence of American and non-American themes on the North American box office of movies. But the films’ performance outside of North America profits from a non-American theme and also suffers from an American theme. In other words, an American theme shifts the foreign-to-domestic ratio of movie revenues toward the domestic component.

We also looked into the economic effects of cultural themes in movies, focusing on three specific American themes, namely sports, military, and African-American themes (Hennig-Thurau et al. 2003). Drawing on a sample of 231 U.S.-produced films, we first determined the “expected” German performance for each film (via regression analysis with its North American box office as predictor) and then investigated whether a film’s under- or overperformance could be explained by the three cultural themes.

We find that six out of the 20 most *underperforming* Hollywood films in Germany contain an African-American theme; among them are MALCOLM X (which made only 16% of what could be expected based on its North

¹⁷⁵For action and drama films, Akdeniz and Talay also find negative effects for South Korea, which conflicts with these genres’ higher-than-average market shares as reported by Follows—something that points at the existence of “hidden” factors for these genres that are not accounted for in mean comparisons. Separately, please keep in mind that their results only reflect a culture’s reception of *American* genre films. So, whereas the underperformance of comedies in Germany seems to confirm the country’s reputation of being “not funny” (Evans 2011), such an interpretation would ignore the enormous successes of native comedies such as DER SCHUH DES MANITU (12 million attendants), OTTO—DER FILM (9 million) and the FACK JU GÖHTE trilogy (which attracted more than 20 million moviegoers in total).

American performance) and *BOYZ IN THE HOOD* (only 19%). For sports movies, we find a similar, although somewhat less pronounced bias, as four of the 20 biggest underperformers deal with sports that are not as popular in Germany as they are in the U.S. Three of the films dealt with American football (e.g., *JERRY MAGUIRE*, which generated 26% of its North American equivalent) and one with baseball (*BULL DURHAM*, which returned just 1%); these films failed at the German box office despite the participation of popular stars such as Tom Cruise and Kevin Costner. The effect was not as obvious for military themes as for the other themes, but at least two military films are among the 20 that underperformed most strongly at the German box office (e.g., *MEN OF HONOR*, 36%).

In Panel A of Fig. 8.6, we illustrate this “theme-bias” for baseball movies, comparing the North American and German performances for the five best-rated baseball films on IMDb. For comparison sake, we do the same for the five best-rated action films in Panel B.

In sum, culture-dependent genre effects should not prevent a U.S. producer from turning an exciting story with a specific cultural genre or theme into an entertainment product. However, the producer should realize the potential commercial limitations that such a product can expect to face in markets outside North America. The producer can make changes to the project itself (such as limiting the budget or tweaking it in a way that is less

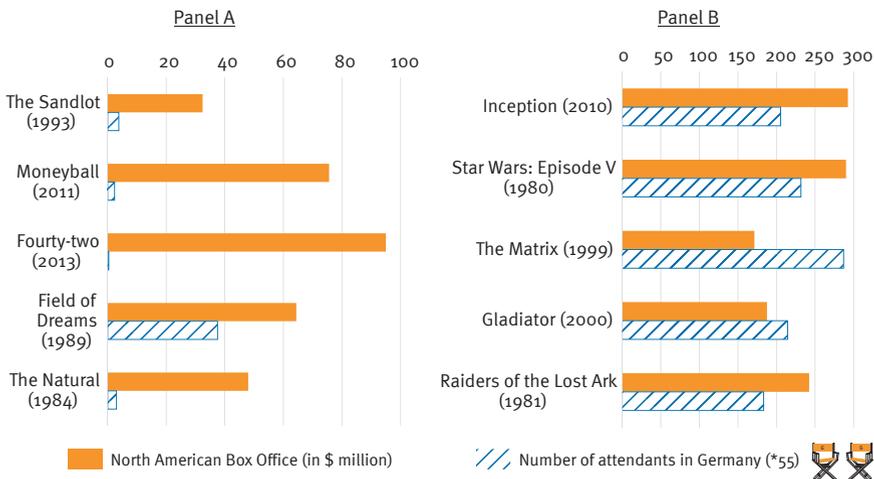


Fig. 8.6 Success of baseball and action films in North America and Germany
 Notes: Authors’ own illustration based on data reported by The Numbers, Insidekino, and IMDb. Our film selection is based on key words (for baseball) and IMDb genre (for action).

culture-dependent) or alter the communication strategy. Sony followed the latter strategy with its baseball movie *MONEYBALL*, which was a hit in North America (with a box office of \$75 million): the firm's managers de-emphasized the sports element and instead stressed the film's "man-fights-against-the-system" element. But making effective product or communication changes is a far-from-trivial challenge, as the figure shows: *MONEYBALL* attracted fewer than 50,000 moviegoers in Germany and also flopped in other parts of the world, despite the studio's repositioning efforts.

Let us end our discussion by saying that a cultural bias will also almost certainly exist for other themes in movies and other forms of entertainment than the ones we mentioned in this section; for example, Hollywood producer Victor Loewy claimed that "[faith-based] films don't travel well" (quoted in Cieply 2014). Knowing those themes would help producers make more accurate estimates, so further *Entertainment Science* work on the topic is desirable. It could contribute to an even more-nuanced understanding for other themes, entertainment forms, and other regions. The question whether such cultural preferences are stable over time is another related question—one we address next.

Culture is a Dynamic Phenomenon: The *Zeitgeist* Factor

People's interest in cultural themes can be stable over a long period of time, as is the case with sports. Baseball, for example, has been "America's game" for more than 150 years, and Germans' lack of fascination with the game has been similarly constant. However, some other themes that occupy a culture are much less stable; these dynamic themes might offer even greater opportunities for entertainment products.

History provides examples that novels, films, and music can become embodiments of a certain cultural *zeitgeist*, capturing and reflecting the lifestyle of a certain period. The Beatles and Rolling Stones set the soundtrack for the rebellious sixties, Simon and Garfunkel's *BRIDGE OVER TROUBLED WATER* album captured the early seventies' disillusionment, the self-expressiveness of the disco era was spurred by the Bee Gees' *STAYIN' ALIVE* tunes, and Michael Jackson's and Madonna's rhythms then turned pop into a dominant (sub)cultural element.

The degree to which an entertainment product captures the attitudes and values that are particularly salient for a culture at a given point in time can heavily influence its commercial success. All these artists and their songs became highly successful because of their *zeitgeist* fit, an explanation that has

also been named as the reason for the unexpected enormous success of several recent films. *RAMBO* offered a very simple (and very right-wing) resolution to the nation's traumatic Vietnam war (Nathan 2006). The patriotic and pro-military themes of *AMERICAN SNIPER* resonated with American audiences in 2015 at a time when the complexities of globalization and frustrating war experiences contested the nation's global leadership rule (Barnes 2015).

But let us note that *zeitgeist* is not always a good thing for makers of entertainment; it can also hurt an entertainment product's commercial performance when *zeitgeist* is missed. To understand the hateful reactions to Michael Cimino's epic western movie *HEAVEN'S GATE* (which even liberal reviewer legend Roger Ebert called the "most scandalous cinematic waste" he had ever seen; Ebert 1981) seems impossible without considering the *zeitgeist* of a torn, post-Vietnam war America at the film's release. After just having made a fragile peace with this war trauma, it seems that America was not ready for one of its foundations, the frontier myth, to be critiqued by an entertainer. The film's affront to the guiding *zeitgeist* of the time kept consumers from watching the film and destroyed United Artists, its legendary producing studio.

You will have noted that our arguments here are largely anecdotal—this is because no empirical research that has yet addressed such dynamic effects of cultural themes in entertainment. That needs to change, as *zeitgeist* certainly deserves a more prominent place in *Entertainment Science* theory. But for now, we will leave the topic and move on to a related quasi-search quality of entertainment: the content out of which entertainment is made and from which, in its aggregation, genres and themes are formed.

Entertainment Ratings and the Controversial Content on Which They Are Based

One consequence of entertainment's cultural character is the existence of content-rating institutions that decide whether a product is suitable for a country's population, and for which parts of it. These institutions' recommendations play a dual role in the success of an entertainment product.

The first role of ratings is the focus of this chapter—they send a signal to consumers of the "radicalness" of the experience that awaits them. Ratings deal mainly with three facets of aesthetical radicalness: the degree to which a product contains violence, profanity (in the form of offensive language), and

nudity or sexual content. How do consumers value these signals? This is far from a trivial question: in some cases, more consumers may be attracted by killing, cursing, and/or simulated intercourse in a movie than may be turned off by these “qualities.”

Ratings’ second role is that they limit the number of potential customers for a product by restricting it from some portion of the population. For example, a movie rated “16” in Germany prevents everyone under the age of 16 from seeing it—this group accounts for 13% of all theater visits, and a much higher percentage for some kinds of films (FFA 2016). In the following, we will first look at the aggregation of these two roles of ratings. We will then attempt to separate the two effects, looking first at the effects of radical content and then the “restriction effect” for entertainment products, in general and for different genres.

Linking Entertainment Ratings with Product Success

Most empirical research on ratings has been conducted in the contexts of movies and games, the two areas for which access restrictions are most prominently applied. The majority of studies includes age-rating categories in their regression analyses that aim at explaining product success, in addition to other “success drivers,” such as genres and advertising.

In the context of movies, researchers have either included the actual rating categories (as categorical variables) or a scale that measures a rating’s restrictiveness (i.e., the more restrictive the rating, the higher the score). Some studies report more restrictive ratings to be a commercial disadvantage. For example, when S. Abraham “Avri” Ravid (1999) applies OLS regression to a data set of 175 films from 1991 to 1993, he finds positive effects on revenues and ROI for G- and PG-rated films. And De Vany and Walls (1999) find that R-rated films are outperformed by other ratings in terms of both revenues and profits when fitting a non-normal Pareto distribution to a large data set of 2,000 films from 1985 to 1996.

Such results are consistent with the traditional tendency of movie studios to avoid restrictive ratings, particularly for action and drama films, because of their “restriction effect;” it hurts producers to see consumers complain of being unable to spend money for their products, as did eight-year old DEADPOOL-fan Matthew (Derisz 2016). When director Ridley Scott was asked about the PG-13 rating for the film PROMETHEUS, the prequel to his science-fiction classic ALIEN which holds a reputation for its strong R-rated

violence, his reply reveals the studio's way of thinking: "The question is, do you go for the PG-13, [*which*] financially makes quite a difference, or do you go for what it should be, which is R?" (quoted in De Semlyen 2012, with italics added by us).¹⁷⁶

But the matter is somewhat more complicated. The studies cited above use somewhat older data; they are also limited in their use of controls. The results of more recent studies show no clear pattern regarding the economic effect of ratings. Some note a restriction effect, but only for a limited time period. For example, Leenders and Eliashberg (2011), applying a hierarchical regression to pooled data from nine countries, conclude that a more restrictive rating negatively influences the *opening weekend* of a movie, but not the *total* box office. Other recent studies find no systematic differences for the performance of rating categories (e.g., Clement et al. 2014, who analyze the North American and German box office of about 2,000 movies for the 2000–2010 period using 3SLS regressions).

And some studies, such as our own, even report a *positive* effect of more restrictive ratings (e.g., Hennig-Thurau et al. 2009, for an OLS regression of 202 movies from 1998 to 2006, half of which are sequels). For video games, Cox (2013) finds, for a data set of 1,770 games released for the seventh platform generation, that "mature"-rated titles (which he measures with a dummy variable) have 12% higher sales in North America than do games available for "everyone." And Dogruel and Joeckel (2013) report that M-rated games, which represent a share of just 8% of seventh generation games, accounted for 26% of "best-selling" games between 2008 and 2010.

So, why the conflicting results? One explanation is that the effect of the different rating categories is not linear, but that some categories have a distinct effect; thus, continuous measures of rating restrictiveness will lead to systematically different results than will binary ones.¹⁷⁷ But, as we will show below, it is the two distinct roles of ratings that are critical for understanding rating effects: the appeal of radical content and the restriction of audiences. When we take a closer look, we will also examine the context in which radical content is offered, such as an entertainment product's genre.

¹⁷⁶In case you're interested in the studios' handling of ratings, we also highly recommend the documentary *THIS FILM IS NOT YET RATED*. Prepare yourself for some radical content, though.

¹⁷⁷Marchand (2016), who uses basically the same data set for the same console generation as Cox, finds *no* effect of a *continuous* measure of rating restrictiveness. When we reanalyze the same data and substitute this measure with a binary one ("mature" rating or not), we find the same sales-enhancing effect that Cox reports.

Disentangling the “Appeal Effect” of Radical Content and the “Restriction Effect”

“Rated ‘G’ is nobody gets the girl. ‘PG’ is the good guy gets the girl. ‘R’ is the bad guy gets the girl. ‘NC-17’ is everybody gets the girl.”

—*Meme on the Internet*

Information about the radicalness of an entertainment product will spread via ratings, but also through the information provided in trailers, posters, and other material. How do consumers react to radical content?

In Holbrook’s (1999) study of HBO viewers, he finds that radical content *negatively* influences mainstream consumers’ liking of movies. But Lang and Switzer (2008) go beyond studying effects on liking to connect content ratings to movies’ commercial success; they use violence, sex, and profanity codings of 1,160 movies from 1993 to 2004 made by the family-recommendation service kids-in-mind.com. In an OLS regression, they include all three dimensions of radicalness as predictors, along with dummy variables for G, PG, and PG-13 ratings. Whereas profanity turns audiences away, and sex shows no effect, the researchers find that, across all films, a higher level of violence indeed attracts more consumers. It is this “consumer appeal” that attracts some of us to restrictively rated content, just as it did former Warner Bros. executive Lorenzo di Bonaventura: “[w]hen I was in my late teens, I wanted to see R-rated movies” (quoted in D’Alessandro 2017b).¹⁷⁸

Do we find the same patterns in more current data? We investigated this question ourselves for a data set of 1,309 movies from 2005 to 2013 that were rated either PG-13 or R, as the two critical rating categories when it comes to “appeal” effects. Also measuring radicalness via kids-in-mind.com codings and controlling for the rating categories and several other success factors (such as advertising spending), we find that a one-point increase in violence (on the 10-point scale) leads to a 3% increase in box office. Profanity and sex both have negative parameters, but they are small and insignificant.¹⁷⁹

¹⁷⁸As Lang and Switzer’s analysis controls for the ratings categories (as well as critics’ judgement and distribution intensity/screens), with the coefficients of the ratings variables indicating how ratings themselves influence movie success, separate from the content they signal (the “restriction effect”); the coefficients for the radicalness dimensions reflect the dimensions’ average “consumer appeal.”

¹⁷⁹In another study, using a data set of 2,000 films from 1992 to 2012, Barranco et al. (2015) code radicalness based on reasons given by the MPAA and arrive at similar insights regarding the appeal of average content. In an OLS regression across all age ratings (for which they do *not* control in the analysis, though), they replicate the success-enhancing effect of violence. They also obtain a negative sign for profane language, but it does not reach significance.

The restriction effect from the rating categories is much stronger in our data; we learn that a movie can, on average and controlling for radicalness and other characteristics, expect to lose 33% of its revenues with an R rating instead on a PG-13 rating.¹⁸⁰ In other words, higher violence can indeed attract additional audiences, but producers have to pay a high price to win them over. And there might be one additional hidden cost of restrictive ratings which our data does not capture: if ratings hurt potential merchandise revenues associated with an entertainment product.¹⁸¹ This is what movie director James Mangold has in mind when he argues that for R-rated films “the studio has to adjust to the reality that there will be no Happy Meals. There will be no action figures. The entire merchandising, cross-pollinating side of selling the movie to children is dead before you even start” (quoted in Hayes 2017).

But we have to keep in mind that these are *average* effects across all kinds of movies. So, do findings vary by rating category or by product type and context? To answer this question, let us take a deeper look at the appeal of radical content for each rating category and also study whether differences in the appeal and restriction effects exist between genres.

The Appeal of Radical Content, Contextualized. Or: Nobody Wants to See Sex (in a Galaxy Far, Far Away)

Let's look at rating categories first and the differences in impact of the appeal of radical content of each. When Lang and Switzer run rating category-specific analyses, they find that higher levels of violence increase the attractiveness of R-rated and PG-13-rated films (but not of G/PG-rated films). Profanity hurts only R-rated films, and high levels of sexual content hurt

¹⁸⁰The strength of this restriction effect assigns meaning to the processes through which such ratings are determined. Leenders and Eliashberg (2011) conduct an empirical investigation into the determinants of ratings for movies across nine countries, finding that not only the movies' ingredients are impactful (e.g., violence etc.), but also are the characteristics of the rating board (e.g., membership structure, size, and a country's culture). Related, Waguespack and Sorenson (2011) investigate potential biases in the assignment process of ratings. Analyzing 2,408 films that have been released in North American theaters between 1992 and 2006 and using content classifications by both kids-in-mind.com and IMDb, they show through linear models that distribution via an MPAA member firm reduces the chances of receiving an R-rating, as does the previous experience of the distributor. In addition, they find that it helps to have directors and producers that are well-connected within the film industry. In contrast, using a director who has a reputation for R-rated films reduces the chance of being rated less restrictive than R.

¹⁸¹See our chapter on entertainment branding for a more detailed discussion of the revenue streams of entertainment brands and franchises.

only PG-13-rated movies. In our analyses with more recent data, we find the “violence-is-good-for-business” effect to be only present for R-rated movies, and although the parameters for sex and profanity are mostly negative in our re-analyses, they are not statistically significant for *any* rating category. Be aware that all these results of secondary market data are only meaningful for how Hollywood has been using radicalness in the past, namely limiting more radical elements to the less restrictive ratings. Thus, our findings do not allow any generalizations regarding non-existent scenarios (e.g., nudity in a G-rated film).

Genre-specific effects of radical content are next. We study them by running analyses on a genre-by-genre basis, only considering the films of a certain genre at a time (while leaving all other films out of the analysis). In our data set of 1,309 movies rated either PG-13 or R, both the restriction effect of rating categories and the appeal effect of radical content vary between genres. The negative restriction effect of an R-rating ranges from -8% for horror movies (where it is statistically insignificant) to around -54% for romantic films; it is also insignificant for science-fiction and fantasy movies. Such differences will probably also exist for merchandising revenues—not every PG-13 movie (or T game) is equally headed for a release at Burger King, so that restricting merchandising potentials matter little for them (while they certainly matter much for others). For some entertainment products, selling expensive “Collectors’ sets” merchandise to older, well-heeled consumers might be the real deal—one that is will not be affected by age restrictions, but based on the appeal of (radical) content only.

Figure 8.7 show how this *appeal* effect of radical content influences not merchandising, but box office revenues for selected genres. The figure reveals that whereas a higher level of violence hurts the commercial performance of PG-13-rated action movies, it helps the performance of R-rated thrillers. Higher levels of sexual content turn audiences away from R-rated adventure and science-fiction movies (telling us that consumers have not been very excited by the idea of seeing simulated sex in space on the big screen), whereas it does not influence action movies and thrillers, regardless of their ratings.

Whereas profanity has no significant impact on most genre-rating constellations, it helps R-rated adventure movies find their audiences, at least in our data set. The latter finding is consistent with the doubling of industry expectations by *DEADPOOL*, the foul-mouthed Marvel character from 2016, when the movie generated opening weekend revenues of \$135 million in

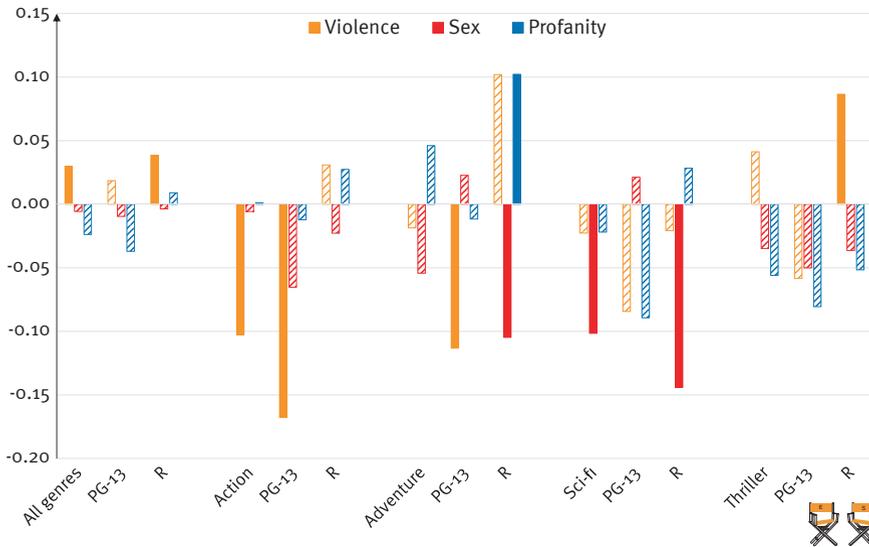


Fig. 8.7 The appeal of radical content for different movie genres

Notes: Authors' own illustration based on publically available data from kids-in-mind.com, MPAA, and The Numbers. All numbers are unstandardized regression parameters from OLS regressions, which also included as predictors whether a movie was a sequel, the movie's quality rating by critics, the number of opening-weekend theaters, the advertising budget, and major studio distribution. Shaded bars show parameters that are not significant at $p < 0.10$.

North America (Fritz 2016). The film's performance provides ad hoc support that restriction effects are only *one* side of a two-sided coin—and that situations exist when “[w]hatever they lose in teenage audiences who can't see the film without a parent, ... they can more than make up for with people 17 and older who are more attracted by the bloodier or funnier material an R-rating allows” (Fritz 2017).

In addition to genres, the value of radical content also varies with the *context* in which entertainment products are consumed. Movie research suggests that theater visits and home entertainment follow a separate logic when it comes to rating effects. When we applied a partial least squares estimation to a data set of 331 films from 1999 to 2001, we found that movies' restrictiveness *positively* influenced the video rentals of films (Hennig-Thurau et al. 2006). This result is consistent with Jozefowicz et al.'s (2008) result that, for their data set of movies that were highly successful in theaters, PG-13 and R-rated movies performed better in rental markets than films that were accessible for all ages (VHS rentals were +20%, DVD rentals +50%).

For video games, it is the console that defines the context more than anything else. When we crunched the data set of games also used by Marchand (2016), we learned that although a more restrictive rating adds to the attractiveness of an average Xbox or PS3 game, restrictiveness *hurts* game sales when the console is Nintendo's Wii, similar to "average" movies. Violence, as the force behind most restrictive ratings in video games, tends to lure Xbox and PS3 players, but keeps Wii players at a distance.

Some other questions remain unanswered. What is the "optimal" degree of radicalness for different forms of entertainment? Our own analyses, like most others, imply a linear effect of radical content. But it seems plausible that the appeal of violence, sex, and profanity is non-linear, such that a moderate level of radicalness may be preferred to both low or (very) high levels—although the success of ultra-violent fare such as the *SAW* movies make such an effect far from obvious, at least for the horror genre. *Entertainment Science* scholars will hopefully continue to explore the matter, shedding even more light on what some might consider a "dark side" of entertainment.

Finally, a Few Words on Risk and Radicalness

If restrictive ratings can hurt the success potential of films, why then do so many of them feature radical content and carry a restrictive rating? Scholars have named this the "R-rating puzzle" of the movie industry (Ravid and Basuroy 2004), referring the issue to the importance of risk for entertainment producers.

One potential explanation scholars have pointed to is that although films that contain radical content elements do not produce higher revenues, they might involve *less risk*. For a sample of 175 films from 1991 to 1993, Ravid and Basuroy (2004) use of the MPAA's explanation of their ratings to compare the standard deviations of the ROI of films that contain different levels of violent content and sexual content. The scholars find that the standard deviation of the ROI of films which are *very* violent is lower than for the average film in the sample. The same is true for those films that contain both violence *and* sex. Based on these findings, Ravid and Basuroy suggest that radical content may serve as a means to hedge the risk of film productions.

But why the lower risk for radical content? We speculate that it could be because radical content appeals to people's most base needs. These needs, although suppressed by more civilized processes, have at least *some* influence on most of our behaviors when consuming entertainment (as in other parts

of life). Although pleasing such needs is not a *sufficient* reason to let entertainment enthuse us, there is always a market for “cheap thrills” and other stimuli that address such fundamental needs, regardless of other quality criteria, just as there is always demand for adult entertainment, which might explain the existence of films that would otherwise attract only very little interest.¹⁸² But this logic remains, at least at this point, speculation.

Entertainment’s Country of Origin

“Made in Hollywood” as a Quality Signal

In a globalized world, the country of origin is a straightforward quality signal. We know it because of the many products we have purchased that express their origin via stickers and labels, such as “Made in the USA.” The power of country-of-origin cues differs between product categories: Germany has a reputation for high-quality cars, Italy for trend-setting fashion, and Columbia for premium coffee. Extensive research by marketing and management scholars has compiled evidence that country of origin influences customers’ quality perceptions and purchase intentions for utilitarian consumer products and industrial products, across a large variety of conditions (e.g., Peterson and Jolibert 1995).

For many people, such country-related quality associations also apply to entertainment products. What kind of associations are triggered when we hear a film is a “Hollywood movie”? Filmmaker Robert Altman has offered a pointed description of the Hollywood stereotype in his film *THE PLAYER*, when he lets studio executive Griffin Mill tell his assistant that a story just pitched to him lacked certain elements which are needed to market a film in a success way. When asked what elements he was thinking of in detail, Mr. Mill’s answer is a succession of nouns, including suspense, violence, hope, heart, laughter, sex, and happy endings. Mr. Mill then specifies that happy endings are the main concern, not reality.

Although offered in a tongue-in-cheek manner, several of the elements in Mr. Altman’s characterization actually overlap with entertainment qualities

¹⁸²We have mentioned the Cannon Group’s approach to making movies earlier in this book and will return to it in more detail in our discussion of entertainment innovation. At this point it is informative that most of the firm’s works have been labeled “exploitation” films, as they almost always featured “cheap attractions”—high levels of exploitative (i.e., dramatically unmotivated) violence, sex, and profanity. Despite this fact, or, following our argument here, because of it, they have developed a devoted fan base which still celebrates Cannon’s creations some 25 years after the firm went out of business, on Facebook (e.g., “Cannon Films Appreciation Society”) and elsewhere.

we have discussed in previous chapters of this book.¹⁸³ It is their *accumulation* that links to the narrative conventions that are often associated with Hollywood films. Other widely shared Hollywood associations are American values (i.e., the individual hero or the importance of “achievements” that are reflected in “rags-to-riches” movies, such as *ROCKY* and *THE PURSUIT OF HAPPYNESS*), a distinctive aesthetic style, as well as the use of a high budget and stars (Hennig-Thurau et al. 2001)—elements we will discuss on the following pages.

Very different associations are triggered by entertainment products from other countries. French movies are believed to be “art house” rather than entertaining, focused on non-conformist characters instead of special effects, the disappointments of life instead of happy endings, and complex and ambitious stories and styles (e.g., Porter 2010). Indian films from Bollywood, in contrast, are known for their “hybrid” nature; most plots involve a love story, but also singing and dancing.¹⁸⁴ They also combine heavy melodrama with slapstick humor. And Russian works are often associated with deep philosophical questions and a pessimistic outlook rather than a straightforward optimistic narrative.

But the country-of-origin concept is not limited to films. It also applies to pop songs (we expect different tunes and sounds from British bands and French singers), video games (doesn’t an American game sound cutting-edge?), and novels (aren’t British writers masters of dark humor and Russian novelists, like the country’s filmmakers, obsessed with reflection?).

In addition to those aesthetic differences, there is also a much more practical one: language. If entertainment products from a country use a different language than that practiced by the consumer, novels have to be translated, films and games have to be dubbed or subtitled, and music lyrics become sound elements instead of conveyors of meaning. But be aware that the country-of-origin concept must not be reduced to language. Whereas British and most Canadian film makers use the same language as their colleagues from California, audiences’ associations won’t be the same, and their products will thus not benefit from being perceived as “Hollywood films.”

¹⁸³See in particular our discussion of “great” storylines in the chapter on entertainment product quality.

¹⁸⁴Or, as an Internet user suggested humorously, there’s always a boy, a girl, and a tree in Bollywood movies—the boy falls for the girl, the girl, after some hindrances are overcome, falls for the boy, then they (and others) sing and dance around the tree in various locations (Valan 2010).

Empirical Findings on How Entertainment's Country of Origin Influences Success

The impact of language, as the pragmatic layer of country of origin, is obvious for countries in which dubbing is disliked by consumers (as is the case in the U.S.). With the exceptions of sub-titled Taiwanese action film *CROUCHING TIGER, HIDDEN DRAGON* and Mel Gibson's *PASSION OF THE CHRIST* (which featured dialogue purely in ancient biblical tongues), no foreign-language film has ever generated more than \$100 million in North American theaters; only ten have made at least \$20 million. The number of non-English language pop songs that became hits in the U.S. is also quite small, with few eccentric exceptions such as Austrian singer Falco's *ROCK ME AMADEUS* which in 1986 made it to the top of the Billboard charts despite its mainly German lyrics. From a statistical perspective, those exceptions are "outliers" or "artifacts," which cannot be replicated and thus provide no basis for learning.

Instead of trying to imitate such rare occurrences, entertainment producers have developed strategies to address this country-of-origin malice. Musicians sometimes record "localized" versions of their hit songs.¹⁸⁵ And American film makers regularly produce English-language remakes of foreign-language films for their home market (e.g., Gore Verbinski's *THE RING* was a remake of the Japanese horror film *RING*), which, in addition to overcoming the language gap, also allows them to get rid of other disadvantages that are tied to the importing of a product with a different country of origin, crafting an "Americanized" version of the original.¹⁸⁶

A language bias is not exclusive for American consumers, but exists for all cultures. Schmidt-Stöltzing et al. (2011) show that German readers have a bias against translated hardcover books. They find that, compared to books originally written in German, sales of translated books are 16% lower, using a sophisticated SUR analysis that accounts for several other book characteristics. But their results also point to the role of context: findings show no impact of language for paperback books.

¹⁸⁵For example. German singer Nena released an English-language version of her 1983 song 99 *LUFTBALLONS* under the title 99 *RED BALLOONS*. Whereas the German version climbed up to #2 in the U.S., the English-language version indeed became #1 in the UK, Ireland, and Canada (but interestingly had no success in the U.S.). In the pre-globalized world of the 1950s, 1960s, and 1970s, recording songs in other languages was done by many international stars, such as The Beatles (*SHE LOVES YOU*—*SIE LIEBT DICH* in German), and The Beach Boys (*IN MY ROOM*—*GANZ ALLEIN*, also in German). As late as in the 1980s, some stars still recorded versions of their songs in other languages, such as Michael Jackson did with a Spanish version of *I JUST CAN'T STOP LOVING YOU* in 1988.

¹⁸⁶But the challenges that exist for every remake of an existing entertainment product also apply here.

But country-of-origin effects are far bigger than language. Using a conjoint analysis approach to determine the importance of certain movie characteristics for New Zealand moviegoers, Gazley et al. (2011) find clear preferences for movies within certain countries of origin. For their sample of 225 consumers, the “Made in Hollywood” label is as important as a movie’s genres—and even more important than the presence of a favorite star. A New Zealand country of origin, in contrast, strongly *reduces* a film’s attractiveness.

We have employed secondary data for 231 movies released in both North America and Germany from 1998 to 2001 to study the impact of “Made-in-Hollywood” associations (Hennig-Thurau et al. 2003). Using a measure of films’ “Hollywood style” from (now defunct) Reel.com, we find a significant positive link between the degree of a film’s “Hollywood style” and its box office success in both regions. The variable explains about 13% of success in North America, and it explains 8% of the German box office performance.

Other researchers have included one or more country-of-origin variables in their models when explaining the success of entertainment products. The consistent finding for movies is that an American origin provides movies with a competitive advantage among *American* audiences. For example, Litman and Kohl (1989) conduct an OLS regression with 697 movies from 1981 to 1986, estimating that between \$5.6–\$8.5 million in theatrical rentals can be attributed to a film’s North American origin, which equal about twice the effect in total box office. Wallace et al. (1993) obtain similar results from a stepwise regression using 1,687 movies from 1956 to 1988; they estimate an average rental effect of \$5.6 million. Consistent with such a bias, we learn when examining 575 movies from 1998 to 2002 with partial least squares (and controlling for an extensive list of other factors) that both a European origin and a “neither-North-American-nor-European” origin are disadvantages in North American theaters (Hennig-Thurau et al. 2013).

Additional findings point to the heterogeneity that exists among country-of-origin associations for entertainment on a *global* scale, that is, outside of North America. Look at Fig. 8.8 which lists the market share of U.S.-produced films in the 15 largest movie-going countries in 2007/2008. It illustrates that Hollywood productions capture about nine out of ten tickets sold in Mexico and Canada, and about two-thirds of tickets sold in Spain, Germany, and Italy. But U.S. films take only about one-third of ticket sales in Japan and China, and even lower in India (Epstein 2011). In addition to supply-side issues, those massive discrepancies point at a varying appeal of the “Made-in-Hollywood” image.

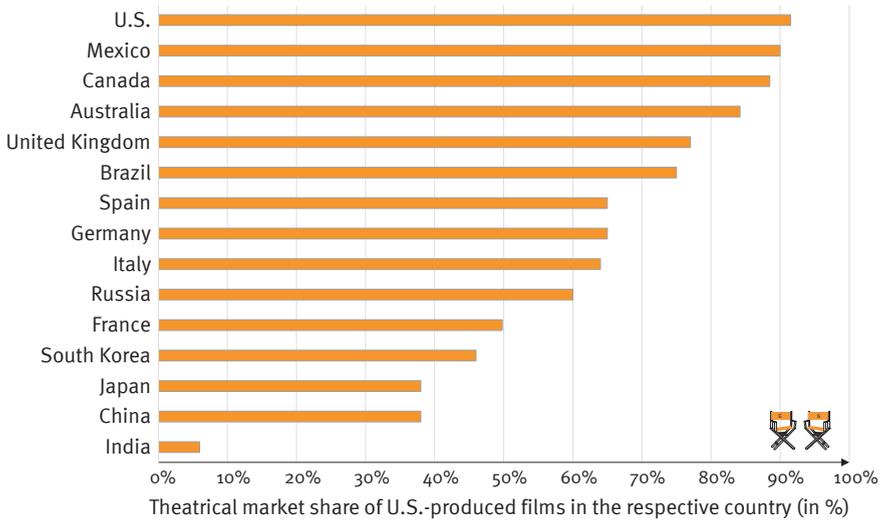


Fig. 8.8 The market share of U.S.-produced films in different countries

Notes: Authors' own illustration based on calculations by Epstein (2011). Data refer to 2007/2008.

So, although the image of America, in general, and Hollywood, in particular, can help U.S. entertainment products enormously in several parts of the world, there is clearly more to global success. How can we explain such enormous differences? Drawing on entertainment's cultural nature, scholars have argued that the "cultural distance" between the producing country and the consuming country is crucial for explaining entertainment-related country-of-origin associations and their impact on success. Let us take a look into this issue.

Both Sides Matter: Cultural Discount

The basic idea here is that we, as consumers, "discount" a cultural product based on the distance between the culture in which we live and the culture in which the product is manufactured. Hoskins and Mirus (1988) introduced this idea in an attempt to explain the dominance of American TV productions in several, but not all, parts of the world. They explain that such cultural discount reflects the "diminished appeal" of content produced in a different cultural context than a consumer's own. Such discount exists because people "find it difficult to identify with the style, values, beliefs, institutions and behavioral patterns of the material in question" (p. 500).

The concept of cultural discount suggests that the larger the cultural distance between the producing and the consuming country, the lesser consumers value the foreign production. For example, cultural discount would argue that because U.S. culture is more similar to Germany's culture than it is to Indian culture, this explains why Hollywood movies fare much better in Germany than they do in India, as shown in Fig. 8.8. And it suggests that American moviegoers prefer Hollywood films over those from other countries (as we have reported above) not because of their patriotism, but because of the higher cultural similarity between American films and audiences.

Can *Entertainment Science* offer empirical support for this logic? A number of studies have empirically tested the impact of cultural discount and related factors on entertainment product success. Craig et al. (2005) analyze the performance of close to 300 American-produced films (the U.S. "Top 50" from 1997 to 2002) in eight foreign countries. The dependent variable in their regression analysis is the "per-capita box office" of a film, i.e., the revenues a movie made in a country (expressed on a per-citizen basis to control for the population size). They then examine whether this measure of film success can be explained by the cultural distance between the U.S. and the respective country, which Craig and his colleagues calculate based on Hofstede's culture dimensions (i.e., individualism, power distance, uncertainty avoidance, and masculinity; Hofstede 1991). Controlling for a film's genre (but no other movie elements), they confirm that higher cultural distance diminishes a film's box office: a one-point increase in distance corresponds to a 15.7% decrease in per-capita revenues. The findings also reveal a positive association between a country's "Americanization" level (which they measured by the number of McDonald's restaurants in a country): the more Americanized a country, the better American films perform there.

Other scholars corroborate these findings and extend our understanding. Moon et al. (2016) employ Hofstede's culture dimensions when analyzing the performance of 846 American movies (from 2008 to 2015) in 48 countries using 2SLS. They also find that cultural distance is negatively related to film performance in a country. But they also show that the impact of cultural distance is non-linear: it hurts box office most strongly when distance is increased from low to medium, but much less so as it is increased to higher distance levels. And there's one more interesting insight we learn from the work by Sangkil Moon and his colleagues. Using a text mining approach in which they look for cultural terms in movie reviews, they determine each movie's cultural "compatibility" with the country to which it is exported. Their results show that higher compatibility helps a movie's box office in a country, above and beyond the cultural distance between the countries of production and consumption.

In another study, Hanson and Xiang (2009) study the performance of 284 American films (from 1995 to 2006) in 46 countries, using language dissimilarity and geographic distance as proxies of cultural distance between countries. Running OLS regressions on the country level, they find that language dissimilarity explains more than 20% of the average performance of American films relative to the performance of local movies; larger geographic distances also are negatively related to the (relative) success of American films in a country.

Finally, cultural distance also works when using an “import” perspective, i.e., explaining why movies from one country succeed and those from others fail when released in a specific culture. Fu and Lee (2008) apply this logic to Singapore (as the importing country), empirically explaining the performance of 441 films from 2002 to 2004 with the cultural distance (measured again with Hofstede’s dimensions) between Singapore and the 22 countries in which the released movies were produced. OLS regressions on the country level show that a higher cultural distance has two consequences: fewer films are imported (the “supply effect” of cultural distance) and lower demand for those that are imported (the “demand effect”).¹⁸⁷

The Production Budget

Before we move on to branded signals, let us look at one last factor that is also often considered a quality signal in empirical studies: an entertainment product’s budget. The logic is that consumers treat information about a product’s budget as an indicator of the talent involved in the making of a product (which should be reflected, for movies, in great acting, dialogue, and special effects), *or* as an indicator of the popular appeal of the product (which also implies “high quality”). After all, what kind of producer would spend \$200 million for a movie if the project is anything less than exciting for a lot of people (Hennig-Thurau et al. 2001)?

Several scholars, including us, have included the production costs in their regression models to help explain product success. The majority of these studies deals with movies; budgets are much less often disclosed for games, musical productions, or novels. The existing results provide strong evidence that the budget size indeed correlates positively with entertainment products’ revenues. For example, Ravid (1999) reports elasticities of larger than

¹⁸⁷Park (2015) reports similar findings for both supply and demand of 222 movies in Australia. Her findings have to be taken with some care, though, as she conducts the analysis on the movie level, not country level, and does not account for the hierarchical nature of the data.

+1 for revenues earned via several distribution channels (North American and international theaters, home video rental). Other studies that show similar effects include those by Litman and Kohl (1989), De Vany and Walls (1999; higher budgets are associated with higher “hit probabilities”), and Lampel and Shamsie (2000).

However, although we agree with the idea that the budget of an entertainment product can indeed serve as a quality signal for consumers, we are skeptical that these findings should be interpreted as *causal* effects. Such logic would imply that mainstream consumers are aware of a specific product’s production budget. But we see little evidence that this is the case; even though the media occasionally reports when films have extreme budgets or have exceeded their initial budgets, consumers rarely mention budget as a reason for selecting a certain entertainment product. On the Internet, we find some enthusiasts discussing record-breaking budgets on fan sites (e.g., *Whedonesque* 2011), but we do not find budget to be a regular topic of consumers’ social media chatter. This kind of chatter would be essential for budget information to spread via word of mouth from enthusiasts to “normal” consumers.¹⁸⁸ In sum, we don’t think that a substantial share of consumers knows a film’s budget or would have high interest in it, at least when other information is available, as is usually the case when consumers make entertainment choices. And if someone is unaware of something, then she or he simply won’t use it as part of the decision-making process.

Instead of being treated as a causal effect, it seems much more plausible to interpret the correlations between budgets and success to be the result of a complex, multifaceted relationship. Managers of entertainment products make up their minds early in the production process regarding the commercial potential of a project. Among the first decisions affected by their judgment is the production budget, which influences the way the product is made (how much money is spent for the writing, the acquisition of brands, for stars). But the judgment is also mirrored in later decisions regarding key elements of the marketing mix, such as the amount of money spent for advertising and distribution. As we discuss in this book, all these follow-up decisions then influence the consumer’s perception of, and anticipation for, the product in a causal way.

If these “other” variables are missing from a statistical model, the budget variable will absorb the variation in success that is actually due to these other variables and we will mistakenly conclude that budget has a

¹⁸⁸See our chapter on “earned” communication for a discussion of the role of word of mouth in entertainment.

more important direct effect as a signal for consumers than it truly does. This situation is a classic case of a spurious correlation caused by an omitted variable bias.¹⁸⁹ Empirical support for this logic comes from studies in which scholars control for other factors and which consistently show that, the more comprehensive a statistical model, the smaller the effect size of the production budget; some studies even report it to be insignificant (e.g., Elberse and Eliashberg 2003; Hennig-Thurau et al. 2007; Liu 2006). And even if the budget indeed remains significant in such models, we suspect it is because the budget stands in for further factors that are not included, such as high-quality special effects or exotic locations, not because consumers buy an entertainment product directly because of its budget.

So, what then should be the role of the production budget in empirical models of entertainment success? Because it is determined so early, the budget is a good proxy for managers' expectations. Interpreted as such, the budget can be a useful instrument for other factors such as advertising or the use of stars (which are both also affected by managerial success expectations, rather than chosen independently, as a standard regression model would assume), an approach that would enable an unbiased measuring of these other factors. For example, Basuroy et al. (2006) use budget information as an instrument of advertising spending. Luan and Sudhir (2010) have done the same, and they also employed it to explain other DVD characteristics, such as the price. Ekaterina "Kate" Karniouchina (2011) used the budget as an instrument of a movie's "buzz" in her analyses, and we used it to create an unbiased measure of the role of movie stars for film success (Hofmann et al. 2016). Another way to make use of the budget is to explain *distributors'* decisions regarding new products, such as in how many theaters a new movie opens (see Elberse and Eliashberg 2003, Clement et al. 2014, and De Vany and Walls 1999). These industry experts have, compared to consumers, a much better knowledge of the ingredients of new entertainment products.

Does all this mean the budget is not a relevant factor for the success of an entertainment product? Not at all—as we have laid out before, financial resources are a key source for competitive advantage in entertainment. But it means that increasing a product's production budget does not necessarily lead directly to higher consumer demand, because its effect on consumers is of an indirect and complex kind. The budget is only impactful when it influences one or more of the more direct drivers of entertainment success.

¹⁸⁹We discuss the matter of spurious correlations and warn you, our readers, about them in this book's inaugural chapter.

Concluding Comments

With the “true” quality of any entertainment product being hidden inside the consumption experience, what can we, as consumers of entertainment, do to pick the “right” product out of the myriad of offerings—the one that we will enjoy? In this chapter, we first looked at search qualities, which are notoriously limited in number and also relevance for entertainment. Technology, such as stunning special effects, but also virtual reality and 3D presentations can ensure consumers of certain benefits, and we discussed the key achievements and developments in this chapter for the different forms of entertainment. Our discussion demonstrated that no technology can guarantee success; what matters is whether meaningful consumer benefits are created by the technology that exceed costs—for those who offer the technology and those who have to pay for consuming it.

In the rest of the chapter, we examined the research concerning signals of product quality, or pseudo-search qualities: factors that are provided by a producer to lead consumers to infer from them that a new entertainment product is one that we will enjoy, based on previous experiences with those factors. You have enjoyed romantic comedies in the past? Here’s a new one for you! Knowing the genre of a movie, video game, novel, or song can narrow the field for consumers because we have learned what to expect from genres and have formed genre-based preferences, loving some while despising others. We reported that spanning multiple genres can be dangerous, and that the fit of product’s genre with broader cultural preferences in a market matters: a winning genre in one country may be a big loser in another market. Genre preferences also evolve over time and with societal shifts.

Age ratings and the controversial content they regulate are a two-sided coin in that the restriction on market size (because some portion of consumers are restricted from consuming the product) may be offset by the product becoming more appealing to certain target audiences, because of the “edgy” content that inspired the rating to begin with. We showed that, on average, restrictions dominate such appeal, but that a more detailed look at genres is recommended, as effects vary strongly between them. An entertainment product’s country of origin is another pseudo-search quality: consumers hold strong expectations and preferences for entertainment that comes from different countries of origin (think Hollywood versus Bollywood). We argued that the production budget of a product, although often treated as just another signal, plays a more complex role and should be treated as such when it comes to configure an entertainment product and to predict its success.

For the producer of entertainment products, thinking through the impact of these various signals enables one to make more informed product decisions. Is the goal to win a narrow niche or market or to play broadly across customer segments and markets? Signals will open some options and close off others. This is particularly true for the type of signals we will discuss in the next chapter—signals that use brands of various kinds and origins to enable consumers to infer the quality of the new entertainment product to which they are attached.

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