
Paradox in Project- Based Enterprise:

THE CASE OF FILM MAKING

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Two interdependent manifestations of the new economy are the rise of project-based careers and the creation of temporary organizations for project-based work. In industries such as film, construction, and semi-conductors, work is frequently organized around projects, whose employees are subcontractors who move among different employing firms.¹ Project-based enterprises (companies formed to pursue a specific project outcome) and project-based careers (careers habitually moving from one project to another) are most typically found where complex, non-routine tasks require the temporary employment and collaboration of diversely skilled specialists. Similar trends toward project-based organizing can be found in knowledge-intensive professional service firms in fields such as law, management consulting, and architecture.²

Project-based enterprises challenge several tenets of current strategic management theory. For example, one tenet of strategic management theory is that firms develop and leverage "core competencies" or key resources over time.³ How can a project-based enterprise accumulate its core competencies when it rents all its human capital? And how can tacit knowledge and knowledge transfer unfold without a stable cadre of experienced personnel? A second tenet of strategic management theory is that firms create competitive advantage through their possession and use of non-imitable resources.⁴ How can project-based enterprises create competitive advantage when its knowledge-based resources are embodied in highly mobile project participants? A third tenet is that competencies are accumulated through firms competing to recruit and develop human capital.⁵ How is this human capital assembled, and what market and social processes facilitate its identification, evaluation, and selection for project-based activities?

Industry Context

Film making is an industry where project-based enterprises have long flourished. Although Hollywood is associated with the dominance of major film studios such as Warner Brothers and MGM, the industry has a long tradition of independent film making dating back to the 1920s. Unlike the major studios of the time, independent film companies did not typically employ their actors under long-term exclusive contracts, did not “own” expensive studio facilities, and did not employ permanent staffs of script writers, special effects technicians, custom designers, and other technical support personnel. In the 1950s, the Hollywood studios found the costs of maintaining permanent stables of film-making talent, and the employment practices that had grown within those stables, prohibitively expensive. The old studio system of film production gave way to the example set by independent filmmakers.⁶

The market uncertainty and demand volatility of the industry require filmmakers to develop competencies in: the identification and recruitment of talented commercial and artistic project participants; and the management of complexities spanning coordination of cast, production crews, elaborate sets and sophisticated audio, visual and special effects technologies. These project-specific, knowledge-based competencies can be an important source of competitive advantage and project success.⁷ Similar relationships between specialized industry competencies and commercial success have been observed in high-technology firms.⁸ However, both sets of observations stop short of identifying how knowledge-based competencies are accumulated and transferred.

Studies in product development suggest that firms having families of sequentially related product development projects often retain core members of successful prior projects to serve on derivative successor projects.⁹ These ideas support strategic management approaches concerned with leveraging a firm’s knowledge-based human resources.¹⁰ A common intention of these approaches is to cultivate distinctive talent through more effective business management systems. However, in independent film making, and in project-based enterprises generally, the enterprise holds no claim to the governance of future projects. The absence of traditional governance mechanisms for integrating creative and managerial talents directs attention toward the market and social processes occurring among independent film-making participants.

Career Context

As the movement toward independent film making unfolded, the industry became characterized by “core” and “peripheral” groups. Core groups obtained financing from the seven major Hollywood film studios (as they continued to be called). Peripheral groups used persistent independent producers or “fly-by-night” single film sponsors. Core groups were more apt to employ similar sets

of commercial and artistic personnel on multiple projects, for whom network processes were critical in explaining inter-project employment. In contrast, peripheral groups demonstrated far less continuity of association or employment. Employees in both groups seeking to stay in the industry had to seek regular re-employment and career progression as companies formed to make a single film were successively established and dissolved.¹¹

One way for film crews to sustain themselves and their careers is through “wholly outsourced teams” that provide the continuity independent film companies lack. However, the performance of such teams suggests a curvilinear relationship to film performance, with moderate levels of prior shared project experience correlating with the highest levels of film success. Hence, film projects can suffer from too little or too much prior experience of members having worked together on previous film projects.¹² Despite contrary claims—from, for example, manufacturing—film crews’ prior experience working together is not a direct substitute for more traditional governance systems.¹³

In sum, it remains unclear how film-making strategy and its implementation relates to industry participants’ prior film experience. In particular, it is still unclear how industry and career processes influence and are influenced by successive project-based enterprise activities.

The Research Setting

This article describes field research into the creation of an independently produced UK-U.S. feature film. The project had large budget financing by a major Hollywood studio (the studios still have a strong presence in financing films, leasing facilities, and securing distribution channels). The project also employed actors and actresses with proven box office appeal, and it had built an experienced commercial and artistic support crew, many of whom had worked together on prior film projects. Hence, the project fit the statistical profile of the “ideal” independent film project.¹⁴

Data for the project consist of participant observations and interviews conducted by the first author with a variety of senior and junior level artistic and commercial project team members during the middle weeks of the film project’s shooting. As a condition for access to the film project, the primary stars for the film were exempted from participating in the interview phase of the study. The notable exception to this requirement was the film’s lead actor, “Peter,” who also was the screen writer and co-director of the film project. As a condition for data access, the names of both the film project (code name “Omega”) and its participants have been disguised to assure the confidentiality of all reported events of the project and its participants.

An open-ended interview schedule was employed with sixteen film project participants. Interviewees represented both creative/artistic and business/commercial project roles in equal proportion. The eight artistic roles interviewed

were script writer, lead actor, production set designer, art director, wardrobe supervisor, sound mixer, animal consultant, and chief make-up artist. These roles are creative/artistic in that they are identified with the creation of the artistic elements (visual, narrative, musical) of the film product. The eight commercial roles were executive producer, producer, associate producer, second assistant director, production coordinator, production accountant, production manager, and production runner. These roles are commercial in that they are identified with the film project's commercial operation and do not directly involve its participants with the creative or artistic elements of the film product.

A semi-structured interview technique was used to illuminate the interplay between the industry context and career behaviors through which project-based enterprise unfolds. Questions covered reasons for project members' involvement, previous connections to other project members, principal tasks performed, interdependencies between tasks, innovative elements of project work, and expected consequences of project success or failure on participant careers.

Results: Paradox in Project-Based Enterprise

The project-based enterprise confronts several assumptions behind traditional strategic management thought, concerned broadly with the temporary nature of the enterprise and with career investments within it. For more than twenty years, temporary enterprises have sustained a relatively permanent and resilient independent film industry. Moreover, the independent film industry provides an opportunity to observe project-based enterprise in relatively pure form. In other prominent examples, such as after building construction, legal proceedings, or software writing, the principal company or companies involved are expected to remain in business and find new work. In independent film making, the producing company is essentially disbanded once the film is released.

The notion of temporary enterprises sustaining a permanent industry presents a paradox. Strategic management theory addresses firm survival as a key issue, noting that firm survival rates will vary with the volatility of an industry. However, strategic management theory does not prepare us for the fact that in some industries even the most successful enterprises should not survive and should be organized with their future dissolution in mind, as is the case in the independent film industry.

Strategy Precedes Enterprise Formation

The film project "Omega" began to form during the shooting of a modestly financed independent film "Alpha" some eight years earlier. The experience of producing Alpha, one of the "sleeper" hits of the year, generated such a sense of camaraderie among the principal actors, director, and several production staff that they collectively agreed to seek out some future film project on

which to collaborate. The box office success enabled Peter, Alpha's visionary entrepreneur, to "write his own rules" and retain creative control for the follow-up Omega project. Peter's "rules" included sharing his evolving vision for Omega with an ever widening network of actors, writers, and consultants expert in the substantive themes and settings for Omega. Included in the draft consultations were the principal actors and production crew from Alpha.

Meanwhile, Paul, the producer, had "been friends for about fifteen years" with Peter and had helped with the production of Alpha. Paul flexed his reputation as a producer, pitching the "sought after" Omega project to multiple prospective backers and won a "very aggressive" deal. It was a deal in which the film was "very much Peter's vision" while Paul's job was to "manage the financial side of it" and bring the film to fruition. Thus, the strategic vision of the film, incorporating both artistic and business perspectives, was largely in place before the formal film-making enterprise was formed.

From its inception, the film-making enterprise is distinct from the continuing entity at which much strategic management thinking is targeted.¹⁵ The project-based enterprise inherits its strategic vision, rather than shapes its own. Moreover, the vision is temporary, and geared to one specific product rather than multiple related products. The enterprise also inherits its funding and is typically not required to generate further income before its dissolution.

Structure/Staffing Are Temporary

A film company, as a new company, recruits all its personnel from outside. In the Omega case, Peter and Paul had clear ideas of the key people they each wanted to work with on the artistic and business sides respectively. Big budget film projects are such time-pressured, performance-driven undertakings that requisite abilities must be available from the outset. For this reason, there is a bias toward hiring artistic and commercial crews with significant prior film experience in the project tasks assigned to them. This bias toward industry experience is clearly evident in the previous film credits of the sixteen interviewed participants in Omega. Everyone except the entry-level production runner had no less than a half dozen major film credits in their background.

The flip side is that accumulated human resources are also temporary and highly variable. The executive producer reflected on the changing size and composition of the production company during the first two months of production: "It's just very odd going from employing 20 people just two months ago to our current employment of over 190 people. This week, because the main construction is finished, we'll be losing 40 or 50 construction people. And then a year later, to all intents and purposes, it is over." Physical assets are also temporary. The Omega production company rented office space from a British film studio, leased office equipment for its business staff, and outsourced all camera and lighting equipment as part of its contracting with crews. Even the physical setting for much of Omega's shooting was a temporary. The realistic looking set

of structures that were created in the ninety days prior to film shooting were dismantled almost immediately upon the film's completion.

A body of strategic management ideas views emergent structure as part of a company's momentum or inertia, and as such a distinctive influence over future strategic positioning.¹⁶ The inertia view did apply to the old studio-based film-making approach, where crews would stay in place awaiting the next film project to come along. However, in independent film making, employment terminates with the completion of one's project obligations. The temporary office and equipment arrangements further discourage any sense of permanence over organizational arrangements.

Capital Investments Are Temporary

Human and physical asset arrangements are symptomatic of the short-term, project-specific capital investments through which independent film making is financed. The "massive" front-end financing required obligates the business side, in the words of the production accountant, "to advise the investors of the cost position on a weekly basis." Moreover, if investors "aren't happy, everyone knows it," and those investors are reportedly "ready to desert if they feel it is going very, very wrong." This obligation to investors means that it is not unusual for the production accounting/control function to be one of a film company's most important and heavily staffed functions, controlling all costs while giving the artistic crew "everything they need to make the film."

A principal reason for this heavy staffing is that film making is continually subject to unanticipated interruptions. For example, unanticipated weather changes can halt outdoor location shooting, the absence of a key cast member can delay a scene, or a fragile ego can fail to respond to new priorities, resulting in significant cost overruns and schedule delays. Because all the company's resources are dedicated to only a single production task, there is little or no opportunity to deploy any of these resources to alternative uses during such delays. Meanwhile, human and physical capital resources are still being charged to the production company's costs, whether these resources are engaged in film production or not. As a result, production planning and production cost forecasts must be continually revised with every unanticipated delay in the film company's schedule.

The overall effect of these temporary capital investments is to constrain the level of autonomy for the project-based enterprise. Accountability to investors regarding capital budgeting is a daily responsibility. Moreover, upon project completion there is no strategic decision between returns to investors (dividends) and retained earnings. All of the revenues are returned to the investors, while the former leaders of the enterprise must look for new work and fresh capital.

Enterprise Dissolution Precedes Outcomes

Staffing follows a predictable sequence in film making, with a small core of people typically involved in pre-production, a growing number during film production, and a small creative core in post-production. This ramping up and ramping down of project staffing reflects the highly task-contingent nature of project-based enterprise hiring. Very few film project employees participate in all stages of production. Symbolic of this pattern of progressive dissolution is the departure of actors and actresses before post-production and their and other crew members' engagement in new projects before editing and release of the current project have taken place.

The release of a film to the general public symbolizes both the dissolution of the enterprise and the beginning of strategic outcomes. In recent years, this effect has been moderated by "sneak previews" which gauge audience reaction before the film is finalized. However, preview activity aside, the main idea in independent film making is to wind down the enterprise before revenue generation, critical reviews, and any industry awards are received.

In theory, the old studio system was better placed on this score and—like Honda in automobile design—could keep the team intact to measure and respond to public reaction.¹⁷ Strategic management theory largely endorses a more interactive approach to product or service delivery and customer feedback. In independent film making there is greater pressure to get it right the first time, since a film once released cannot generally be revised for a second distribution.¹⁸

Idleness Is Necessary

During a typical day of film shooting at Omega, different crews of project specialists alternated between frenetic activity and enforced idleness. These alternating patterns of activity and idleness are only imperfectly anticipated by the sequence of film shoots planned for the day. Particular crews can anticipate likely activities, but cannot be certain about the exact time their services will be required. Hence, what appears as idleness on the film set is more akin to vigilant readiness to be mobilized on a moment's notice.

The work rhythms of film making contribute to a learning-by-watching phenomenon. It is often during periods of vigilant waiting that senior project team members provide opportunities to demonstrate specific craft routines to neophyte crew members or to answer questions from their junior crew members regarding previous activities performed by the senior crew members. Lull periods of crew activities also provide an opportunity to observe how tasks outside one's current role are performed by other members of other specialized crews. The opportunities on this particular film included the chance to observe, as one student intern put it, "the world's top cameraman and one of the world's top make-up artists."

The necessity of idleness runs counter to traditional themes of productive effectiveness. Even relatively mundane work cannot be scheduled with produc-

tive efficiency in mind. Moreover, the value of idleness for reflection and learning can be overlooked by the proponents of lean production systems and other efficiency-focused strategists.¹⁹ When idleness is factored in, the strategic assumption is that the returns to learning will accrue to the employing enterprise. However, in independent film making, those returns to learning will principally benefit a new enterprise formed for a subsequent project.

Inconsequential Jobs Are Sought-After

One of the camera crews observed during the Omega project had three experienced camera team members (each with a highly specialized role) and two student interns (whose roles were much more vaguely defined). The students' tasks centered around getting coffee, snacks, or equipment for the veteran crew. However, closer observation revealed that each senior camera crew member explicitly provided opportunities for the interns to closely observe the performance of their well-practiced craft. This "learning by watching experienced crew members" was relatively widespread among the most junior members of each crew. Another intern working with the script team spent much of her free time observing how others on her team performed their tasks and coordinated with other teams on the project.

Performance of the mundane tasks of getting coffee or tea is a time-honored socialization ritual for new crew members and both their performance and attitudes are duly noted. The neophyte's behavior is incidental to the current project, but is seen as indicative of his or her commitment and compatibility for performing more demanding tasks in future projects. Perhaps the most junior role on any film project is that of a "runner," who literally runs around the set to deliver information or material (e.g., script revisions, stage props) as needed. In the process, the runner becomes exposed to the complex, chaotic interconnections among specialized film crew activities. The art director reported that "three to four years as a runner" made his career. In the runner's role "you make of it what you can...you watch...and learn...you're working with great people."

In sum, low responsibility, inconsequential jobs assume a delayed importance in film making. Inconsequential jobs are sought after because of the career benefits they offer the job-holder. In turn, they also make the prospective learning benefits available to other, later, enterprises. In essence, the least responsible positions in a project enterprise are the ones in which neophytes are socialized into the shared values and uncodified tacit knowledge of their community of practice.²⁰

Career Mobility Drives Industry Stability

It is the nature of independent film making that neither Paul, one of the most respected producers, nor Peter, even after his success with Alpha, were permanently employed by any studio. Instead, the studios had regular access to talented producers and directors from whom to pick for their next investments. The studios' access to Peter and Paul gets mirrored in the two principals' further

access to artistic and business talent. Peter and Paul were able to draw on their range of personal contacts to appoint principal lieutenants. Those lieutenants in turn filled out the rest of the crew. In Paul's words: "everyone comes with a team...because the job is too big for any one person."

Most Omega project participants described their industry as a small, socially interconnected network, and it was through inclusion in that network that future project opportunities were identified. These opportunities included, but were not limited to, working with one's immediate crew. One example is Peter's observation that a director's "ability to choose the right shot" came through hard-earned experience, however, it also required the tacit support of lighting and camera staff (around such things as close-ups, reversals, tracking, and eyeline adjustments) to make the shot work.

Each film project sustains or enhances each project member's network of industry contacts, any one of whom may provide the lead or recommendation for future project opportunities. This contrasts with modern strategic management ideas about returns to intellectual capital and tacit knowledge becoming assets of one particular firm.²¹

Career Success, Enterprise Failure?

In the long run, it is box office and ancillary market gross of the film relative to its production and distribution costs that determines financial success. The producer and director are held most accountable, but others share in their concern to meet budgets and release a successful film. The ideal outcomes are both box-office success and widespread acclaim through "Oscar" nominations and awards for professional and technical roles. The chance to brag about being involved with a hit movie is reported as a powerful draw for getting involved, as well as an opportunity to exonerate people who had difficulty delivering on the set. One key contributor with budgetary problems acknowledged his work had "cost too much" but that he hoped that people would "take on board why it went over budget" once his contribution to the final film was witnessed by sponsoring studio executives.

However, the liabilities of film project failure vary by the type of project role a person holds. Production support people who are skilled in maintaining a tight schedule, a smooth pace of production and a relaxed, collaborative atmosphere are valued, whether the films they produce are financially successful or not. Similarly, artistic support personnel who contribute discrete, identifiable artistic components to the project (i.e., theme music, costuming, cinematography) may enhance their reputation by receiving award nominations for their contributions to money-losing films. An interesting subtlety here is bargaining over titles to ensure the possibilities of Oscar nomination. One key collaborator noted, "There's no Oscar for being an associate producer and there is for screen writing—so that's a better title."

Strategic management thinking emphasizes a classical, neo-military perspective that subordinates personal goals to those of the firm.²² However, in the film industry, the reverse appears to be largely the case. In the long run, the success of a particular enterprise is seen as incidental. The industry's continuing success becomes synonymous with the accomplishments of its principal participants, and it is those successes, rather than enduring company successes, that get celebrated.

Discussion

Each of the above reports exhibits a contrast between strategic management theory's assumption of the permanence—or aspirations to permanence—of the firm and the project-based enterprise's temporary status. In the film making example, no capital investments convert to fixed assets, no revenues are retained, no structure or positions are permanent, and no returns to learning accrue for future projects. The common assumption that the health of an industry derives from the health of its most enduring firms does not apply in film making. How, then, can strategic thinking be applied to the project-based enterprise, and with what implications for the related outcomes of industrial competitiveness and economic returns?

Independent film making presents a phenomenon that is prevalent but is more disguised in other situations. In situations such as law (cases), software writing (packages), construction (buildings), and in the pursuit of innovation culminating in new products or services, there is a similar underlying project-based structure. Also, recent thinking about careers envisions a series of projects, where people's principal loyalties are directed toward project outcomes rather than toward continuing dependency on the present employer.²³ These observations suggest that independent film making may exhibit in relatively pure form a model of organizing that is broadly and increasingly applicable to other fields of strategic endeavor. What, then, might be learned and what might be generalizable from the film-making example?

Human and Social Capital Are Interdependent

Peter and Paul got to know each other, chose to work together (on Alpha), got to know each other better still, and chose to work together again (on Omega) over a prolonged period of engagement in the same industry. Human capital (each knowing their own trade) and social capital (each knowing one another) appear inextricably linked in their still-unfolding relationship. In turn, Peter and Paul each went to their separate networks, using social capital to locate further human capital resources to build the film crew. In turn again, principal lieutenants did the same thing with their crews. The system worked through reputation, which may be viewed as an estimate of human capital conveyed over social capital channels.

Project participants at Omega described the continuing nature of this interplay between their skills (human capital) and their work relationships (social capital). The participants also expressed hopes about how this interplay would continue to evolve, through their skills becoming better recognized by others, leading to invitations to join future projects and further extend their human and social capital assets. Thus, human and social capital—in contrast to the separate treatment they receive in the strategic management literature—form a self-reinforcing cycle of career competencies that propel a person through successive projects.²⁴ The cycle can, of course, reverse itself if a person is seen to perform below expectations.²⁵

Creative and Commercial Communities

A particular aspect of human and social capital interdependence concerns the relationships between artistic/creative groups and business groups. The basis for interaction between the groups was to be found in the cooperation between Peter and Paul tracing back to the project's origination. The extension of that interaction came in everyday activities on the film set, as each group worked in almost constant dialogue with the other. Whatever the limitations of this dialogue on creative freedom, it did mean that creative ambitions were held accountable to and calibrated against original budget estimates for the film. Similar conversations (for example, between innovation-oriented and efficiency-oriented project participants) can be found in studies of small firm positioning and high-technology companies.²⁶ However, it is exceptional for the two sides to be in as close and continuing a dialogue as in the independent film-making example.

The pressure of everyday film making meant that both technical and collaborative attributes were valued. Omega's non-artistic participants described themselves as having been selected for participation in Omega and other projects because of both sets of attributes. In this context, social skills are a direct component of human capital, as well as the means through which new social capital is accumulated. Conversely, people who developed a reputation for being difficult to work with then also needed to possess considerable technical talent or box office appeal to compensate for their social deficiencies. In sum, functional separation and hierarchical channels—that is, the structure usually associated with strategy—were of little help in resolving everyday dilemmas. Relationships—including relationships across creative and commercial divisions—drove the enterprise along, as has been observed in studies of knowledge-management in Japanese firms and in new venture formation in biotechnology.²⁷

Principals, Professionals, and Apprentices

Film project participants occupy one of three occupational niches. Principals may be described as those people behind initial strategy formation and funding of the enterprise. In Omega, the principals were the director and producer, which is typical for film projects, and to a lesser extent the star performers

who had agreed to return for a new collaboration. Next come the key professionals hired by the principals to apply particular artistic or commercial competence in support of the adopted strategy, and whose arrival usually coincides with the founding of the enterprise. Finally, there come apprentices, interns, and runners at early stages of their careers who are allowed to join the enterprise to perform mundane but necessary tasks.

In many respects, the film project resembles Handy's "shamrock" form of organization involving a professional core, outsourced specialist providers, and flexible, part-time or temporary groups of workers.²⁸ However, there are some important distinctions. First, everyone is temporary, along with the enterprise. Second, from an industry standpoint, the "core" may be seen as the second key professional group through which films regularly get made, even as producers, directors and movie stars come and go. Third, the most dedicated and the most driven to learn of all three groups are often the temporary or "peripheral" workers. It is also from this group that future principals and professionals will emerge and in turn take responsibility for the health of the industry. In sum, the distinctions among principals, professionals, and apprentices reflect dynamic industry and career development processes rather than enduring social stratification.²⁹

Career and Industry Episodes

The project-based enterprise serves separate purposes for its participants' careers and for the evolution of the industry. On the one hand, Omega's participants will employ their film credits to seek new assignments. Each participant's learning is particular to the project role he or she performed and to the unfolding of his or her own career. Personal successes (for example, in set design or special effects) will enhance the prospect of offers to work on new projects coming on stream. On the other hand, the industry will move on to commission new films to follow Omega. Omega's press reviews and box-office performance will become known, and that knowledge will inform future initiatives undertaken by industry principals and their prospective backers. The project-based enterprise represents a meeting ground between discrete career and industry episodes.

Over time, the industry develops a collective memory, informed by films such as Omega, of what worked and what didn't, of new special effects and audience tastes.³⁰ Meanwhile, project participants develop their own memories, informed by the accumulating set of credits earned and experiences involved.³¹ What is distinctive here is that there is no place for "organizational memory" as conventionally presented in strategic management theory.³² Instead, the film-making enterprise offers an extreme case of the organization's memory disappearing once its project tasks are accomplished. However, by then the enterprise will have played an important transitory role in the episodic learning of both the industry at large and its individual participants.

Who Needs the Firm?

Remarkable by its absence from the above interpretations is any reference to the long-term significance of the firm. Peter and Paul leveraged their separate networks to establish the resources to make the film. The focal firm—the project-based enterprise—provided a temporary meeting-ground between the industry and project participants. Professional guilds appeared to provide a partial, although limited, institutional framework. So too did “Hollywood” through its central role as a source of large-scale project financing, bankable stars, and access to distribution channels. However, Hollywood was valued as a regional cluster of competencies, a place to access the overall scale and diversity of resources, rather than as the location of any particular firm.

What appeared to sustain the ability of Omega’s principals to realize their artistic and commercial vision was their access to geographically clustered networks of U.S. (Hollywood) and UK (London) film industry resources. No single firm or institution was an indispensable source of project-relevant resources. However, effective access to and membership in the geographically concentrated industry networks of the U.S. and UK film industries were indispensable requirements for organizing the necessary resources and competencies for the Omega film project. The firm, whether as the source of funding, the project-based enterprise itself, or the vehicle to provide project resources, seemed little more than an administrative convenience.³³

Conclusion

The evidence from the film industry calls for strategic management theory to incorporate a dynamic, multi-community perspective into the mainstream of its ideas. The evidence further suggests that the perspective needs to be sensitive to shifting combinations of human and social capital, and the further evolution of these through people’s career investments. The proposed perspective leads away from firm-centric formulations of strategic activity.

The concept of project-based enterprise leads strategic inquiry toward such questions as: How are project-based enterprises of varying size, complexity, and risk initiated through network mobilization? How are the knowledge and experience of project-based enterprises disseminated within multiple communities and transferred to subsequent enterprises? How is economic value created and appropriated among the multiple communities that participate in project-based enterprises? What are the respective roles of geographically concentrated industry regions versus electronically-mediated virtual communities in fostering project-based enterprise activities?

These questions direct strategic inquiry toward issues of community and career progression that are inevitably intertwined with the creation and performance of both project-based enterprises and the industries in which they flourish.

Notes

1. On film, see C. Jones and R.J. DeFillippi, "Back to the Future in Film: Combining Industry- and Self-Knowledge to Meet Career Challenges of the 21st Century," *Academy of Management Executive*, 10/4 (1996): 89-103. On construction, see R.G. Eccles, "The Quasifirm in the Construction Industry," *Journal of Economic Behavior and Organization*, 2 (1981): 335-357. On semiconductors, see A. Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (Boston, MA: Harvard University Press, 1994).
2. C. Jones, "Careers in Project Networks: The Case of the Film Industry," in M.B. Arthur and D.M. Rousseau, eds., *The Boundaryless Career* (New York, NY: Oxford University Press, 1996), pp. 58-75; W.H. Starbuck, "Learning by Knowledge-Intensive Firms," *Journal of Management Studies*, 29/6 (1992): 713-740.
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4. R. Reed and R.J. DeFillippi, "Causal Ambiguity, Barriers to Imitation and Sustainable Competitive Advantage," *Academy of Management Review*, 15/1 (1990): 88-102.
5. See, for example, O. Nordhaug, *Human Capital in Organizations: Competence, Training and Learning* (Oslo: Scandanavian University Press, 1993).
6. T. Bohn, R. Stromgren, and D. Johnson, *Light and Shadows: A History of Motion Pictures*, 2nd Edition (Sherman Oaks, CA: Alfred Publishing Co., 1978).
7. D. Miller and J. Shamsie, "The Resource-Based View of the Firm in Two Environments: The Hollywood Film Studios from 1936 to 1965," *Academy of Management Journal*, 39/3 (1996): 519-543.
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9. S.C. Wheelwright and K.B. Clark, *Revolutionizing Product Development* (New York, NY: Free Press, 1992).
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11. C. Jones and W. Hesterly, "Network Organization: Alternative Governance Form or Glorified Market?" Working Paper, Carroll School of Management, Boston College, 1996. See also Jones (1996), op. cit., and Jones and DeFillippi, op. cit.
12. C. Jones, W. Hesterly, B. Lichtenstein, S. Borgatti, S. Tallman, "Intangible Assets of Teams: How Human, Social and Team Capital Influence Project Performance in the Film Industry." Working Paper, Carroll School of Management, Boston College, 1996.
13. L. Argote, "Group and Organizational Learning Curves: Individual, System and Environmental Components," *British Journal of Social Psychology*, 32 (1993): 31-51.
14. Jones et al., op. cit.
15. Prahalad and Hamel, op. cit.
16. P. Ghemawat, *Commitment: The Dynamic of Strategy* (New York, NY: The Free Press, 1991).
17. K. Clark and T. Fujimoto, *Product Development Performance* (Boston, MA: Harvard Business School Press, 1991).
18. The recent release of the "Star Wars" trilogy is not a contradiction, since the first release was commercially successful and made possible a second release featuring enhanced special effects but no change in plot, dialogue, or characters.
19. J.P. Womak, D.T. Jones, and D. Roos, *The Machine that Changed the World* (New York, NY: Rawson Associates, 1990).

20. J.S. Brown and P. Duguid, "Organizational Learning and Communities of Practice: Towards a Unified View of Working, Learning and Organization," *Organization Science*, 2/1 (1991): 40-57.
21. Nonaka and Takeuchi, op. cit. For extended ideas about learning and new firm formation, see A. Saxenian, "Beyond Boundaries: Open Labor Markets and Learning in Silicon Valley," in M.B. Arthur and D.M. Rousseau, eds., *The Boundaryless Career* (New York, NY: Oxford University Press, 1996); R.E. Miles and C.C. Snow, "Twenty-First Century Careers," in M.B. Arthur and D.M. Rousseau, eds., *The Boundaryless Career* (New York, NY: Oxford University Press, 1996).
22. K.R. Andrews, *The Concept of Corporate Strategy* (Homewood, IL: Irwin, 1971).
23. M.B. Arthur, M.P.H. Claman, and R.J. DeFillippi, "Intelligent Enterprise, Intelligent Careers," *Academy of Management Executive*, 9/4 (1995): 7-22.
24. On human capital, see Nordhaug (1993), op. cit.; on social capital, see R. S. Burt, *Structural Holes* (Cambridge, MA: Harvard University Press, 1992).
25. One senior project participant expressed concern that his shortcomings in performing up to expectation on Omega might reduce the likelihood of his being invited to participate in future projects by some of his Omega peers and superiors. When the Omega project subsequently went to reshoot some parts of the film in Hollywood, this person was not invited to participate on that phase. The apparent failure in human capital, highlighted through social exchanges on the set of the film, appeared to contribute to a negative reputation effect which in turn might reduce access to future project opportunities.
26. On small firm positioning, see C. Hendry, M.B. Arthur, and A.M. Jones, *Strategy Through People: Adaptation and Learning in the Small-Medium Enterprise* (New York, NY: Routledge, 1995); on high technology, companies see Raelin, op cit..
27. G. Hedlund, "A Model of Knowledge Management and the N-form Corporation," *Strategic Management Journal* (Special Issue: "Strategy: Search for New Paradigms"), 15 (1994): 73-90; D.L. Deeds, D. DeCarolis, and J. Coombs, "The Impact of Timing and Firm Capabilities on the Amount of Capital Raised in an Initial Public Offering: Evidence from the Biotechnical Industry," in B. Keys and L.N. Dosier, eds., *Academy of Management Annual Meeting Best Paper Proceedings*, 1996.
28. C. Handy, *The Age of Unreason* (Boston, MA: Harvard Business School Press, 1990).
29. The processes we describe appear to have much in common with recent ideas about communities of practice. Brown and Duguid, op. cit.; J. Orr, "Sharing Knowledge, Celebrating Identity: War Stories and Community Memory in a Service Culture," in D. Middleton and D. Edwards, eds., *Collective Remembering: Memory in Society* (Beverly Hills, CA: Sage, 1990).
30. J.C. Spender, *Industry Recipes* (Oxford, UK: Basil Blackwell, 1989).
31. A. Bird, "Careers as Repositories of Knowledge: Considerations for Boundaryless Careers," in M.B. Arthur and D.M. Rousseau, eds., *The Boundaryless Career* (New York, NY: Oxford University Press, 1996), pp. 150-168.
32. R.R. Nelson and S.G. Winter, *An Evolutionary Theory of Economic Change* (Cambridge, MA: Belknap/Harvard Press, 1982).
33. In the language of recent chaos and complexity theory, the firm becomes a temporary "attractor" in the self-organizing behavior of industry participants. See, for example, D. Parker and R. Stacey, *Chaos, Management and Economics* (London, Institute of Economic Affairs, 1994).