Boundaryless Careers in the US Film Industry: Understanding Labor Market Dynamics of Network Organizations

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Abstract
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Most labor economists would explain these career results and the presence of an industry core and periphery as due to internal labor markets. However, due to the demise of the film studio system in the 1950s and 1960s, the US film industry no longer has internal labor markets. Yet, the film industry is highly stratified into core and periphery and this social structure has a profound impact on career opportunities within the industry. This suggests that other mechanisms, such as status and access to resources, rather than internal labor markets are at play for maintaining asymmetries in boundaryless career opportunities and outcomes. We discuss these mechanisms and their implications.

Keywords
job history, media job, media industry, labor market, structure, intercompany cooperation, occupation, United States of America, North America

Disciplines
Other Business

Comments
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Boundaryless Careers in the US Film Industry: Understanding Labor Market Dynamics of Network Organizations

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Most labor economists would explain these career results and the presence of an industry core and periphery as due to internal labor markets. However, due to the demise of the film studio system in the 1950s and 1960s, the US film industry no longer has internal labor markets. Yet, the film industry is highly stratified into core and periphery and this social structure has a profound impact on career opportunities within the industry. This suggests that other mechanisms, such as status and access to resources, rather than internal labor markets are at play for maintaining asymmetries in boundaryless career opportunities and outcomes. We discuss these mechanisms and their implications.
Introduction

The increasing use of networks, strategic alliances, and other forms of inter-firm organizing create inter-firm or boundaryless careers. Since the career is the key link between the individual and the organization these inter-firm forms of organization can be understood by examining careers within them (Barley, 1989; Van Maanen & Schein, 1979). However, this requires framing the career in a way that is not tightly coupled with the firm, as most prior models and research on careers have done (Arthur, 1994; Tolbert, 1996). The concept of the boundaryless career provides an alternative frame to previous firm centered career definitions. The boundaryless career is defined by three key criteria: movement across the boundaries of separate employers, validation from the market rather than the employer, and extra-organizational networks or information (Arthur, 1994: 296). The career system – the roles and movement of people – defines the boundaries and nature of organizations. We suggest that by examining the boundaryless career system, we can better understand these new forms of organizing.

The media industry provides a ripe context for examining inter-firm forms of organizing and boundaryless careers. In film, publishing, advertising, and music, networks of independent artists and firm representatives work in teams for a project – advertising campaign, movie, CD, or book - and form their own temporary network group or organization. These network organizations, often called dynamic networks by some scholars due to their combining and recombining of parties around projects (Snow, Miles & Coleman, 1992), create the products for sale and in doing so, work to achieve the goals of both the organization and its members. Thus, this industry is referred to as a network organization (Hirsch, 1972; Miles & Snow, 1986; Powell, 1990; Reich, 1991).

The U.S. film industry in particular, provides an excellent context for answering questions about boundaryless careers and dynamic network organizations. Since the dissolution of the vertical integrated studio system in the 1950s and 1960s, work in the film industry has been organized not around traditional hierarchies and in-house human resource departments but around projects and informal personal networks (Storper, 1989) of independent subcontractors and firms. Thus, the boundaryless career has been a
dominant career pattern within the U.S. film industry for the last two decades. It is regularly cited as an example of a network organization comprised of inter-firm relations (Hirsch, 1972; Powell, 1990; Reich, 1991; Snow, Miles & Coleman, 1992). Careers within the film industry move across rather than within firms; subcontractors are self-employed and move from project to project. The role of the company in this network organization is to finance and distribute the finished product (film). The film industry is geographically concentrated in Hollywood, and as such, creates an industry community (DeFillippi & Arthur, 1994) with extensive inter-firm mobility. Thus, the U.S. film industry is an important source of insight for examining and understanding the nature of boundaryless careers and thus, network organizations.

The purpose of this paper is to identify career systems and outcomes within network organizations of the U.S. film industry. We do this through analyzing movement both into and out of the industry, and among firms and fellow subcontractors. We examine cores and peripheries of this industry, including its labor market segmentation and stratification. We find that based on subcontractors’ initial position within the industry’s core, semi-periphery or periphery, future opportunities for these subcontractors either open up or remain constricted. The film industry is highly stratified; yet, it does not have internal labor markets to explain this stratification. This suggests that other mechanisms are at play for maintaining asymmetries in career opportunities and outcomes and we discuss these mechanisms as well as their implications.

The paper is organized into four primary sections. First, we discuss how career systems and labor markets can be used to define and understand organizations. Second, we review the data and methods of our analysis. Third, we present the results of the study by describing the career system within the U.S. film industry and exploring the consequences of this career system for individuals. Finally, we offer concluding remarks and discuss the implications of our findings for practice and theory.
**Organizations, Careers, and Labor Markets**

We can understand organizations by examining their career systems: the work patterns of the members who use their skills and abilities to create goods or services. In fact, this framework offers a different notion from our more traditional ideas of organization. Ouchi (1980:132) broadens the concept when he defines an organization as „any stable pattern of interactions between individuals or aggregations of individuals.“ This definition provides several advantages when examining boundaryless careers and network organizations. First, organization is no longer firm-centered so it can incorporate interactions within or across firms (or self-employed subcontractors). Second, patterns of interaction can capture the informal processes and formal structure, both of which are critical to network organizations. These patterns of interaction (e.g., sets of interacts) in fact, are the structure and process of organizing (Weick, 1979). As Weick (1979:80) commented, „The structure that determines how an organization acts and how it appears is the same structure that is established by regular patterns of interlocked behaviors.“ Thus, organizational processes and structures are intrinsically linked. Third, persisting patterns of interaction, since they are nonrandom (e.g., we choose our partners based on some criteria), reveal the system's organizing principle (Lauman & Knoke, 1986:84-86). A career system maps the organization's interactions: its permeable boundaries (e.g., how many move in or out of the system), its movement among parties (e.g., up, down, across) and its continuity and expansiveness of interactions (interrupted versus continuous, with few or many partners). We can define and understand variations and differences in organizations by examining the career systems and institutions maintaining them.

We provide a not extensive but important literature review on industrial relations, primarily dual economy theory, to understand boundaryless careers and contrast them with traditional firm centered careers. The notion of boundaryless careers in the US film industry expands our understanding of traditional explanations for firms and careers. It also provides insight into other mechanisms than internal
labor markets for creating and maintaining asymmetries in firms and career asymmetries within an industry.

**Firms and Labor Markets: Core-Periphery Model**

Labor economists and sociologists have used a core-periphery model, often called dual economy theory, to explain the relationships among careers, organizations, and industries. Both suggest that firms and careers exist at both the industry core and at the periphery. Depending on whether individuals and institutions reside in the core or periphery, the pattern of interactions between them will differ (Althauser & Kalleberg, 1981; Doeringer & Piore, 1975; Kerr, 1954). Careers at the core and periphery have distinct patterns. Careers for those in the core are centered around internal labor markets. These internal labor markets are characterized by a pattern of repeated, long-term and skill specific interactions and create an exclusive career pattern and segmented labor markets (Kerr, 1954) which are „distinct and insulated from one another“ (Spilerman, 1977: 583). This segmentation develops into what Granovetter calls a strong tie social structure characterized by fragmentation (Granovetter, 1973, 1982). In contrast, careers in the periphery are comprised of an external labor market characterized by non-exclusive ties with firms. This market is short-term, unstable, and less skilled. Here, individuals experience little advancement in terms of knowledge, prestige, or pay. Kerr (1954:101) suggests that in the periphery there is „no attachment between employer and worker except wage.

**Boundaryless Careers and Occupational Communities**

Yet, dual economy theory does not tell the complete story. The firm in the film industry has disintegrated into networks of flexible specialization, where individuals form temporary and sometimes recurring relationships with other individuals, as they create their product. These individuals, more times than not, work on behalf of different firms as they move from one project to the next and their careers are generally not bounded within one particular firm, but rather within the industry (Storper, 1989).
The film industry is centered around what Tolbert (1996) calls an occupational community. In this type of community, careers are external to a firm and movement in and out of firms is high. Thus, standards for defining and communicating work requirements as well as tacit industry knowledge, are set not by the firms, but by this community's members. Members set these standards through things such as simple social contact among individuals and standardized educational credentialing. Thus professional schools become increasingly important in occupational communities comprising network organizations. In such a work environment, career mobility is dependent upon an individual's reputation not within a firm, but within the community (Tolbert, 1996).

The high inter-firm mobility, as well as this vague and somewhat implicit notion of reputation as critical, have important implications for movement in, out of and within the industry. In industry communities or network organizations, the peripheries are open. This would suggest that most new entrants begin at the peripheries and often exit here, as well. Yet, the inner cores where the high status, high pay work occur, are restricted (Kadushin, 1976). For example, in the film industry from 1965 to 1980 only seven percent of the film producers made 40% of the films while 64% made only one film (Faulkner & Anderson, 1987:894). The question becomes how members move from existing at the periphery to moving to the inner core. In the U.S. film industry, the union created a role for itself that helped facilitate this career movement.

*Boundaryless Careers and the Role of Labor Unions*

An important question for network organizations and the occupational communities comprising them is how wages are set when individuals move between firms for their careers. Labor economists using a dual economy framework would suggest that market forces determine wages. However, the US film industry shows how labor unions played a role in determining wages and how labor unions evolved along with a network organization. Traditional labor relations research would suggest that a union would find it difficult to organize in a network industry, due to its boundaryless, highly specialized career form.
Those in the film industry for example, are required to continually develop new skills and specialize their craft. As a result, the industry becomes characterized by its highly specialized and segmented crafts. As a result of this diversification, a union would be unable to meet the fragmented interests of its varied membership (Paul & Kleingartner, 1994.)

Yet the role of the union in the film industry is alive and well. Paul and Kleingartner (1994) attribute the ability of three above the line unions (Directors' Guild of America, Screen Actors Guild and Writers Guild of America) to take over administration of the industry's compensation system from film and production companies as the source of their continuing integral role. Due to the industry's complicated pay schemes, companies pay unions for members' contracted work. Unions in turn, pay out the members. Film industry compensation is organized by a three tier system that includes basic minimum pay rates, the opportunity for elite members to negotiate personal service contracts and residual supplemental payments for all members. The flexible pay system in this three tier design meets the needs of all members, whether they reside in the core, semi-periphery and periphery. Paul and Kleingartner (1994) contend that on compensation issues, these unions are so intertwined with film and production companies that they are indispensable to the industry and its members. Over time, these unions created perhaps unusual but undoubtedly critical roles for themselves and were able to met the needs of members as they transitioned from the periphery to core. This is an example of the role unions can play in determining compensation in network organizations and how in the U.S. film industry, the unions role evolved along with the organizational form and careers.

Integration of These Perspectives

The roles of unions and professional schools are important for understanding network organizations; however, since they influence careers within the film industry in a somewhat uniform way, we do not assess their impact on individual careers within the film industry. To adequately assess the role of unions and professional schools would require comparison with other industries where the role of
unions and professional schools are less well developed. We focus instead on how position within the industry's core, periphery or semi-periphery influences career outcomes for film subcontractors. Scholars using dual economy theory would suggest that the film industry be comprised of an external labor market since firms no longer have internal labor markets. Thus, we should not see cores but only a periphery within the industry and no difference between career outcomes for subcontractors. In contrast, those applying concepts of occupational communities, (Tolbert, 1996; Zucker, 1991) suggest that the industry community plays a key role in setting career standards and accepting particular members. This community, as well, also influences the creation of cores and peripheries and the movement of subcontractors between cores and peripheries. Thus we consider the important question: what career systems exists in the film industry and what do these systems imply about the network of organizations? Through examining career patterns in the film industry, we consider if and how these ideas hold merit.

Methods and Data Analysis

To consider our questions about boundaryless careers, network organizations, and their consequences for individuals in the film industry, we integrate two distinct perspectives: the experiences of subcontractors and transactions found in archival industry data. Empirical data for the descriptions below derive from two sources. The first source is 2-3 hour in-depth interviews with five individuals who have been in the film industry since the late 1970s. The second source is the first author's data base of 2,744 subcontractors and their film credits for the 606 feature films released and distributed in the U.S. from 1977-1979. Film credits are recorded in the film industry periodical Willis Screen World. The analysis represents a time when film historians suggest that the industry network structure was already established (Ellis, 1990: 437- 439).

We use the years 1977 through 1979 to establish a base line for the industry labor market. We examine industry labor market and career patterns using network methods. For the network analyses, only those subcontractors with two or more credits were used in the network analyses because these represent
potentially recurring relationships. As Aldrich (1982:282-283) argues, „networks can usefully be
created as structures of recurrent transactions... one time relationships are not worth bothering about,
and indeed would not be legitimately described in terms of the language of relationships.“ This three year
tracking resulted in the creation of a person-by-project data matrix of 836 participants for the 606 films.
This was converted to a person-by-person matrix using the affiliations procedure in UCINET (Borgatti,
Everett and Freeman, 1991).

Since the focus of this study is on career systems and patterns of interaction comprising them,
network methods which assess this direct contact or interaction were used. Two types of network analyses
were used to assess the patterns of interaction: component, and k-core. Component analysis indicates „the
intensity of interaction among its members compared to a lack of interaction with outsiders“ (Aldrich,
1979:328). Several components would result from individuals who have exclusive interactions with a
specific firm. This method identifies whether segmented labor markets exist within the U.S. film industry.
K-core analysis identifies the cores and peripheries within a social structure (Scott, 1991:112). Each inner
core represents an increase in direct interaction among parties. Thus, the number of k-cores shows the
range of inclusion and exclusion within the social structure. Since k-core analysis also identifies
participants' location in an industry's labor market by showing in which k-core one resides, it indicates
whether one is located in the periphery, semi-periphery, or core. Those with lower k-core numbers exist
toward the periphery of the industry and those with higher k-core numbers are more centered towards the
core.

Once the industry labor market baseline was established, the second step in the research process
was to collect longitudinal data on a select subsample of those who made movies during 1977-79.
Subcontractors who made four or more movies during 1977-79 were tracked for the next ten years
(through 1989) to see how their position within the industry labor market during 1977 through 1979
influenced their careers – the ability to make more movies. The careers of 131 subcontractors involved in
technical roles of film making (e.g., director, producer, screen writers, cinematographers, editors) were
tracked over a ten period.
Results

Perceptions of Careers and Career Systems in the US Film Industry

Bryan, one of the grippe, electricians interviewed, explains the career cycle and labor market for those in the film industry: “…80% usually never make it; 20% finally get to a place where they start making some money. You need people who are just starting out because you always need inexperienced people who are inexpensive enough that you can afford them on the less expensive jobs. As you get experience, you work your way up the ladder and get a few more jobs, you start getting more and more jobs and then raise your rates. Your medium range people are good quality for reasonable prices. You get some who get on top who are considered good and make good money. These top people are used for key positions and to work with the stuffy people from LA or New York. At some point, you start getting burned out or continue to raise your rates and then get fewer jobs. You obviously need less at the top and more at the middle and bottom.”

Career Patterns in the U.S. Film Industry

Results indicate the film industry has permeable boundaries for entrance and exit of subcontractors and firms. Of the more than 2,744 film participants who worked on 606 films during 1977-1979, 70% made only one film (e.g., had one credit). Continuing work on projects, reflected in the subcontractors credits, is a clear indication of having a career in an industry community (Faulkner, 1987) and supports the notion that reputation is key. Our results showed that the film industry is highly competitive with many entering and few staying and succeeding. This results in intense competition for each job. In this industry, it is difficult to build a successful career that spans over many years.

To see whether this intense competition for jobs on movie projects led to segmented labor markets of core versus periphery, we performed component analysis on the network data. Results showed
that in the film industry, only one component exists. This component comprises 98% of subcontractors and executives and ten subcontractors formed seven small relatively isolated groupings. This indicates that the film industry is integrated, because 98% of participants potentially have either direct or indirect access to one another.

Our results also showed that the film industry is characterized by boundaryless careers; only 19% (159) of participants with multiple film credits worked exclusively for one firm. The extensive inter-firm mobility of this occupational community creates weak ties among various parties and links subcontractors and firms together into one common labor market, characterized by its social nature. As an experienced production manager noted, „it all works as a network. Everyone knows everyone. If you don't know them, you normally know about them. If you don't know, you can find out“ (Jones & DeFillippi, 1996).

To see whether cores and peripheries characterized the film industry, k-core analysis was run. Twelve cores were identified. These cores show the various degrees of inclusion and exclusion within the industry. Since firm VPs or Presidents indicate the link between firms and subcontractors, their placement shows the firm's location in the social structure.

As shown in Table 1, the cores are differentiated according to their involvement with the majors, minors and „fly-by-nights.“ Those who work for the major studios and „fly-by-nights“ are inversely situated in the cores. Subcontractors working for the majors comprise 80% or more of the three most inner cores where relationships are more densely connected. Faulkner's (1985, 1987) extensive interviews with subcontractors in the film industry describes how the major studios (Paramount, Columbia, etc.) are the most prestigious, have the best pay and make artistically challenging films. Indeed, even a successful independent director such as Joan Micklin Silver comment on the significantly more skilled film crews who work primarily for the major studios in Hollywood and those lesser skilled film crews who work primarily for firms in the periphery (see her interview in Squire, 1983: 40-41). In contrast, the other firms
in the industry have limited resources, less prestige and inexperienced subcontractors. Those who work for the "fly-by-nights" reside in the peripheries (40% or more in the most peripheral cores) and have fewer credits. Those working for the minor firms occupy the semi-periphery and periphery, which are less dense and cohesive than the inner cores and have fewer credits.

In sum, the k-core analysis of film subcontractors and executives reveals that the subcontractors who work among the major studios in the inner cores are an elite who earn better pay, work on more challenging films and work more often. In contrast, those firms and subcontractors who reside in the periphery of the industry work for lower pay, work on less prestigious and challenging films, and work less often. These results indicate that in this industry community there exists a set of firms for whom an elite group of subcontractors work. These subcontractors are tightly knit in their interactions with one another and inclusion or exclusion to this elite inner core provides disparity in terms of challenging work, prestige, pay and access to resources within the industry community.

Due to extensive inter-firm movement of subcontractors rather than two segmented and non-overlapping labor markets as dual economy theory suggests, one labor market exists within the film industry community. The labor market is comprised of levels of opportunity for prestigious, well-paid, challenging and consistent work employment and this opportunity depends on whether one resides closer to the core or the periphery. Careers within the industry are highly stratified based on whether one works for the majors versus working for smaller, more peripheral firms. In the next section, we explore the consequences of this stratification into cores and peripheries.

Career Outcomes of Cores and Peripheries

We tracked the careers of 131 subcontractors who made four or more movies during 1977-79 for the next ten years (1980-1989). We wanted to see how location within the cores and peripheries of the industry labor market influenced future opportunities. Figure 1 shows how location in the k-core is influenced by whether one worked for the majors in the following ten years. Those who were in the
higher k-core (10-12 indicates having worked for the majors during 1977-79) have three times as many credits for major studios than those who were in the periphery (e.g., 3 versus 0 credits). Those in the semi-periphery fared no better than those in the periphery. This suggests that an elite core maintains its status and the stratification of the industry through preferential hiring: those in the inner circle get opportunities to stay in the inner circle whereas those on the periphery and semi-periphery rarely, if ever, get the opportunity to enter the inner circle and prove themselves. In contrast, Figure 2 shows how those in the inner core rarely worked in the periphery over the next ten years whereas those who started in the periphery and semi-periphery were far more likely to remain in the periphery.

[Figure 1]

[Figure 2]

We performed further analysis on „above and below line“ subcontractors to see if there was any difference in career outcomes based on occupational role. Above the line subcontractors are those who are hired first and are primarily responsible for the creative direction of the movie such as the screen writer, director, and producer. In contrast, below the line subcontractors are the administrative assistants (e.g., assistant directors and associate producers) and the craft and technical subcontractors (e.g., cinematographer, editor, and art, production designer) (Silver & Ward, 1992).

We tracked the career outcomes for these various above and below line subcontractors based on their initial positions within the industry social structure and their future work. The career outcomes for the above and below line subcontractors showed little difference from our aggregated results. Above the line subcontractors who started in the core (cores 9-12) during 1977-79 were six times more likely to make films for the major studios than for peripheral firms (see Table 2). Below the line subcontractors who started in the core made five times the number of films for major studios rather than peripheral studios (see Table 3). There was no difference between above and below line subcontractors who started in the periphery and remained in the periphery; they made three times as many movies for peripheral
firms than the major studios (see Table 4). The only difference between above and below line subcontractors is that there were more below line subcontractors than above line subcontractors. This suggests that technical and craft positions may provide more employment security than creative and organizational roles. These analyses show quite clearly that the variance in career outcomes is due to initial starting position within the industry rather than role in the film making process.

[TABLE 2]

In sum, our findings show that there are high rates of inter-firm mobility, few strictly segmented labor markets and little difference in career outcomes based on role in the film-making process. There are high rates of stratification into cores and peripheries which constricts opportunities and reinforces inequalities within the industry labor market. This suggests that internal labor markets are not the primary vehicle for stratification in the film industry and that network organizations, as used in the film industry, do not necessarily promote open career opportunities for many within the industry community.

[TABLE 3]

[TABLE 4]

Discussion and Conclusion

Career systems can inform us about how work and relationships are organized in an industry. This is especially important as more work and workers move across boundaries. Our results show that although the film industry is highly permeable with open boundaries into and out of the industry, movement into work for elite, well paying studios is difficult. The challenge is to gain entry into the inner core because it opens up opportunities and improves the likelihood of career success. The key to doing this is through building a reputation through both establishing social contacts and obtaining skilled
experience. Thus, initial access to these studios is important and developing the contacts and skills necessary to gain this access is critical.

Labor economists and sociologists have defined internal labor markets as the mechanism for career stratification and asymmetries within an industry. However, our research shows that internal labor markets do not have to be present for stratification to exist and provide differential career opportunities and outcomes. Industry communities also restrict opportunities without the presence of firm internal labor markets. This suggests that the other concepts such as social capital may be more important for explaining how stratification and inequality are maintained in an industry community.

Another possible source of explanation is the industry's history and use of firm internal labor markets. The US film industry evolved from vertically integrated studios as the primary organizational form to a highly specialized, flexible inter-firm network (Storper, 1989.) This is due to among other factors, the changing economic conditions that supported vertical disintegration of the studios' functions. The industry's evolution may have created stratification and inequalities in the industry which are re-enacted through subcontracting policies by the major studios. This suggests that path dependencies in terms of prior industry history may provide an important source of explanation for understanding labor markets in industry communities.

Organization and strategy theories have been firm centered. The increase in boundaryless careers challenges the basic assumptions and approaches in organization and strategy literatures and poses new questions about this new form of, labor. “For example, how does a firm gain and retain a competitive advantage when the assets are teams of skilled people who move among firms, especially among their competitors? What attracts skilled labor to a firm? What becomes of the role of human resource and training departments in firms or does this role shift exclusively to professional schools? Does a third party such as a union or professional guild more effectively design portable salaries and benefits? How does an industry downsize? “How does the industry culture evolve and take shape? And finally, what role would professional organizations play that they currently do not in more traditional organization forms? Our research suggests that media industries, such as film, can provide insight for firms which increasingly use
inter-firm organizing (e.g., strategic alliances, networks, etc.) to achieve goals and objectives.

Undoubtedly and as in the case with unions, human resource issues will evolve in response to this changing organizational form. The implications for those studying industrial and labor relations are tremendous.
References


Table 1: K-Core Analysis, Subcontractor Credits and Firm Location.

<table>
<thead>
<tr>
<th>K-core</th>
<th>Avg # Credits</th>
<th>Majors</th>
<th>Minors</th>
<th>Fly-Nights</th>
<th>Film Studios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner</td>
<td>3.03</td>
<td>.87</td>
<td>.12</td>
<td>.01</td>
<td>Universal, Paramount, Columbia, United Artists, Warner Bros, Orion, 20th Century Fox, Walt Disney, American International</td>
</tr>
<tr>
<td>Cores</td>
<td>10-12</td>
<td>.87</td>
<td>.12</td>
<td>.01</td>
<td>Avco Embassy, World Wide, American Cinemas, New World, Crown Intl, Dimension, IPS, Sunn</td>
</tr>
<tr>
<td>7-9</td>
<td>2.51</td>
<td>.47</td>
<td>.42</td>
<td>.11</td>
<td>Independent Intl, Group 1, First American, Film Venture Intl, New Line, Allied Artists, Compass, PIE, Cannon, Howco, PRO, United Film, International</td>
</tr>
<tr>
<td>4-6</td>
<td>2.33</td>
<td>.21</td>
<td>.51</td>
<td>.28</td>
<td>Republic, Box Office, EMC, World Nothal, Cinema Shares, Sebastian</td>
</tr>
<tr>
<td>1-3</td>
<td>2.13</td>
<td>.08</td>
<td>.46</td>
<td>.52</td>
<td></td>
</tr>
</tbody>
</table>

*Percentages may not add to 100% due to rounding errors
Table 2. Role, K-Core Position and Movie Credits for Above Line Personnel.

<table>
<thead>
<tr>
<th>K-Core Position</th>
<th>N</th>
<th>Major Studio Movie Credits</th>
<th>Other Movie Credits</th>
<th>Ratio</th>
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</thead>
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<tr>
<td><strong>Producer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>16,0</td>
<td>8,4</td>
<td>3,6</td>
<td>2,3</td>
</tr>
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<td>5-8</td>
<td>5,0</td>
<td>3,2</td>
<td>11,4</td>
<td>3,6</td>
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<td>1-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>Director</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
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<td>9-12</td>
<td>34,0</td>
<td>8,8</td>
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<td>7,0</td>
<td>6,3</td>
<td>9,0</td>
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<td>3,0</td>
<td>8,5</td>
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<tr>
<td><strong>Screen Writer</strong></td>
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<td></td>
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<tr>
<td>9-12</td>
<td>2,0</td>
<td>8,5</td>
<td>17,0</td>
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</table>
Table 3. Role, K-Core Position and Movie Credits for Below Line Personnel

<table>
<thead>
<tr>
<th>K-Core Position</th>
<th>N</th>
<th>Major Studio Movie Credits</th>
<th>Other Movie Credits</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assistant Director/Producer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>26.0</td>
<td>5.3</td>
<td>1.4</td>
<td>3.8</td>
</tr>
<tr>
<td>5-8</td>
<td>3.0</td>
<td>1.0</td>
<td>4.3</td>
<td>4.3</td>
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<td>1-4</td>
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</tr>
<tr>
<td><strong>Cinematographer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>29.0</td>
<td>22.0</td>
<td>2.6</td>
<td>8.5</td>
</tr>
<tr>
<td>5-8</td>
<td>8.0</td>
<td>2.1</td>
<td>7.1</td>
<td>3.4</td>
</tr>
<tr>
<td>1-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Editor</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>15.0</td>
<td>9.9</td>
<td>1.5</td>
<td>6.6</td>
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<tr>
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<td>4.0</td>
<td>12.0</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Art/Production Designer</strong></td>
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<tr>
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<td>14.0</td>
<td>9.8</td>
<td>3.6</td>
<td>2.7</td>
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<tr>
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<td>1.0</td>
<td>2.0</td>
<td>7.0</td>
<td>3.5</td>
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<td>0</td>
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</tbody>
</table>
Table 4. Average of Above and Below Line Personnel for K-Core Position and Movie Credits.

<table>
<thead>
<tr>
<th>K-Core Position</th>
<th>N</th>
<th>Major Studio Movie Credits</th>
<th>Other Movie Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above</td>
<td>17,3</td>
<td>8,6</td>
<td>2,4</td>
</tr>
<tr>
<td>Below</td>
<td>21,0</td>
<td>11,8</td>
<td>2,3</td>
</tr>
<tr>
<td>5-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above</td>
<td>3,3</td>
<td>1,3</td>
<td>8,1</td>
</tr>
<tr>
<td>Below</td>
<td>3,2</td>
<td>2,3</td>
<td>7,6</td>
</tr>
<tr>
<td>1-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above</td>
<td>0,7</td>
<td>1,0</td>
<td>2,8</td>
</tr>
<tr>
<td>Below</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Figure 1.