

**Producing Quality:
A Social Network Analysis of Coproduction Relationships
in High Grossing Versus Highly Lauded Films in the U.S. Market**

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While mainstream U.S. film production has been derided as following a “lowest common denominator” blockbuster-style logic, the industry has actually produced both popular and highly regarded productions. To imagine an alternative (lower cost, higher quality) Hollywood of the future, this article set out to examine the network structure of coproductions in both high grossing and in highly lauded films in the U.S. market for a recent five-year period. Using social network analysis, this study shows that the funding structures of both types of films were less centralized, dense, and clustered than is commonly believed. Coproduction networks of highly lauded films, however, did exhibit structural differences from their high grossing counterparts that suggest more collaboration and penetrability. If the future of film production looks like the structures of the alternative Hollywood described here, we may see a more cooperative, dispersed, and international industrial structure for the future.

If one looks at the funding structure of most films released in American theaters, a pattern of familiar names quickly emerges: Paramount, Universal, MGM, and those of other major movie studios. It’s no secret that the majority of films that achieve mass domestic (and international) promotion and distribution are usually associated with a small elite: an oligarchy of production and distribution, headed by a small group of risk-adverse and notoriously nervous executives.

The concentration of this power in the hands of a few drives the hit-based economic structure of the current Hollywood system. Chris Anderson (2006) describes the current blockbuster-focused structure of the film and other entertainment industries in his influential book *The Long Tail*. For the major entertainment houses, 20% of the production is said to generate 80% of the profits of any given company, and the other 80% of the content comprises the remaining 20% of the profits. As very few, if any, films can be considered a “sure thing,” studios are encouraged economically to back productions aimed at the lowest common denominator to maximize the chances that a film will garner blockbuster-level returns (Vogel, 2007). In other words, films that tend to get funding are those that are least

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offensive to the widest segment of the audience, and increasingly, this means that they appeal to a particularly heterogeneous global audience. Bland romantic comedies and plot-thin action films are allowed free reign. Quality is not a primary consideration in this equation.¹

This model has been criticized in many circles and perhaps nowhere as loudly as in debates regarding cultural globalization. The dominance of Hollywood in global box offices has been a point of concern and criticism for many and has spawned a series of domestic box office quotas in non-U.S. film markets worldwide. The American blockbuster system, dominated by a small number of players, is viewed by many as both undesirable and practically impenetrable.

Yet, a quick glance at the number of production companies backing even the largest of blockbusters easily shows that film production is never a product solely of seven major players to the exclusion of others. Practically every "major studio" film released is at least nominally a coproduction between a major studio and a network of smaller production companies. It is true that some of these smaller production companies listed in the film credits are just vanity imprints for an actor or other major player wishing to take a greater share of the films' profits. Yet, it is also true that "Hollywood," the industry, is and has been full of very busy production companies that work both in concert with and apart from major studios in getting films from the "concept" stage to the "awaiting release" stage. In fact, the slates of all the majors include films that originated wholly in independent production companies and attracted major support after the film had already been "packaged" (i.e., securing the director, script, lead actors, etc.) by these smaller companies (see Waterman, 2005, for more on this process). The doors to getting funding in Hollywood do not just lead to the offices of major studio executives: The collaborative structure of coproductions draws a picture of a Hollywood that is more open than the image of the major studio-dominated system might lead one to believe.

Hollywood, which began as a dispersed network of independent producers and entrepreneurs, consolidated itself into a studio system early in its development. The chaotic swirl of competing independent producers in the early days of the American film industry began its consolidation into a handful of very strong, large, vertically integrated operators by the 1920s (Hall, 1998; Scott, 2005). However, the Paramount Decree of 1948 obliged the studios to disintegrate, resulting in disintegration and freelance collaboration arranged by individual contract becoming a defining characteristic of Hollywood ever since (Caves, 2000; Scott, 2005; Storper & Christopherson, 1987).

Not only did the Paramount Decree lead to a restructuring of creative collaborative relationships in the industry, it has also been cited (along with competition from other screens like television) as a main driver of blockbuster logic, because loss of direct control over screens increased competition between studios while freeing up studio capital (Storper & Christopherson, 1987; Cucco, 2009; Scott, 2005). As studios had to shed their distribution arms, more studio resources were allocated to a few big ticket films

¹ The low quality of mainstream Hollywood fare is far from a foregone conclusion. Many would suggest that the critical binary set up between auteur versus studio-driven productions is an unfair distinction (Scott, 2005).

because there were not a standard number of studio-owned screens to be filled on any given week. And as studios faced competition at the same time from the advent of television, they could no longer rely on mass audiences without providing attractive fare. Going to the movies had to become worthwhile; Hollywood had to offer spectacle (Cucco, 2009). In the age of increased global screen dominance, Hollywood products must make their money back not only domestically but from global audiences as well. Mass global distribution means increasingly heterogeneous audiences for whom action-filled blockbuster fare trumps nuance and is most likely to be accessible and appealing to the most diverse of audiences.

Blockbusters can be most easily defined as films featuring high production costs and high returns.² Scott (2005) claims 1915's *Birth of a Nation* as the first blockbuster, costing five times more than any other film had before (\$85,000) and grossing an astounding \$18 million in return. However, it is 1975's *Jaws* that is most often credited as the first contemporary blockbuster with its use of heavy television advertising in advance, as well as a wide release to a large number of theaters on opening weekend (Cucco, 2009). This heavy advertising prior to an extremely wide release lends itself to significant profits in the first week or two the film is out and is heavily linked to what Cucco defines as the contemporary blockbuster's defining characteristics: the size of both its marketing and production budgets; its "spectacularity" (i.e., special effects, novelty); and its wide release (2009). Scott (2009) notes that the rise in the number of blockbusters over the last 35 years is based not only on the desire for risk reduction or extreme returns but also on the necessity for modern Hollywood to make significant returns in the foreign market, as many films don't reach profitable status in the domestic market. Blockbuster fare with action sequences and big-name stars are particularly appropriate for mass export, as films must be aimed at increasingly heterogeneous audiences (Scott, 2009).

While vertical disintegration fueled blockbusters, it also fueled a sea of independent firms, from production companies to individual freelance labor that form the backbone of Hollywood today. Despite their provenance, this divide between independent production companies and studios is not clear-cut. Not only do studios frequently employ these independent companies, they may do so on a regular and standard basis. Independent production companies may have long-term, multifilm contracts with certain studios, or personal relationships tying them to one studio, or they may even lease office space on one studio's lot (Waterman, 2005).

Additionally, besides the majors, Hollywood also has many "independent studios," but the term *independent* here, too, is a designation that can be misleading, as some of these independents are powerful and many are tightly bound to specific major studios. Many of these independents (such as Lions Gate) function much like the major studios, performing their own distribution and green-lighting of film projects. Others like Miramax and Fox Searchlight are subsidiaries of major studios—Disney and Fox, respectively—and utilize that studio's expertise in those areas (see Waterman, 2005, for more on this).

² Whether a film that is meant to garner high returns in this fashion, but, in fact, fails at the box office can be called a blockbuster by virtue of the intentions of its producers is an issue that is up for debate, but is not relevant to this article.

Independent production companies of varying levels of connection to major studios engage in movie production from start to finish, championing film concepts and sometimes being the first to green-light a project or at least back and lend support and cachet to a new film. This draws a picture of a more penetrable Hollywood than the reputation of a major-dominated studio system might lead one to believe. Even if many of these production companies don't have the ability to green-light on their own, they can facilitate the financing and green-lighting of a film. Or they can be enlisted after the fact as a coproducer for one of any number of reasons (to be discussed further in the next section). Given the variety of company types engaged in the production process, the cultural production of the American film industry is not simply bland lowest common denominator fare. Many films that have received production support from major studios have been heralded as masterpieces, even as works of genius (e.g., *Apocalypse Now*, *The Godfather*). Quality is hard to define, yet it is difficult to deny that the existent dominant entertainment industry structure has produced films that abide by the lowest common denominator formula, as well as product that represents some of the best of film as an art form.

Research Questions

The research questions this article addresses have implications for the future of entertainment industry economics. The overarching research question is whether the funding structure of highly lauded films differs in nature from that of the high grossing films for which the major studio system is most well known. One can imagine an alternative Hollywood of the future with an eye more for quality than for blockbuster economics. Of course, this alternative Hollywood already exists in part now, alongside blockbuster-producing Hollywood. As many have posited, including Anderson (2006) and Waterman (2005), the rise of alternative distribution technologies—from diverse sources for DVD sales such as eBay to increased movie selection available to audiences via services like Netflix and Direct TV—is likely to drive the shift toward a niche-ified nonblockbuster future. The main research question this article addresses is whether, in this alternate Hollywood, power is more dispersed. Along those lines, how does the coproduction network structure that produces blockbusters change when dealing with productions of higher quality? Do laudable films emerge from more dispersed networks of funding? Are new players continually entering the system, leading to a less dense network? Is one network more clustered and therefore more insulated than another?

Related to these questions about the penetrability of these networks of film production, are debates about the hegemony of the U.S. entertainment industry. Is this industry, sometimes considered as much a global business as it is an American business, exclusively American? Do non-U.S. production companies have a difficult time breaking through the production system to produce films that are well received? Are ties based on nationality the standard? Are there barriers to collaboration between non-U.S. production companies and U.S. companies?

Lastly, to what extent are the same players successful in both networks? Have producers of quality films been able to also break into the world of high grossing films? On the other side of the coin, have companies backing films in the blockbuster model also been able to successfully back quality films, branching out from what is thought to be their traditional business model? First, this article will review the

current economic structure of Hollywood and theorize about the role of coproductions and the relationship between studios and production companies in modern Hollywood.

Background

More than 60 years after the Paramount Decree antitrust action obliged studios to vertically disintegrate and divest themselves of their exhibition arms, the locus of power in modern-day Hollywood remains in the hands of the major studios, which control the vast majority of distribution and participate in the financing of most films. Waterman (2005) argues that the true source of major studios' power today is in their role as distributors, exerting virtually total control over the mainstream paths by which movies make their way to the eyes of the mass viewing public. In Waterman's analysis, it is this vital role as distributor that enables the majors' other key roles for which they are better known—that of gatekeepers. He notes that while they may not oversee the day-to-day production of all movies they release, major studios are involved in financing and green-lighting a large percentage of projects that make it to theaters and wide release (p. 16).

The films distributed by major studios are themselves produced by a variety of sources, including independent studios and independent production companies, officially unaffiliated with major studios. These independent studios release lower budget movies and smaller slates than do the majors, which makes each release a riskier prospect (Waterman, 2005). Indeed, from an industrial perspective, the film industry is particularly high risk (Morawetz, 2007; Walls, 2005). This characterization applies across the board. Film production is inherently high risk, though blockbuster sequels can feel less risky to funders than do other films, as they include the elements more proven to draw crowds: spectacular action sequences, big name stars, and association with a successful prequel. At the same time, these elements are remarkably expensive and do not guarantee a box office hit. Given this, usually no single party will want to risk everything on any one production, no matter its size or the diversity of its release slate.

Because of this endemic risk and uncertainty, Morawetz (2007) and Waterman (2005) draw the outline of an industry that, in the past third of a century, has been increasingly reliant on dispersed and external financing, particularly bank financing, to spread risk and minimize the possibility of losing "everything" on any one production. Large studios often maintain revolving lines of credit with banks, usually based on a guarantee that the studio will market and distribute each film (Waterman, 2005). Banks are more likely to feel comfortable funding large budget productions with higher blockbuster potential, while smaller budget movies that take more artistic risks—the kind that may lead to awards and praise—find bank funding more difficult, as potential profits are judged to be smaller. These productions, too, must look for funding from dispersed locations. As Morawetz points out, this has increasingly come from public film support funds in international locations (2007).

It is worth highlighting the high value of guaranteed studio distribution and marketing in securing external funding. For all of the participation of banks and other external funding sources, the concentrated distribution power and marketing prowess of the major studios are their main draw and that which drives their continuing power. Yet, even within the realm of dispersed funding sources, there is room for

difference, and smaller independent studios and producers are more likely to get behind less expensive productions that take greater risks. While Waterman (2005) argues that the continued role of majors in distribution highlights the continued power of major studios—in that they even have a vital role in smaller productions—I argue that the movies that win awards and that, in turn, garner less returns in the general marketplace come from distinctly different funding structures than do the blockbuster high grossing movies for which Hollywood is most well known. While major studios may have a role in both, their role is more central and vital in high-grossing movies; the world of high-quality (or highly lauded) movie production is more dispersed, diverse, and penetrable. Additionally, as networks, including online distribution and distribution sources like eBay and Netflix emphasize a broader catalog, we may see the mass distribution power of major studios drop and the production networks of smaller budget films become more relevant and common.

One significant nonbank and nonmajor studio venue for funding is one that is particularly relevant for this study of coproduction relationships: European and other international public film support funds. That such funds go to support movies that are helmed by U.S.-based production companies might appear surprising to anyone following the history of European film support. Begun as a tool of resistance to the dominance of U.S. films, such film funds were initially designed to support “high quality” movies that provided an artistic voice for domestic auteurs, an outlet that could not be supported by the mass market. As Morawetz points out, this system in which only the films that could not be supported in the mass market win funds encouraged the development of a film industry in many of these countries that could never become self-sufficient, as the system values art films over those that could appeal to the mass market, and as it values “quality” and artistic expression over development of a sustainable domestic mass market industry (2007). In the past two decades, discourse has begun to support public film policy that, instead of supporting individual local auteurs, favors the grooming of a local film industry workforce and foreign direct investment into local facilities (“building the local industry” vs. “protecting the national culture,” as Morawetz [2007] set up the binary). In this way, public film support, particularly in Europe, shifted to encourage foreign productions to shoot on location domestically and to partner with local production companies. Whether this will support a local industry or legitimately benefit local industries is the topic of another article, but many analyses suggest the answer is no (see Christopherson & Rightor, 2010). What is certain here is that this structure of significant film tax incentives means that there are substantial incentives for U.S. productions that are searching for dispersed funding to find it through coproductions with European production companies. (As Morawetz [2007] points out, there are more than 175 support bodies in more than 30 European countries that provide over \$1 billion in public support, excluding tax incentives). Changes in European film support policy in the 1990s meant that there were now incentives to support higher budget foreign productions rather than just small budget local movies. It seems counterintuitive to have public film funds going to support nondomestic movies, but the guiding philosophy is for the funds to be a capacity builder and job creator in the local industry, while still going to support movies that might not make it to the market without public funds. That includes, of course, films that are more likely to win awards and are thought to be of higher quality than is standard Hollywood blockbuster fare, even if those same films have a complex coproduction relationship that makes their nationality and provenance murky.

We can see then that coproductions have a dual role. Any coproduction can be a mechanism of risk dispersal and spreading ownership of both a film's risks and profits. However, coproductions can also be mechanisms of "rent-seeking" behavior in which coproductions may be based on foreign tax incentives that can be tapped into via the nationality of a particular production company. In this way, coproduction relationships can exemplify the creative ways in which a film with less support from a major studio can seek sources to fund production. For example, Morawetz (2007) described *Lord of War's* creative funding thusly:

Financed by Endgame Entertainment (U.S. equity money) and VIP3 Medienfonds (German tax shelter money), it took further advantage of soft money by shooting partly in South Africa (Reeleyes Film), and cut still more costs by filming in the Czech Republic. (p. 21)

The production companies listed for the film included Endgame (U.S.) and VIP3 (Germany), as well as U.S.-based Ascendant Pictures and Rising Star, among others. Morawetz argues that coproductions can be a function of film industry production being increasingly driven by rent-seeking behavior or chasing after the largest tax incentives and other state-led film-support initiatives. In this study, we can see the level of coproductions, particularly those with the foreign sources that Morawetz highlights, as heightened in high quality, nonblockbuster productions. Many of the highly lauded movies in this sample are international and incorporate European tax incentives. Being smaller in scope, with less potential profit overall, means that productions must reach out to more places and dig deeper into international film incentives. As Coe (2001) points out, dispersed coproductions are important for their dispersal of power, as they render the major studios if not less important, at least less vital.

Method

Networks

For the purposes of this study, the researcher created two networks for a social network analysis. The first network consists of the coproduction links among production companies of the largest grossing Hollywood films over a recent five-year period. The five top grossing films were selected for every year from 2002 through 2006, as determined by domestic (U.S.) cumulative box office gross to a selected year's end. The relatively low figure of five top grossing films per year was chosen to ensure that the sample reflects the extremity of the blockbuster model for Hollywood. In the age of the blockbuster, a small portion of any studio's movies generate the majority of that studio's profit annually (the 80%–20% model as laid out by Anderson, 2006). Selecting the top five films in a year captures the *crème de la crème*: Each of these five movies can be considered an unequivocal financial success and can be assumed to have made a profit no matter the size of its budget. U.S. box office to year's end was used as a measurement (versus other more universal measures) because dominating the U.S. box office is usually the first hurdle a film must overcome before it is heavily marketed abroad and can generate additional revenues in re-release and special edition sales (Vogel, 2007). In this way, 25 films were selected as the

sample and appear in Appendix 1.³ Using any five films may have resulted in too small a sample from which to generalize; however, a sample of 25 films over the course of five years should yield sufficient diversity for analysis and generalization.

A total of 110 production companies, all displayed as nodes in Figures 1 and 2, were identified as part of the final sample. Production companies involved in backing the actual production were chosen rather than companies involved in distribution, as distribution decisions are often made after production decisions. Within the coproduction companies, there is green-lighting and funding power—or at least connections to that power—that make or break a film concept. Of course, coproduction relationships tell only part of the story, and the influence of individual production companies in the credits will vary greatly in their control over the film's production and green-lighting processes. Each movie's path from concept to production is fraught with chance, favors, and personal connections. Whole movies have been made about the difficulties and drama of producing even one film (see the fictional *Cannes Man* of 1996 or the 2002 documentary *Lost in La Mancha*). While qualitative research, such as interviews with producers, would draw a fuller picture of each film's path to production, social network analysis of coproduction relationships is a first step that also yields valuable information, giving us a window through which to understand the structure of coproduction relationships in disparate networks from a macro- versus microperspective. Coproduction relationships are valuable in that they can serve as shorthand for the difficulty of bringing a film to fruition and for the openness of that sort of film to new players. It is no coincidence that the only isolate in the sample, Lucasfilm Limited, is a firmly established Hollywood player, while the film with the highest number of coproducers, *The Pianist*, appears to have employed the most creative funding networks to bring the film to the screen. Understanding the shape of coproduction relationships in both networks helps us understand the penetrability and nature of green-lighting power in that network, even if it is not explicitly spelled out in the data.

Production companies with only one produced film (the film in the sample) to their credit are not included in the study, as they are considered to be vanity companies founded for the sole purpose of funding this one film versus active production companies. There is, of course, the possibility in this exemption that a fledgling "real" production company with only one film to its name so far would be erroneously exempted through this procedure. However, this scenario would be the exception rather than the rule, and very little total information would be lost were this to be in the case in one or two isolated incidents. Following this method, 44 production companies were identified as being involved in the funding of these 25 high grossing films.

The second network created by the researcher is slightly harder to define in that it attempts to identify the highest quality films over the same five-year period of the study. Quality is a highly subjective determination, no matter the subject, and so a parallel descriptive—*laudable*—is employed. The second network consists of those films released from 2002–2006 that received six or more Academy Awards

³ While films like *The Passion of the Christ* and *My Big Fat Greek Wedding*, which both appear in the sample, are not representative of standard blockbuster production logic, a sample of top grossing films was chosen versus films with the highest budgets or widest openings to reflect the heterogeneous realities of Hollywood fare that is considered to be highly successful.

nominations. While the Academy Awards are certainly not a universal guarantee of film quality, receiving multiple Oscar nominations represents the repeated judgment of the film community that a certain film was among the best offered that year. In other words, while a film can get one or two nominations through flukes of fate, multiple nominations represent a sustained judgment by multiple members of the filmmaking community that a particular film is, at the very least, worthy of being singled out for praise or highly laudable. Garnering six or more nominations, spanning many categories, is unlikely to happen through chance or luck.⁴ This is also why "Best Picture" nominees are not chosen. However, of the selected 21 film samples in this network, 16 of them (76%) were nominated for best picture. Even as studios have begun to campaign rather vigorously for such nominations, the actual garnering of multiple nominations can stand in as a proxy for an elevated level of quality. While being highly lauded does not necessarily translate to being of high quality, there remains an expectation of some kind of correlation between the two. The Oscars were chosen versus a denser criterion of award nominations across multiple festivals because of the elevated status of the Academy Awards in the film industry. An analysis can never include all possible awards ceremonies. The Oscars are simply the most visible of all awards shows, with nominations derived from the collective judgment of those working in the very same industry who have deemed that this film represents the height of quality. Additionally, a large number of Oscar nominations is highly correlated with large numbers of other awards nominations, from the Golden Globes to the SAG Awards. Oscar nominations, then, are a simple signifier for garnering multiple nominations. Additionally, nominations are used as a signifier for quality versus, for instance, the ratings of critics, to make sure the films in the list are still viable high-profile productions as opposed to obscure microbudget critical darlings that only played on screens in one or two cities. The alternative Hollywood of the future is more likely to follow a model based on at least mid-range budgets and recognizable actors rather than on the path of true art films. The Academy Awards, then, serve as a valid proxy for quality films still aimed at profitability and targeted at something that could be considered mass market success.

Using this criterion, 21 films received more than six nominations apiece in this study's five-year timeframe. Two films (both part of *The Lord of the Rings* trilogy) appear on both network lists and were counted in each. This network sample is cited in Appendix 2. Following the same method as the highly grossing sample (exempting production companies with only one film to their name and using only and all production companies listed in the credits), we identified 80 production companies that contributed to the production of these 21 films (compared to the 44 companies attached to the 25 high grossing films).

An affiliation matrix was created representing the links (i.e., coproduction of at least one film in this sample) between each production company. This technique is referred to as two-mode analysis in which the affiliation matrix is multiplied by its transpose to create a coproduction matrix (Borgatti, Everett, & Freeman, 2005). The coproduction matrix indicates the frequency of two production companies being attached to the same film. It is worth noting that seven production companies appear in both the highly grossing and highly lauded networks (nine if the overlap of the two *Lord of the Rings* films is

⁴ Of course, some companies sustain massive Oscar® campaigns aimed at Academy voters, but the movie must also be widely considered laudable (worthy of such praise) for an ad campaign to have a chance.

counted). These companies are Fox, Paramount, Warner Brothers, Dreamworks, WingNut, Village Road, and NPV (as well as New Line and Saul Zaentz, if the two *Lord of the Rings* films are counted).⁵

The analysis strategy consists of calculation of standard network matrices such as degree centrality, clustering, and density (Scott, 2001). A Quadratic Assignment Procedure (QAP) correlation was also run between networks, and a homophily test was run on both with attribute data regarding the nationality of individual production companies (Borgatti et al., 2005).

Results

The affiliation matrix for the highly grossing films network is shown in Figure 1. Each self-enclosed group is illustrated in a different color, and we can see only four isolated films, the three clusters along the top of the figure, and one purely isolated company, Lucasfilm, which is powerful enough and its *Star Wars* prequels enough of a sure thing that it needed no cofunding relationships with other companies. Gomery (2009) notes Lucas' ability to fund his movies entirely and retain 90% of the revenues (after paying Fox their distribution fee) is a testament to the certainty that the *Star Wars* prequels would be profitable. This set-up is highly unusual. Yet, at the same time, Gomery points out that even Lucas couldn't go it entirely alone; he needed Fox's distribution connections and expertise. Thus, we can see that even the rare non-coproduction still requires some reliance on another entity, though not in the production or financing stages. Lucasfilm's position in the network as an isolate highlights the singularity and unusualness of its power, yet its reliance on Fox for distribution is a footnote, reminding us that this is as much power as one firm can achieve in the current system.

⁵ WingNut, while integral to the *Lord of the Rings* productions, also produced *King Kong*, putting it fairly in both lists.

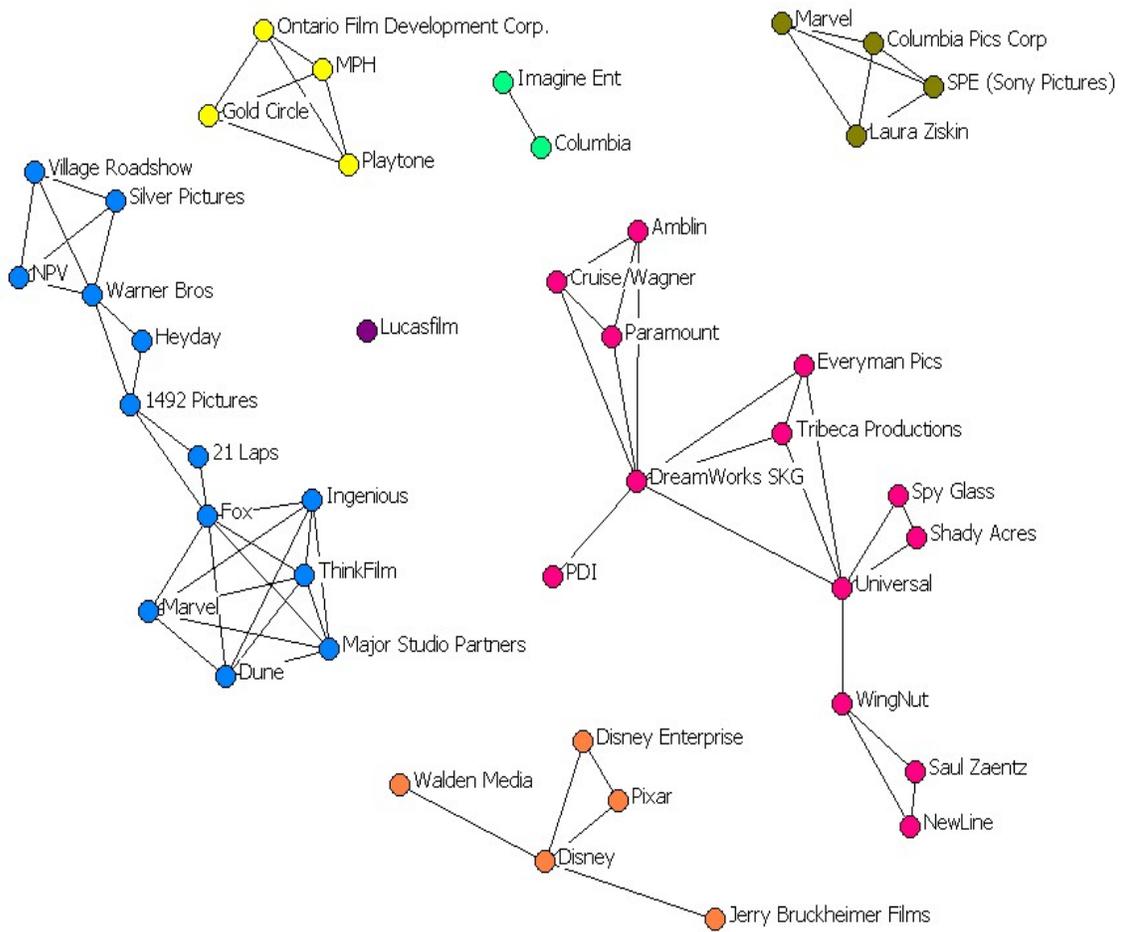


Figure 1. Network of coproduction relationships among production companies of high grossing films.

Figure 2 represents the affiliation matrix for the highly lauded films, following the same color-coded logic. There are five self-contained groups that reflect five separate films (and no isolates), as well as one large and expansive network of affiliations connecting, in some way, the remainder of production companies in the network.

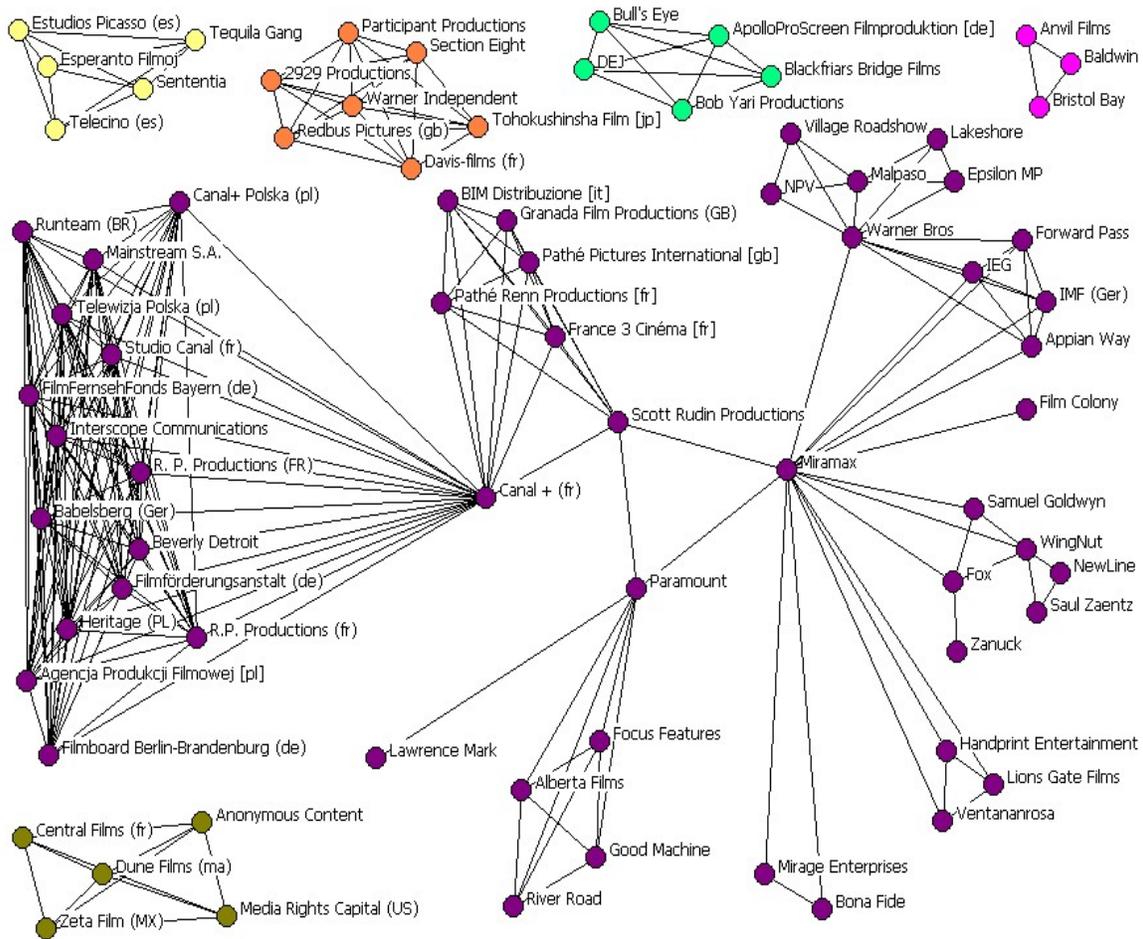


Figure 2. Network of coproduction relationships among production companies of highly lauded films.

This study's first research question asks whether highly lauded films are products of more dispersed networks of funding than are highly grossing films. Degree centrality analyses were run on both networks. Overall, network centralization on the production networks of highly grossing films is quite low: 1.76%, with a mean degree of 1.36 links per node, $SD = 2.03$. Disney, Fox, and DreamWorks SKG have the highest degree: 7, with a normalized degree of 2.14 for each.⁶ Warner Brothers and Universal follow closely: both with a degree of 6 and a normalized degree of 1.84.

Network centralization on the production networks of highly lauded films is also low, but higher than in the highly grossing films network. Network centralization for the highly nominated films is 7.58%, with an average of 4.78 links per node, $SD = 5.14$. Canal +, a French company, has the highest -degree: 21, with a normalized degree of 9.63. Miramax, well-known as an "indie"-producing giant, is the second largest, with an in- and out-degree of 16, and a normalized degree of 7.34. It is worth noting that the strong showing of Canal+ versus Miramax is likely attributable to the former company's collaborations with a large number of partners on each film. Miramax produces many films, but does so in collaboration with few partners. The subject of this article, though, is based on collaborations between partners versus numbers of successful films that particular firms have produced. That Canal+ has relationships with a large number of other production companies as does Miramax speaks to a more dispersed and open funding structure, despite the centrality of both Canal+ and Miramax.

Along the same lines, another research question asks if new players are constantly entering the highly lauded network to fund films, leading to a less dense network? Density analyses were run on the two networks. For the highly grossing network, density is .01, $SD = .13$, whereas, for the network of highly lauded films, it is .04, $SD = .21$. Although both networks are sparse, the highly lauded network is denser, despite its being nearly twice as large.

The next research question concerns the national location of the funding firms and their relationships as a barrier or accelerant to film production ties. Homophily tests were run between national location of the production companies and their ties. In the network of the production companies for high-grossing films, there is significant evidence of homophily ($p < .01$), but the effect size is quite small ($R^2 = .004$). This homophily and effect size can likely be explained by only one production company being, in fact, foreign (a Canadian production company that supported *My Big Fat Greek Wedding*, which can only be considered a highly atypical high grossing film). In the network of the production companies for highly-lauded films, the homophily is even more significant ($p = .00$), but the effect size is similarly small ($R^2 = .005$).

Lastly, the third major research question asks to what extent the same players produce highly lauded films and high grossing films. A relationship between the two networks was investigated through correlation of the two networks using the QAP. The correlation score is .081, $p < .01$. This shows very low correlation between the two networks, as we can see in the raw data as well. There is some overlap

⁶ As this is an affiliation network, all degrees here are both in-degree and out-degree.

between studios in both networks, but the vast majority are active in only one network and isolates in the other.

Discussion

This study examines the different network structures of coproduction funding in two types of films: major blockbusters and highly lauded major productions. In imagining an alternative Hollywood where quality trumps the blockbuster-led profit motive, what would (and do) funding and green-lighting structures look like? Three analyses were run, all centered on that theme.

First, the research question asks, if highly lauded (high quality) films are the products of more dispersed funding structures than are highly grossing films. A degree centrality analysis shows that neither network is very centralized, suggesting that the overarching dominance of a few key players in either type of funding network may be overstated by qualitative generalizations about the industry. While the network isn't very centralized overall, specific individual firms do serve as a central point for many of the links. Even a cursory glance at Figures 1 and 2 reveals particular companies that stand out as central: Dreamworks, Disney, and Universal in the high grossing network; and Canal+, Miramax, and Paramount, in the highly lauded network. Indeed, each of these companies led the field in in-/out- degree connections.

Yet, even though certain production companies may be particularly active and vital in the production of highly lauded films, the size of coproductions indicates there are many collaborations in highly lauded films. This is reflected in the degree differences between the two networks. Analyses show that the most connected companies in the highly lauded network have much higher in-/out-degrees than do the companies in the highly grossing network. This suggests that, just as Canal+ has more overall relationships than does the technically more productive Miramax, those companies funding high quality films reach out to more dispersed networks for additional funding and support. As Morawetz (2007) notes, this outreach is a way to disperse risk in producing nonblockbuster fare and to pursue public film funds with diverse production company rules attached to them. Nonblockbuster films must be more creative and more dispersed in their funding structures.

Density and clustering are also analyzed, and while neither network is shown to be very dense, both show high degrees of clustering. Without comparing the networks of hundreds of films spanning at least a decade, it might be hard to get sufficient overlap of production companies. The density shown here may be a reflection of each individual film's dense clustering and of the low level of linkages between films. However, even with a larger sample, the large percentage of production companies without ties to other films could not be expected to change drastically. That is the picture of the industry that these analyses have drawn: Both networks continually involve new firms that are not already established as major players, while they are given to dense clustering around a few centralized nodes. The centrality analysis shows, too, that while network structure may be similar, the highly lauded network involves a much higher degree of connections and is therefore more penetrable. Yet, even as the highly lauded network appears more penetrable than does the high grossing network, it is worth noting that Figure 2

shows that the majority of these firms can trace themselves to one another, usually by way of the more centralized firms. Though the highly lauded network offers more doors upon which to knock for funding and more opportunities for films to get funding from dispersed forces, there are still leading firms that hold much of the power in this network. The implications of this for our hypothetical Hollywood are important because such an alternative structure would not destroy the power of major studios; instead, this power would still be relatively centralized, but shared with many more players.

The next round of analyses addressed the issue of American-led hegemony. The raw data in the high grossing network is almost self-evident, rendering the results somewhat redundant: Only one production company was not U.S.-based. In that network, it is clear that nationality is very closely tied to production cooperation, though, as the effect size indicates, other factors as well would be necessary to effect such cooperation. High grossing blockbuster-style films tend to be funded by and return profits back to U.S. corporations.

In the highly lauded network, homophily between company nationality and likelihood to collaborate is also high (and effect size low). The homophily here can likely be explained thusly: Films utilizing foreign funding (or foreign films themselves) are more likely to necessitate multiple funders, many of which will also be from foreign countries, or the foreign production companies may have been included because of their nationality (and subsequent ability to tap into public funds), revealing that these productions find it necessary to use particularly creative funding strategies. For instance, *The Pianist*, (represented as the extremely dense interlocking cluster to the leftmost side of Figure 2, connected to the rest through Canal+) with no direct funding from a major Hollywood studio, utilized multiple funding sources from Poland, from France, and from Germany, among other countries. One can assume that the lack of a major studio to champion the film led both to spreading the investment between multiple entities, as well as to reaching out to major European production companies and to public funds in a variety of European nations. International production companies, being less a part of the entrenched Hollywood system, are likely to be a part of funding networks that include multiple non-U.S. entities. Therefore, this reflects the tendency of films that reach out to one international funder to also reach out to multiple international production companies.

It is also worth noting that our example of dispersed funding, *The Pianist*, is not self-enclosed. Canal+, the French production company, coproduced both *The Pianist* and *The Queen*, another film utilizing largely non-U.S. funding sources. Scott Rudin Productions, a production partner on *The Queen*, is one of the more central nodes in the highly lauded network, collaborating on *The Hours* with Miramax and Paramount, two other centralized nodes. In just one step, the dispersed European funding network of *The Pianist* is connected to the most centralized and productive firms in the network, all three of which are based in the United States. In this way, the production of higher quality or highly lauded films is more geographically dispersed. While the participation of one non-U.S. firm is a significant correlate to the participation of multiple production companies on one film, it is also worth noting that these U.S. and non-U.S. films are generally not that far removed from one another in the network structure of highly lauded films. While blockbuster logic may go along with imagining Hollywood as U.S.-centric, a future of higher quality productions and more dispersed funding networks is likely to be more international in character, particularly if public film funds in Europe remain structured as they are at present.

This article set out to imagine an alternative Hollywood, with production aimed at quality versus the blockbuster mindset that has reigned thus far. Yet, the line of inquiry here is not only relevant for imagining a hypothetical industrial structure specifically more conducive to quality products. In a movie industry increasingly defined by dispersed and networked means of production and distribution, it is not hard to begin wondering what that business would look like with some of the gatekeeping power of the major studios also dispersed. We can imagine a Hollywood of the near future with productive capacities dispersed among a wide variety of production companies. In the age of the “Long Tail” (Anderson, 2006), the economics of lowest common denominator production will at least lose some of its power. This (perhaps inevitable) cultural power shift may also lessen the dominance of blockbuster-style major studio coproductions. The age of the blockbuster may be ending (Anderson, 2006). In competing with the 80% of films that make up the long tail of the entertainment industry, blockbuster-style funding will also need to shift. It is worthwhile, then, to examine the networked structure of both types of productions to determine whether there are different network structures that define funding in blockbuster films and highly lauded films. The revelation in the final analysis that there is little overlap between production companies backing highly grossing films and highly lauded films suggests that the production companies involved in the creation of highly grossing films will need to adjust or diversify if, as many believe, the age of the Long Tail is upon us.

Future research would do well to explore the relationships here more deeply. Using coproduction on a closed world composed of a limited number of films is a rough way to get at some densely layered and nuanced information regarding relationships in the film industry. Scott Rudin, for instance, whose production company was involved in the funding of three films in the highly lauded network, also used to work at Disney and at Miramax. Indeed, Disney, not present in the highly lauded network, is certainly active there, given the Disney-Miramax relationship. Similarly, Warner Independent and Warner Brothers also have clear links not addressed in this study, and *Good Night and Good Luck*, a Warner Independent production, is self-enclosed in this study, with links only to its co-production companies, many of which are not U.S.-based. Additionally, films may have barriers to funding not related to a mass market/quality dichotomy. Female-driven or minority-helmed films, for instance, may find funding more difficult, and a quantitative analysis will find it difficult to address these nuances.

To a degree that was not able to be fully captured here, film funding is a complex dance, combining professional partnerships and personal relationships, with employees and executives changing positions and companies frequently. An agreement to coproduce a film, as in most arts-related endeavors, involves not just professional considerations but also the most social of attributes—social relationships and trust (e.g., Currid, 2007; Rantisi, 2004). Future research that incorporates entire production slates of a large number of production companies and tracks executives in their professional relationships (and perhaps, personal as well) would be ideal. A diagram addressing the social connections and previous working relationships of all major players would likely have so many crisscrossing lines that it would be rendered unreadable. Yet, it is these types of crisscrossing lines that may draw a fuller picture of entertainment industry collaboration, both as it exists today and as it could exist in the hypothetical decentralized future of production in the age of the Long Tail. That said, the analysis here does provide significant insight into funding and coproduction relationships in two different takes on Hollywood.

Coproduction networks of highly lauded films do appear to exhibit structural differences from their high grossing counterparts that suggest more collaboration and penetrability. The Hollywood of big budgets, sequels, big-name stars, and “surer” things is less penetrable and less diverse than is the Hollywood of smaller highly lauded movies. If the future of film production looks like the structures of the alternative Hollywood described here, we may see a more cooperative, dispersed, and international industrial structure for the future.

Appendix 1. Top grossing domestic box office films in the U.S. to year-end, 2002–2006.

<p>2006</p> <ul style="list-style-type: none"> • <i>Pirates of the Carribean: DMC</i> • <i>Night at the Museum</i> • <i>Cars</i> • <i>X-Men: The Last Stand</i> • <i>The Da Vinci Code</i>
<p>2005</p> <ul style="list-style-type: none"> • <i>Lord of the Rings: Two Towers</i> • <i>Star Wars Episode II</i> • <i>Harry Potter and the Chamber of Secrets</i>
<p>2004</p> <ul style="list-style-type: none"> • <i>Shrek II</i> • <i>Spider Man II</i> • <i>The Passion of the Christ</i> • <i>Meet the Fockers</i> • <i>The Incredibles</i>
<p>2003</p> <ul style="list-style-type: none"> • <i>The Lord of the Rings: The Return of the King</i> • <i>Finding Nemo</i> • <i>Pirates of the Caribbean: CBP</i> • <i>Matrix Reloaded</i> • <i>Bruce Almighty</i>
<p>2002</p> <ul style="list-style-type: none"> • <i>Spider Man I</i> • <i>The Lord of the Rings: The Two Towers</i> • <i>Star Wars: Episode II</i> • <i>Harry Potter and the Chamber of Secrets</i> • <i>My Big Fat Greek Wedding</i>

Appendix 2. Films receiving six or more Oscar nominations, 2002–2006.

2006 <ul style="list-style-type: none"> • <i>Dreamgirls</i> (8) • <i>Babel</i> (7) * • <i>Pan's Labyrinth</i> (6) • <i>The Queen</i> (6) *
2005 <ul style="list-style-type: none"> • <i>Brokeback Mountain</i> (8) * • <i>Crash</i> (6) ** • <i>Good Night and Good Luck</i> (6) *
2004 <ul style="list-style-type: none"> • <i>The Aviator</i> (11) * • <i>Million Dollar Baby</i> (7) ** • <i>Finding Neverland</i> (7) * • <i>Ray</i> (6) *
2003 <ul style="list-style-type: none"> • <i>The Lord of the Rings: ROTK</i> (11) ** • <i>Master and Commander</i> (10) * • <i>Cold Mountain</i> (7) • <i>Mystic River</i> (6) *
2002 <ul style="list-style-type: none"> • <i>Chicago</i> (13) ** • <i>The Hours</i> (9) * • <i>The Pianist</i> (7) * • <i>Frida</i> (6) • <i>The Lord of the Rings: The Two Towers</i> (6) * • <i>Road to Perdition</i> (6)

* Includes nomination for Best Picture

** Includes win for Best Picture

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