

On the Perceived Quality of Movies¹

Victor Ginsburgh
Université Libre de Bruxelles and
CORE, Louvain-la-Neuve

Sheila Weyers
CORE, Louvain-la-Neuve

Abstract

We address the question of the quality of movies produced between 1950 and 1970. A first outcome of our analysis is that the quality assessments made during the Cannes Festival, and to a lesser degree, by the US Academy are short-lasting. In contrast to this, consumers seem consistent over time. There is, however, one issue on which experts agree as well as consumers: American movies dominate both in terms of commercial success and in terms of quality. There is less agreement, and sometimes there is even dissent concerning other dimensions. This does not come as a surprise and merely indicates that there is hardly a common yardstick along which the quality of a movie can be measured. Therefore, decomposing a work of art into quantifiable characteristics—even in a subjective but possibly unanimous way—would make it possible to explain the divergences between audiences and changes of appreciation over time.

Keywords: Motion picture, quality measures in art.

Published *Journal of Cultural Economics* 23 (1999), 269-283.

¹We thank O. Ashenfelter and C. Croux for discussions on quality in art, wines, and nonparametric statistics, as well as Pascal Courty, Marie-Paule Orban, Ruth Towse and an anonymous referee for comments on previous versions, and for references. We are also grateful to Ms Corbisier from *Télé-Moustique*, Brussels, M. Covents, Centre de Documentation Catholique, Brussels, J.P. Dorchain, Cinémathèque Royale de Belgique, Brussels, R. Laudrin, Centre National de la Cinématographie, Paris, for their help in retrieving information and data. The paper was presented at the Tenth Conference on Cultural Economics in Barcelona, June 1998.

1 Introduction

Quality is an important characteristic in determining the demand for a commodity. This is *a fortiori* true for works of art, since aesthetic quality is often the main, in many cases the only, reason for “consuming” them. Economists are more used to think of quality in terms of vertically differentiated goods for which consumers are unanimous in agreeing that more of a given objective characteristic, say the dimension of a flat, provides more utility. This concept can hardly be used to describe works of art—a large painting does not contain more quality than a small one. Works of art can much better be understood as being horizontally differentiated—a work by Rubens is preferred to a work by Beuys by some consumers, a Beuys to a Rubens by others, even if both are of the same size—but apart from defining the concept, economists have had little to add.²

This is more the playground of philosophers who have been interested in the subject for many centuries, starting as early as Plato in his *Republic*. Since then, many have contributed to the literature, but there is little consensus among them on issues other than the following three basic ideas:

- (i) Quality assessments should be left to specialists who are familiar with the experience of works of art (Budd, 1995, p. 12).
- (ii) Some unanimous, even if subjective, judgment is necessary (Budd, 1995, p. 182).
- (iii) Only time makes it possible to separate fashion from art (Jimenez, 1997, p. 427).

The concept of “unanimity” is invoked by both economists and philosophers, and may provide some link between vertical and horizontal differentiation. However there are differences that remain important. Philosophers put the burden of the proof of quality on specialists, economists think that the choice should be left to consumers; philosophers stress the importance of time, and this is not raised by economists in this context.

On the other hand, measuring quality—as is necessary to make operational the economic concept of vertical differentiation—is rarely stressed by

²See e.g. Gabszewicz and Thisse (1986) for a good exposition of the distinction between vertical and horizontal differentiation.

philosophers, and even less so by art historians.³ But, surprisingly, it is even criticized by cultural economists. Throsby (1990), for example, believes that quality characteristics do not necessarily have to be measured along numerical scales, and that we should recognize that “many facets of quality can be specified without measurement.”

In this paper, we try to contribute to the issue, by analyzing how movies, produced between 1950 and 1970, can and have been evaluated over time. We chose this relatively remote period of production since it allows to compare judgments passed by general audiences as well as by specialists shortly after the movie was produced, with those passed many years later, when commercial interests have receded and one can, at least according to philosophers, expect judgment to be based on artistic quality only.

Most papers on movies implicitly relate quality to box office results (or rental income), i.e. to short-run evaluations made by consumers. Hirschman and Pieros (1985) are among the first to study the relationships between three short term indicators of success: reviews by professional critics,⁴ recognition via awards, and box office data. They find that reviews and awards produce consistent choices, but that both are negatively correlated with audience receipts. Smith and Smith (1986) also investigate the determinants of success. They compare the influence of various characteristics (mainly types of awards) for movies released during three decades (1950s and before, 1960s and 1970s) and find that the short-run determinants of success have changed substantially over time. Wallace, Seigerman and Holbrook (1993) try to price the worth of movie stars by running hedonic regressions of rental income on movie characteristics that include dummy variables representing movie stars. These studies are extended by Prag and Casavant (1994), who show that academy awards and the presence of major stars contribute significantly to revenue only when marketing expenditures are not included in the regressions, thus casting doubt on the role of experts who distribute the awards. This result may even imply that experts could be influenced by advertising and marketing expenditures, when awarding Oscars. Eliashberg and Shugan (1997) concentrate on the role of critics on box office revenue and show that positive reviews have no impact on box office performance in

³See, however, the very controversial, but historically important, analysis by de Piles (1708).

⁴See also the interesting paper by Cameron (1995) on the “theoretical” role of art critics.

the short-run (weeks 1 to 4 after the release of the movie), but have a significant influence for later weeks (weeks 5-8) as well as for cumulative receipts. They believe that if moviegoers were influenced by critics, reviews should be correlated with early box office revenue (realised shortly after the reviews are published). Since this is not the case, their finding suggests that critics are predictors rather than influencers of box office numbers. Throsby (1990) uses press reviews of performances, measured against a cardinal scale to estimate demand and supply functions for various (theatre) companies. Finally, there exist many papers which study the pure dynamics of success (or failure), by using time series of box office revenues. See de Vany and Walls (1996, 1997), Krider and Weinberg (1998) and Sawhney and Eliashberg (1996). Though in many cases, the role of specialists (movie critics and awards) is thus recognized, as suggested by philosophers in (i), the role of time, suggested by them in (iii), is never taken into consideration. This is particularly important in the case of movies, since short-run evaluations and success may be due to heavy marketing, viz. *Titanic* or *Jurassic Park*, rather than to aesthetic or artistic quality.

We are not concerned with the determinants of success. Instead we analyze the various evaluations made at the time the movie was produced and many years later, both by specialists and critics—as suggested by art philosophers—and by consumers—as suggested by economists who believe in consumers’ sovereignty. Our paper aims thus at comparing four types of evaluations and examining whether specialists and consumers have consistent opinions and whether short-run qualitative evaluations have some lasting power.

The paper is organized as follows. Section 2 describes the data set that we constructed to analyse the phenomenon, while Section 3 is devoted to the analysis. In Section 4, we draw some conclusions.

2 Data

We collected judgments made by movie specialists—critics, as well as professionals of the motion picture industry, such as actors, directors, etc.—and by consumers. For the short-run, awards are probably the best measure of what movie specialists think. They pick productions that are fashionable at the time the movie is produced and which include new technical devices,

specific movie stars or topics, temporary moral yardsticks, etc. We chose to include two well-known series of awards, which existed already in the early 1950s: Oscars for best movies, awarded by the US Academy and Palmes d'Or distributed during the Cannes Festival. Long-run quality assessments are obtained by using recent lists of “best movies of all times,” as well as ratings quoted in two well-known movie guides (an American and a French).

Box office data are used to measure what consumers think of a production. These are collected in a relatively consistent way as long as the newly produced movie is shown in large theatres (owned or controlled by distributors or producers). They are not systematically collected later, when the movie is shown in small theatres, or by film archives. Therefore, we rely on the frequency with which a movie is shown on TV as a long-run audience measure. A series of objections may come to mind with this measure. First, the choice may reflect the taste of the TV-channel rather than the taste of consumers and some movies—especially those produced by or belonging to US majors—are more easily accessible than others. However, given the increasingly commercial nature of most private and public TV-channels, it is likely that at least some rationality prevails, and that the public “gets what it expects.” Secondly, there is the time of the day during which a movie is shown. One may think that movies shown during prime-time should be given more importance than those shown after midnight. However, given that many households own video-recorders, this may not really be an issue today, since late movies (as well as early ones) can be recorded at very little cost.

The data set that we constructed consists of the union of the following two sets of movies produced between 1950 and 1970: (1) productions which were distinguished by the US Academy (nominees and Oscars for best movie and best foreign movie) or in Cannes (Palme d'Or and other equivalent awards); (2) movies which are included in five lists of “best movies of all times,” two of which are international, and three are national (British, American and German⁵). This makes for a total of 249 films for which we collected two sets of movie-guide ratings (Maltin, 1997 and Tulard, 1997), box office data and number of broadcasts by 17 channels in five European countries in the early 1990s. The database is described in more detail in the Appendix.

⁵According to the Centre National de la Cinématographie in Paris, no such list exists for France.

In most of the analysis carried out in Section 3, the various quality indicators are aggregated, in order to produce results that are statistically meaningful. Awards are aggregated into five classes: (a) Palmes d’Or at the Cannes Festival, (b) Other Cannes awards, (c) Oscars for best movie, (d) Other US awards (nominees for best movie and Oscars for best foreign movie) and (e) no award. Movies included in one of the five “best movie” lists are attributed a “1” for present (0 for absent) and these numbers are added, so that a movie that is present in m lists gets a mark of $m \leq 5$ for the “list” variable. We did the same for box office data, attributing a “1” to a movie present in a box office list (and 0 otherwise), and added the “1” to obtain the “box office” variable.⁶

In order to reduce the number of unrated movies by either Maltin or Tulard, we attributed to each movie the maximum between the two ratings, instead of averaging them, as would have been natural.⁷

3 Analysis

Before turning to the comparisons between evaluations, we provide some descriptive statistics concerning the 249 movies of our sample.

Table 1 provides an overview by country of production. As can be seen from the first two lines, American movies come out much better than others, though the US produces less movies than Europe. The next line of the table shows the number of movies which were awarded prizes in Cannes and by the US Academy. American movies dominate but there is a slight bias since, the award for Best Movie is only given to films produced in the English language (note, however, that Oscars for Best Foreign Language Film of the Year are also included). Finally, for each type of evaluation (lists, ratings, box office and number of broadcasts), the table gives the number of movies which appear at least once (for ratings, it is the number of films whose marks are at least equal to 3.5) as well as averages: the average number of best movie lists or of box office lists in which a movie is present, the average rating, and

⁶It would have been more meaningful to add audiences, but these were available for the US and France only, and not for the UK.

⁷This reduces the number of unrated movies to a total of 7 out of 249. Note that even 7 is a surprisingly large number, since each movie in our data comes either from a “best movies” list or was attributed an award.

the average number of TV shows.

[Table 1 here]

The table clearly indicates that American movies dominate in terms of “quality,” as judged by specialists and consumers, both in the short and the long run. The only exception is that French, Italian and Japanese movies are, on average, present in more best movie lists than American movies, but almost half of the movies (56/122) that appear in such lists are American. .

Table 2, is similar to Table 1, but compares evaluations made for movies nominated or rewarded in Cannes and by the US Academy. Movies rewarded by the US Academy are dominant: they do better than Cannes on all accounts. It is very interesting to note that there is an important number of movies (75) which were not selected in Cannes or by the US Academy (“No award”) and which do quite well one generation later. This is an issue to which we will come back.

[Table 2 here]

Most of the analysis which follows will essentially compare evaluations, the consistency of which can be checked according to two criteria:

(a) Consistency between short- and long-run evaluations. How are movies chosen in Cannes and by the US Academy evaluated later (agreement between awards and lists or ratings); how are top box office movies considered by consumers many years later (agreement between box office receipts and broadcasting frequency).

(b) Consistency between experts and consumers. Is there agreement between judgments made just after the movie was released (awards and box office receipts) and one generation later (lists, ratings and broadcasting frequency).

We also compare evaluations made by experts across countries (for instance, do the US and the UK lists agree; do the French and the US ratings agree) and evaluations made by experts and consumers within a country (e.g. the US list and the US box office).

Since the data are in the form of number of objects which fall in various categories (number of movies rated 0, 1, 2, etc.), we construct contingency

tables and use nonparametric statistics, more specifically the χ^2 -test for independent samples (see e.g. Siegel, 1956). A word of caution is however necessary. The data at hand are not randomly drawn, but consist of a selection of 249 among some 20,000 movies produced between 1950 and 1970. Therefore, the χ^2 -statistics and the test-values that we give are merely indications of orders of magnitude and should be taken with a pinch of salt. Moreover, the power of the χ^2 -test decreases if too many cells in the contingency tables contain zeros. This led us to aggregate data into two categories (characteristic present or absent) and proceed with 2x2 contingency tables.

Short- and Long-run Evaluations

Table 3 shows whether short-run evaluations, made in Cannes or in Hollywood, stand the test of time. The χ^2 -statistics show that there is little or no consistency between short- and long-run opinions (awards and ratings). But there is even worse since the association between the judgments expressed in best movie lists and those passed when awards were distributed is strong but *negative*.

This leads us to believe that evaluations which are made shortly after the movie comes out are prone to fashion, if not to political or economic influence. If one follows art philosophers who claim that time plays an important role, this indicates that awards do not recognize artistic quality, since their discriminant power is short lasting, and they do not select the movies which will last, since many movies get listed later, but were not selected.

[Table 3 here]

Consumers seem to be more consistent in their evaluations, since box office receipts are strongly and positively correlated with the number of times a movie appears on television long after having been produced.

Movie Specialists and Consumers

The results of the comparisons between evaluations made by movie experts and consumers are displayed in Table 4 and show that awards are positively associated with box office receipts. This is in contrast with the rather surprising result in Hirschman and Pieros (1985), who conclude, though on the basis of ten observations only, that this correlation is negative.

There is, however, a serious discrepancy between the judgments made by specialists and by consumers, as is apparent from the absence of association between best movie lists and TV-broadcasts and between lists and box office data. Note that this is not the case with ratings, but there are many more movies that are highly rated by Maltin and Tulard than there are movies appearing in best movie lists (each of which usually includes a hundred movies only).

[Table 4 here]

Do Movie Specialists Agree

In Table 5, we compare all couples of “best movie” lists, as well as the French and the US ratings. The association is strong (and positive) between the American and the British lists, which is not too surprising, and it is almost significant between the British choice and the one made for the Luxembourg film festival in 1995. In all other cases, there is no dissent, but no agreement either.

[Table 5 here]

Within Country Consistency

We now ask the same question as above, but concentrate on evaluations made by experts and consumers within the same country. Our results are displayed in Table 6 and show that there is no within-country consistency either. The US is however an exception, since in two of the three comparisons, there is agreement.⁸ It is tempting to conclude that in the US, tastes seem to be more uniform over individuals and over time.

[Table 6 here]

4 Conclusions

A first outcome of our analysis is that the quality assessments made during the Cannes Festival, and to a lesser degree, by the US Academy are short-lasting. From the 174 movies rewarded or nominated between 1950 and

⁸For France and the UK, available data allow for one comparison only.

1970, only 47 belong to the 122 movies produced during these years and selected, later on, as best movies. This could be seen as a consequence of the increasing number of movies over time, leaving less room for older movies, which end up disappearing from best movie lists (usually, limited to one hundred titles) established much later. But this does not explain why 75 out of the 122 movies considered as best movies nowadays, received no award (and were not even nominated). Judges in Cannes and Hollywood are thus both short-sighted and unselective: they cannot discriminate between good quality movies and other movies. This is similar to what happens for other forms of art, such as paintings, where the appreciation of what is quality also changes over time: some artists or entire schools (e. g. the 17th Century Bolognese painters, or the Pre-raphaelites, between 1900 and 1960) get forgotten, while others, such as Greco or Vermeer are rediscovered (see e.g. Haskell, 1980).

In contrast to this, consumers seem to be more time-consistent, since box office receipts remain positively associated with the number of times a movie is shown on television one generation later.

Consumers and experts agree when movies come out: award-winning pictures are ranked high in box office statistics, but this may be due to many other factors than quality. There is less agreement some years later, and the two groups seem either to value different attributes or value differently the same attributes.

There is, however one issue on which there is an international consensus among experts and consumers: American movies dominate both in terms of commercial success and in terms of long-lasting quality, since 56 out of a total of 122 best movies are American. Even if consumers are likely to be influenced by the power, the marketing and the organization of the American film industry, one may hope that experts are less so, especially one generation after the movie is out.

But, being “American” is not a quality *per se*. In the spirit of Lancaster (1966), it should be possible to decompose works of art into basic characteristics which could be quantified by as many experts as possible, even if this judgment is subjective (recall suggestion (ii) above made by philosophers). It is then the varying appreciation over time—by consumers as well as by experts—of each characteristic that could explain the differences in the appreciation of global quality, seen as a weighted combination of characteristics. In this way, some of the “horizontal” qualities of works of art can be

made “vertical.” This is probably what, long before Lancaster, the French art historian de Piles (1708) had in mind when he wrote that⁹ “the true understanding of painting consists in knowing whether a picture is good or bad, in distinguishing between that which is good in a certain work and that which is bad, and in giving reasons for one’s judgment.” This led him to grade on a scale of 20, characteristics such as composition, drawing, color and expression, for a group of painters, and rank them accordingly.

For movies, an answer in this direction is given by D. Moïsi, deputy director of the Paris-based Institut Français des Relations Internationales. Writing about the triumph of American culture, and more specifically about the universality of American movies, he suggests that¹⁰ “[...] The success of Hollywood, beyond pure economic factors, can be attributed to two main things: on the one hand, the nature of the message, and on the other, its ubiquity and familiarity. From the masterpieces of Frank Capra [...] to Stephen Spielberg [...], the message is the same—individuals can make a difference. If you want to do it, you can. This triumph of the individual [...] is universal. It contrasts drastically with the French romance: A loves B, who loves C, who loves D.”

5 Appendix. The database

The data set that we constructed consists of the union of the following sets of movies produced between 1950 and 1970.

(a) *US Academy awards*. Movies which were awarded an Oscar for “Best Picture of the Year” as well as those nominated for that Oscar (without necessarily receiving it); all the movies which won the Oscar for “Best Foreign Language Film of the Year”. The list includes 21 Best Picture awards, 84 other nominated and 15 Best Foreign awards (which are awarded since 1956 only). See *Annual Academy Awards* (1998).

(b) *Cannes Festival*. Movies which were awarded one of the following awards at the Cannes Festival: “Palme d’Or” (“Grand Prix du Festival International du Film” before 1955), “Prix Spécial (du Jury),” “Mention exceptionnelle”

⁹We borrow the translation from Rosenberg (1969, p. 33).

¹⁰See *The Financial Times*, 12 February 1998.

and “Prix International,” “Prix de la Critique Internationale” depending on the years, since mentions keep changing. No awards were attributed in 1950 and 1968. The data include 24 Palmes d’Or (on several occasions, more than one Palme d’Or was awarded) and 41 other awards. See Toscan du Plantier (1997).

(c) “*Best movies of all time*”. Movies which were listed in a certain number of “best movies of all time” lists; we were able to retrieve two “international” lists, and three “national” lists produced in the UK, the US and Germany:¹¹

- Cinémathèque Municipale du Luxembourg (1995). This list of 100 movies was set up as follows: 100 international key figures of the movie world were each asked to quote “their preferred movie.” All the movies so chosen (100 in total) were shown by the Cinémathèque Municipale de Luxemburg in 1995, year during which the city of Luxemburg had been selected as European City of Culture. Out of this total of 100 movies, 50 were produced between 1950 and 1970.

- Fédération Internationale des Archives du Film (FIAF) (1995). This list of movies was set up as follows: 37 film archives (belonging to 29 countries) were asked to select as many movies as they wished, to represent what they thought to be “the best movies in the world.” We selected the 110 movies that received the largest number of votes (5 or more).¹² Out of this total, 35 were produced between 1950 and 1970.

- Norman (1992). This is a choice made by B. Norman for the UK. Out of the total of 100 movies, 34 movies were produced between 1950 and 1970.

- Movie Guide (1997). This list contains 100 “best movies of all time,” selected by US movie critics; 33 were produced between 1950 and 1970.

- Koelsner (1995). These four volumes contain “best movies” chosen by a group of German specialists, but since the number of films listed is much larger than 100, we discarded all those which were not included in any of the previous lists. No new movie is thus added to the previous ones; the German list includes 69 movies.

This produced a list of 249 movies. For each of these, we added three extra

¹¹According to the Centre National de la Cinématographie in Paris, no such list exists for France.

¹²110 movies received five votes or more, and only 81 received six or more votes; this forced us to select among 110 and not among 100 titles.

pieces of information:

(a) *Box office information.* We included box office statistics for the UK, the US and France. See Swern (1995) for the UK, Reynolds (1995) for the US and Alion (1991a, b) for France. Unfortunately, the three sources give very different views on box office numbers. For the UK, we were able to retrieve only the titles of the ten top movies for every year (210 movies); for the US, the list included over 3,000 movies; for France, the only consistent list (there exist other lists, but these are marred with inconsistencies) that we could find included the top 75 box offices for movies produced between 1956 and 1970. We eventually opted for the following choice: since there were no attendance numbers available for the UK, we only introduced information as to whether the movie was listed or not in the box office list. Among the 249 movies selected above, 69 were in the UK list of 210 box office movies, 74 in the top 210 list for the US, and 15 in the top 75 list for France. This introduced an unavoidable asymmetry on box office statistics; the information which is provided by aggregate box office numbers should thus be taken with some care.

(b) *TV broadcasts.* We also computed the number of times each movie was shown on the following (freely accessible) TV-channels over the years 1989, 1990 and 1992 to 1994:¹³:

Belgium (French speaking channels): RTB (public) and RTB2-Tele 21 (public), RTL (private).

Belgium (Dutch speaking channels): TV1 (public), TV2 (public), VTM (private).

France: Antenne 2 (France 2 since 1992) (public), France 3 (public), TF1 (private).

Germany: ARD (public), ZDF (public).

Netherlands: NL1 (public), NL2 (public), NL3 (public).

United Kingdom: BBC1 (public), BBC2 (public).

France and Germany: ARTE (public).

¹³The year 1991 is missing, since the original data were not available in a convenient form.

(c) *Ratings by experts.* Finally, we included quality (number of stars) given in two well-known movie guides, Maltin (1997) and Tulard (1997). Maltin is American while Tulard is French, but, of course, they both discuss and rate “foreign” movies. Maltin attributes 0 (actually, this is what he qualifies as BOMB), 1.5, 2, 2.5, 3, 3.5 or 4 stars. Tulard’s classification is somewhat more coarse; he awards 0, 1, 2, 3 or 4 stars. Note that it was not always possible to retrieve this information for the following reasons: (a) some movies are simply not included in the guides; (b) Maltin’s guide only gives the title under which the movie was shown in the US and, sometimes, we could not find Maltin’s rating if only the original title (in Japanese, Indian, Swedish, French, etc.) was available.

6 References

- Alion, Y. (1991a), Le feuilleton du cinéma, *La Revue de Cinéma* 471, 61-69.
- Alion, Y. (1991b), Le feuilleton du cinéma, *La Revue de Cinéma* 473, 65-70.
- Annual Academy Awards* (1998), www.oscar.com/.
- Budd, M. (1995), *Values of Art*, London: Penguin.
- Cameron, S. (1995), On the role of critics in the culture industry, *Journal of Cultural Economics* 19, 321-331.
- Cinémathèque Municipale du Luxembourg (1995), *100 Chefs-d’oeuvre pour un Centenaire*, Luxembourg.
- de Piles, R. (1708), *Cours de peinture par principes*, Paris.
- de Vany, A. and W. Walls (1996), Bose-Einstein dynamics and adaptive contracting in the motion picture industry, *Economic Journal* 106, 1493-1511.
- de Vany, A. and W. Walls (1997), The market for motion pictures: rank, revenue and survival, *Economic Inquiry* 35, 783-797.
- Eliashberg, J. and S. Shugan (1997), Film critics: influencers or predictors?, *Journal of Marketing* 61, 68-78.

- Fédération Internationale des Archives du Film (FIAF) (1995), *The Categories Game: a Game for the Cinema Centenary*, Lisbon: FIAF's Commission for Programming and Access to Collections.
- Gabszewicz, J. J. and J. Thisse (1985), On the nature of competition with differentiated products, *Economic Journal* 96, 160-172.
- Gyory, M. and G. Glas (1992), *Statistiques du Cinéma en Europe*, Brussels: CERICA.
- Haskell, F. (1980), *Rediscoveries in Art. Some Aspects of Taste, Fashion and Collecting in England and in France*, London: Phaidon Press.
- Hirschman, E. and A. Pieros (1985), Relationships among indicators of success in Broadway plays and motion pictures, *Journal of Cultural Economics* 9, 35-63.
- Jimenez, M. (1997), *Qu'est-ce que l'Esthétique?*, Paris: Gallimard.
- Koelsner, Th., ed. (1995), *Film Klassieker*, vol. 2 and 3, Stuttgart: P. Reklam jun.
- Krider, R. and C. Weinberg (1998), Competitive dynamics and the introduction of new products: the motion picture timing game, *Journal of Marketing Research* 35, 1-15.
- Lancaster, K. (1966), A new approach to consumer theory, *Journal of Political Economy*, 74, 132-157.
- Maltin, L. (1997), *Movie & Video Guide 1998*, New York: Penguin.
- Movie Guide (1997), *Critics Picks: 100 Best Movies of All Time*, www.mr.showbiz.com.
- Norman, B. (1992), *100 Best Films of the Century*, London: Chapman's.
- Prag, J. and J. Cassavant (1994), An empirical study of the determinants of revenues and marketing expenditures in the motion picture industry, *Journal of Cultural Economics* 18, 217-235.

- Reynolds, Ch.(1995), *Hollywood Power Stats*, Valley Village, CA: Cineview Publ.
- Rosenberg, J. (1969), *On Quality in Art*, London: Phaidon Press.
- Sawhney, M. and J. Eliashberg (1996), A parsimonious model for forecasting gross box-office revenues of motion pictures, *Marketing Science* 15, 113-131.
- Siegel, S. (1956), *Nonparametric Statistics for the Behavioral Sciences*, New York: McGraw-Hill.
- Smith, S. and K. Smith (1986), Successful movies: a preliminary empirical analysis, *Applied Economics* 18, 501-507.
- Swern, P. (1995), *The Guinness Book of Box Office Hits*, London: Guinness Publ.
- Throsby, D. (1990), Perception of quality in the demand for theatre, *Journal of Cultural Economics* 14, 65-82.
- Toscan du Plantier, D. (1997), *Cinquante ans du Festival de Cannes*, Paris: Editions Ramsey.
- Tulard, J. (1997), *Guide des films*, Paris: Robert Laffont.
- Unesco (1970), *Film and Cinema Statistics*, Paris: Unesco.
- Unesco (1981), *Statistics on Film and Cinema 1955-1977*, Paris: Unesco.
- Wallace, W., A. Seigerman and M. Holbrook (1993), The role of actors and actresses in the success of films: how much is a movie star worth? *Journal of Cultural Economics* 17, 1-27.

Table 1
Quality and Country of Production
(No. of movies and “average” quality)

	France	Italy	Japan	UK	US	Other	Total
Annual production	130	185	540	110	270
In database	23	20	12	17	126	51	249
<i>Cannes (P.O.) and US Academy (B.P.)</i>	7	10	1	7	22	13	60
<i>Best movie lists</i>							
> 0	16	16	7	7	56	20	122
Average (max.5)	1.26	1.35	1.25	0.59	0.86	...	0.89
<i>Ratings</i>							
≥ 3.5	13	12	8	16	97	20	166
Average (max.4)	3.41	3.32	3.46	3.68	3.59	...	3.41
<i>Box office</i>							
> 0	2	1	1	8	77	3	92
Average (max.3)	0.09	0.05	0.08	0.88	1.08	...	0.63
<i>Broadcasts</i>							
> 0	12	12	0	10	94	14	142
Average	0.87	1.05	0.00	0.94	1.91	...	1.29

Movies coproduced by two or more countries are not included.

P. O. means Palme d’Or in Cannes and B. P. means Best Picture at the National Academy awards.

Table 2
Quality, Cannes and the US Academy
(No. of movies and “average” quality)

	Cannes		US Academy		No award	Total
	P. O.	Other	B. P.	Other		
In database	24	41	21	98	75	259
<i>Best movie lists</i>						
> 0	10	8	10	24	75	127
Average (max.5)	0.71	0.34	1.05	0.42	1.83	0.89
<i>Ratings</i>						
≥ 3.5	15	11	20	74	54	174
Average (max.4)	3.17	2.79	3.79	3.56	3.52	3.42
<i>Box office</i>						
> 0	5	3	19	55	15	97
Average (max.3)	0.25	0.12	1.90	0.95	0.29	0.64
<i>Broadcasts</i>						
> 0	13	11	21	69	38	152
Average	1.00	0.41	2.95	1.47	1.23	1.31

The total number of movies is larger than 249, since 10 movies were awarded prizes both in Cannes and by the US Academy.
P. O. means Palme d’Or and B. P. means Best Picture.

Table 3
Consistency Between Short- and Long-run Evaluations

	Agree on yes	Agree on no	Disagree	χ^2 - value	Agreement “significant”
<i>Experts</i>					
Awards and Best movie lists	52	0	207	106.8	yes, but –
Awards and Ratings ≥ 3.5	58	54	140	0.5	no
<i>Consumers</i>					
Box office and Broadcasts	75	90	84	34.2	yes +

The value of χ^2 (with 1 d.f.) at a probability level of 0.01 is 6.64.

Table 4
Consistency Between Experts and Consumers

	Agree on yes	Agree on no	Disagree	χ^2 - value	Agreement “significant”
<i>Short-run</i>					
Awards and Box office	82	60	117	12.7	yes +
<i>Long-run</i>					
Best movie lists and Broadcasts	75	60	114	1.6	no
Ratings ≥ 3.5 and Broadcasts	77	68	104	17.8	yes +
<i>Short and long-run</i>					
Best movie lists and Box office	72	37	140	0.02	no

The value of χ^2 (with 1 d.f.) at a probability level of 0.01 is 6.64.

Table 5
Consistency Between Experts

	Agree on yes	Agree on no	Disagree	χ^2 - value	Agreement “significant”
US-UK	11	193	45	10.6	yes +
US-Int.	4	185	60	0.0	no
US-Lux.	11	177	61	3.3	no
UK-Int.	9	189	51	3.9	no
UK-Lux.	13	178	58	6.8	yes +
Int.-Lux.	10	174	65	1.4	no
US-Fr.	40	39	121	0.0	no

“Lux.” refers to movies chosen by an international committee, and which were shown in Luxembourg in 1995. “Int.” refers to choices made by 37 film archives in 29 countries. See the appendix on the database for details. The value of χ^2 (with 1 d.f.) at a probability level of 0.01 is 6.64.

Table 6
Within Country Consistency of Evaluations

	Agree on yes	Agree on no	Disagree	χ^2 - value	Agreement “significant”
<i>France</i>					
Ratings ≥ 3.5 and Box office	14	27	190	0.1	no
<i>UK</i>					
Best movie lists and Box office	16	162	71	6.3	no
<i>US</i>					
Best movie lists and Box office	20	162	67	15.7	yes +
Ratings ≥ 3.5 and Box office	61	37	102	3.4	no
Best movie lists and Ratings ≥ 3.5	32	48	120	8.5	yes +

The value of χ^2 (with 1 d.f.) at a probability level of 0.01 is 6.64.