New Economy Litigation:
Claims to Intellectual Property and Human Capital
in a Global Institutional Environment
Changing at the Speed of Thought*

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ABSTRACT

This paper identifies areas of research in New Institutional Economics that have joint theoretical and practical value relating to the "New Economy". Rapidly changing customs and practices in the New Economy frequently are based on the work of prominent New Institutional economists. Therefore, the New Institutional Economics has a vital interest in knowing the degree to which its paradigm explains New Economy decision-making. This paper analyzes several types of institutional issues at the center of the increasing volume of commercial litigation involving claims to intellectual property and human capital in New Economy ventures. These cases identify a burgeoning area of institutional interest that is not fully contemplated in current statutes governing commercial partnerships and capital market investment in New Economy companies.

INTRODUCTION

Much of the research in Institutional Economics analyzes institutional arrangements across countries. In this paper we argue that the changes in institutions and business practices associated with the emergence of the Internet provide an opportunity to study "longitudinal" changes in institutions within a single country.

In this paper, we present a series of issues emerging from cases involving intellectual property claims related to "New Economy" ventures. Here traditional economic tools are either insufficient to derive meaningful conclusions or lead to conclusions far different from those reached if the institutional economist's tool box is put to work.

We believe in particular that an institutional approach allows a better understanding of "speed" as a major driver of the differences between "old" and "new" economy companies. The success of New Economy companies is often linked to being first to bring new products to market before a new generation of technology makes existing products obsolete. Consequently, speed has become a central determinant of success, and many aspects of New Economy companies are best (or only) explained with reference to speed.

The concept of transaction costs can easily be expanded to allow for the inclusion of speed as a unit of analysis. If "being first" is an important success factor for New Economy companies it is easy to see why transactions can be "costly" not only because to transact, costs (real or opportunity costs) are incurred, but also because they take time, and as a result increase time to market and lower the probability of ultimate success.

Figure 1 below illustrates how the units of analysis of Institutional Economics, including speed costs, impact the analysis of New Economy companies:

Figure 1

	Transaction Costs	Speed Costs	Information Costs	Contract Theory	Agency Theory
Intellectual Property	●	●	◗	●	
Employment Contracts and Internal Investor Relationships	●	●		●	
External Financing and Value Implications	◗	●		◗	●

In the remainder of this paper, we will use the framework of Figure 1 to examine how an institutional perspective can lead to an interpretation of central issues recurring across court cases involving New Economy companies that is different from the interpretation that would result from a more "traditional" economic perspective.

MOTIVATION

The emergence of the New Economy, with a host of changing business customs and practices, is an activity often rationalized—consciously or otherwise—on basic institutional economic principles. Therefore, New Institutional Economics has a vital interest in knowing the degree that its paradigm explains and predicts behavior in a swelling and volatile area of global economic activity. E-commerce may provide globalization of the sort envisioned by New Institutional economists for many years now. But the New Institutional Economics is an area of applied economics where the importance of the field is not as well known or understood in the

practice of the law as it might and should be.[1] In New Economy commercial litigation we observe a wholly new area of institutional interest that is not fully contemplated in the current structure of U.S. or international corporate law regarding intellectual property, human capital, and financing issues.

While the world speaks about the "Internet revolution", economists might as well term this phenomenon a "Revolution of Institutional Economics". Never before has what is central to the research of Institutional Economics been so central to the "real world". The technological changes related to advances in computing and communications in the industrialized world, and increasingly in developing countries as well, represent, in our view, a significant departure from past business practices that are so significant they should be termed revolutionary rather than evolutionary[2].

Technological innovation and progress in computing speed, information storage, communication speed and networking have led to exponentially decreasing information and transaction costs. It is indeed difficult to come up with New Economy companies that do not claim to reduce information costs or transaction costs or both: shopping for a book at does not require us to get up and walk to the bookstore, provides us with ready information on many more books than we

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[1] Paul Joskow discussed this in his address at the 2000 ISNIE Conference (*Transaction Cost Economics and Competition Policy, Keynote Address to the Annual Conference, September 23, 2000*): "A legal rule may fail to detect market structures, contractual arrangements or firm behavior that reduces economic efficiency, consumer welfare, etc…Moreover, even when a legal rule correctly identifies structural or behavior attributes that lead to performance losses compared to some theoretical alternative…the courts may apply remedies that either do not lead to performance improvements or actually make market performance even worse."

[2] There has certainly been no lack of revolutionary lingo. But we believe that in spite of the recent disenchantment with all things Internet, the revolutionary impact on virtually all aspects of business (and life) has just begun.

could browse in the brick-and-mortar store, and, may (sometimes) be a bit cheaper. Similarly, online banking frequently costs less than ordinary banking,[3] and it avoids the time cost of standing in line to bank with a teller or an ATM. The list of examples is endless.

Institutional economics is finally hitting home in a big way. Its ideas are shaping the New Economy. The true benefits are sometimes hard to grasp without an explicit or implicit understanding of the importance of just the things institutional economists have been studying for decades. But not all is well in paradise. New Institutional economic thinking may drive much of the economic progress associated with the Internet, but traditional economics still has a strong foothold in a real-world context that New Economy companies increasingly experience: high-stakes commercial litigation.

The success of many Internet companies over the last decade (and possibly their recent turn of fortune) is leading to a myriad of intense legal battles on issues ranging from intellectual property violation to shareholder suits, and many of these cases are fought on a battle field where the weapon of choice on both sides is still traditional (read non-Institutional) economic knowledge. New Institutional Economics can make important contributions in this area by advancing the institutional response of finders of fact (*e.g.*, regulators, policymakers, judges, and juries) to meet the practical challenges of these new markets.

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[3] It is now becoming increasingly common for banks to reduce or eliminate many transaction fees and/or offer higher rates of interest on savings and money market accounts for customers who bank electronically using direct deposit, automatic bill payment, electronic statements, and the like.

Two broad developments have created a lag between knowledge creation in academics and its recognition by legal institutions. First, the law lags knowledge. By design, legal statutes and institutions are both difficult and slow to change. The most relevant example in our work is the application of *Daubert* and *Kumho* standards for the reliability of expert testimony.[4] Second, real-world innovation leads formalized knowledge. Most economic research is informed by innovations that already are changing the way buyers and sellers interact and transact; it generally is reactive to innovation. This certainly is true of New Economy businesses, which have developed rapidly on a large scale with a new set of institutional arrangements, which have fundamentally changed the costs of transacting, information, and contracting.

A danger results from this lag between the creation of knowledge in the real world and its theoretical description, on the one hand, and its absorption into the legal system on the other hand: New Institutional Economics drives a revolution in economic growth spurred by reduced information and transaction costs, but the revolution may run into a wall of legal arguments fueled by old-style economic thinking. As the case studies in this paper illustrate, analysis of the relevant facts (and perhaps including a reading of what the relevant facts are) can lead to different legal conclusions depending on whether the analysis is based on "traditional" or "New Institutional" analytics.

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[4] *Daubert v. Merrell Dow Pharmaceuticals, Inc*., 509 U.S. 579 (1993).

Kumho Tire Co., Ltd., et al. V. Patrick Carmichael, et al., 526 U.S. (1999).

Supreme Court decisions in the landmark *Daubert* and *Kumho* cases, which set specific standards for the admissibility of all expert testimony, signal both the increasing reliance on expert testimony in all types of litigation and the increasing importance of finding the right experts.

Clearly, it is important that not only the innovations driving real economic progress, but also the thinking of finders of fact in New Economy litigation be grounded in a deeper understanding of the issues underpinning the Internet revolution, which in turn implies a deeper understanding of New Institutional Economics.

CASE OVERVIEW

Much of our thinking in this paper is the result of our involvement in New Economy litigation over the past two years. At the time of writing, some cases have not been fully resolved, but any facts we discuss are part of the public record. To illustrate how New Institutional Economics might influence the analysis of New Economy commercial litigation cases, we have distilled various actual cases into two model cases, Case A and Case B. Both cases exhibit many similarities yet, with the help of institutional economics, we arrive at different conclusions on key points of contention.

Case A involves two Internet sites in a developing country financed from the United States and other countries. Case B involves two Internet sites developed and financed in the United States.

Case A is the case of two entrepreneurs who develop a plan to launch an Internet site involving a search engine, auctions, and barter function outside the United States. Due to lack of fundraising experience, they invite two other individuals with investment banking experience to join their proposed venture. Together they write a business plan, which the two former investment bankers present to several venture capital firms, apparently without success. After a few months, the two former investment bankers announce that they will no longer be involved with the venture. Less

than two months later, they resurface with a plan to launch an Internet site focusing on auctions in the same country, with funding from the same venture capital firm that had apparently turned down the first venture idea presented by the same individuals, who happen to be former business school class mates of the venture capitalists. An initial round of financing is obtained very quickly, followed by two additional injections of cash within less than three months, increasing the equivalent valuation of the company – if measured by the exchange of VC money for ownership shares[5] – approximately 75-fold. The plaintiffs in the case, the original founders of the first venture, assert that the defendants, the two former investment bankers, have misappropriated intellectual property and claim that they have been substantially damaged by being left without funding in a market, in which the first to market "takes all".

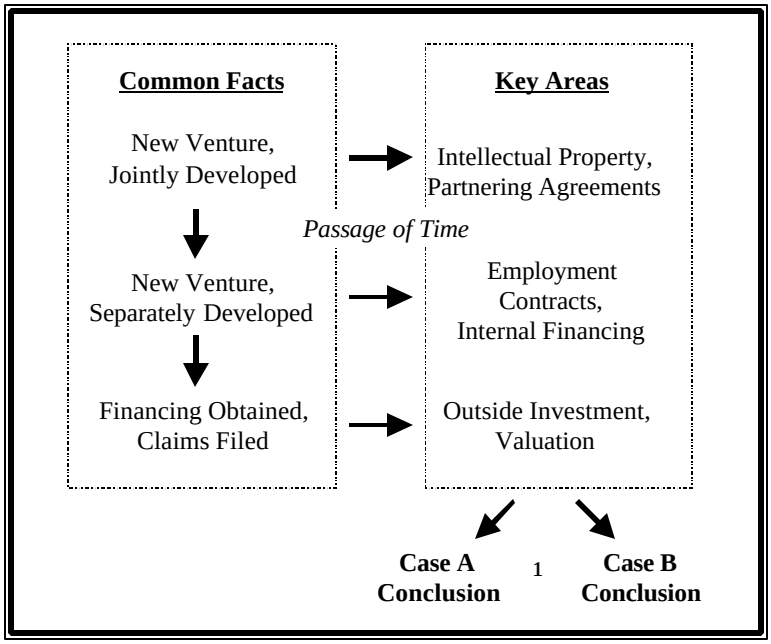
Case B is the case of a single entrepreneur who worked for a small firm and begins to develop an Internet site to market the firm's branded products electronically. The stated purpose of the site is to webify the firm's traditional business. By analogy, it is to be an Internet placement of the firm's existing product offerings, much like BarnesandNoble.com or the interactive component of any click and mortar company. The entrepreneur writes an initial business plan and presents it to a venture capital firm at which he has a personal contact. Before the plan is ever finished or funded, the firm's partnership puts the idea on hold and the entrepreneur eventually leaves the firm. Nearly two years later, he develops a plan for a new venture in the same industry. The new plan receives an initial round of financing and three additional funding rounds in the next two years. The plaintiffs in the case, the two partners of the firm that had employed the

[5] We explain below what problems we believe to be associated with a valuation based purely on the observed exchange of VC dollars for ownership.

entrepreneur, assert that the new venture is just a repackaged version of the firm's interactive business plan. They claim that they have been damaged because the new venture is the result of ideas and human capital initially developed at their firm. As a result, they claim a share of the new venture's market value.

The two cases exhibit many similarities. In both cases, an idea for a new venture is developed in one environment, where it does not get funded. The idea, or parts of it are then taken away from the original development environment by at least some participants of the original development team and, some time later, emerge under a different umbrella that obtains venture funding. In both cases, the plaintiffs claim a violation of intellectual property rights and damages in relation to the value of the company subsequently created and funded. Figure 2 below illustrates the parallel structure of both cases.

Figure 2



[1]

Even though the cases appear to be very similar on the surface, our analysis arrives at different conclusions, favoring the plaintiffs' claim in Case A and the defendants' claim in Case B. As we will show, attention to institutional detail and analysis founded in the principles of New Institutional Economics (or our understanding thereof) leads to conclusions that differ widely from those obtained by limiting analysis to the traditional economic framework in three key areas: (1) Intellectual Property, (2) Employment Contracts and Internal Investor Relationships, and (3) External Financing and Value Implications. In the next section, we will present relevant institutional detail for both cases as it relates to each key area, and highlight how, in our view, traditional economic and New Institutional analysis would interpret the relevant facts differently.

Intellectual Property

Plaintiffs in both model cases claim that defendants misappropriated intellectual property that belonged to them. Such intellectual property claims are a prominent feature of New Economy litigation for a variety of reasons:

Many New Economy ventures don't produce a physical product, but rather a business process, a service, or a business model, all of which are based exclusively on "ideas" rather than production processes typical of more traditional economic activity.

New Economy ventures tend to grow more rapidly than traditional ventures, partly driven by the belief that many Internet markets are characterized by a "winner takes all" race, and partly driven by venture capitalists' need to participate in a liquidity event over a relatively short time horizon.

Many Internet companies employ a wide set of institutional arrangements for generating products and services; unlike a traditional model where employees make the product or portions or the product are bought from a supplier, the Internet era seems to be characterized by a collaborative network involving some employees, but increasingly freelancers and strategic partners to construct the final product or service. This form of collaboration blurs the traditional boundaries of the firm and, as a result, makes it harder to determine the locus of intellectual property within the loose and sometimes informal network of collaborating entities.

All of the above makes it important to develop a consistent framework for analyzing intellectual property claims in a New Economy context.

Subquestions of relevance

To begin answering whether or not intellectual property is misappropriated in either one of our two model cases and, if so, how much such intellectual property is worth, we need to ask a number of subquestions related to the creation and the relative value of intellectual property: In either case, are the unfunded and the funded venture ideas completely different, or is there "significant" overlap between the concepts involved? Do the concepts and ideas involved amount to "intellectual property" in the sense of a protected property right? Is there a typical portion of the value of a business that can be attributed to intellectual property? Does the distribution of roles of the original founders and the corresponding split of ownership provide any insights into the relative value of intellectual property?

Case A Facts

The original venture between the four entrepreneurs results in a business plan, specifying in detail the services to be offered on the contemplated Internet site as well as a tentative time line for rolling out additional services. Even though the original plan focuses on a "portal" driven in large part by a sophisticated search engine, the business plan and various presentation materials feature auctions as an integral part of the site's development. The venture started and funded by the two former investment bankers focuses primarily on auctions. Arguably there exists a significant overlap of the target audience, marketing strategy, and corporate identity and logos of the two ventures. No patents, trade secrets, or other formalized protections for intellectual property are filed by either venture. Ownership in the first venture is split 60:40 between the original founders and the two former investment bankers who are brought onboard primarily to raise funds and to manage the company. The financing documents for the funded (second) venture specify that the founders of the company retain approximately 44 percent of the common equity if they leave or are fired before the arrival of an event that allows the outside investors to liquidate their investment.

Case B Facts

The original venture between the entrepreneur and the firm results in a detailed business plan which is an extension of the firm's traditional lines of business into ecommerce through a new distribution channel, the Internet. It is designed to create a click and mortar company, whose branded products can be purchased physically in sales offices or electronically online. Ownership shares are negotiated that would give the firm five percent ownership in the interactive business as a royalty payment for the use of its brand name. But share splits are not

agreed to before the plan is shelved, and the firm never tries to finalize the plan or launch the site after the entrepreneur resigns. The entrepreneur's second venture is an ecommerce pure play that derives all of its revenue from on-line services, not products. Instead of attracting customers to buy products, the site attracts market participants who interact and transact directly in exchange for a transactions-based fee for access to the site. After the plan's final round of financing, the entrepreneur owns 40 percent of the new venture and outside investors have a 60 percent ownership share. As in Case A, no patents, trade secrets, or other formalized protections for intellectual property are filed by either venture. But the firm's partnership argues that the first plan created intellectual property that the entrepreneur ultimately misappropriates in the second plan, at their expense. The entrepreneur argues that the plans are different in their critical dimensions and that only the second plan creates intellectual property.

Traditional Conclusions

In a traditional world, intellectual property is created and protected in a well-established process involving patents, trade secrets and similar legal instruments. A company trying to protect its intellectual property trades off its ability to charge rents based on the fact that its product is significantly differentiated from other products (through a trade secret) against its abilities to generate revenues from licensing fees (patent). The calculation of expected licensing fees from patents takes into account the likelihood that competitors will invent "around" the patent once it is filed and open to public view. Since neither of the companies filed for patent, trade secret or similar protection of intellectual property, one might conclude that no (valuable) intellectual property was created. This view is consistent with the argument that the ideas involved were of a generic nature. Auctions have been around for thousands of years, as have companies designed

to market industry-specific products or broker financial transactions. Similarly, a traditional approach to measuring the value of intellectual property may be to observe the change in market value of a company upon the filing of a patent or trade secret.

NIE Conclusions

We believe that an institutional approach to the intellectual property issue would recognize the impact of the need to be first to market on firms' propensity to file for patent or trade secret protection. The process of filing for patent protection is indeed lengthy and costly. The uncertain prospects of obtaining patent protection, given that the products involved are business processes and business models rather than physical products[6] further increase the "transaction costs" (here including the speed costs defined earlier). Given these considerations, one might not expect that New Economy companies will protect intellectual property through established means ill-adapted to the high speed environment of the innovating firms involved. This is not to say, however, that no intellectual property is being generated, and that the value of such intellectual property cannot be measured. We believe that several elements of contracts between the parties involved, some explicit, some implicit, shed light on the perceived value of the intellectual property generated in these ventures.

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[6] A growing number of e-commerce method patents have resulted in a rash of patent infringement lawsuits between Internet competitors. The suit filed by Amazon.com against rival BarnesandNoble.com over amazon's patented "1-Click" technology is a well-known example. In 1999, the U.S. Patent & Trademark Office received 2,600 applications for e-commerce method patents and approved 583 of them (Source: *New Web Technology Patently Unfair?* by Ellen Messmer, CNN.com, July 5, 2000, http://cnn.co.il/2000/TECH/computing/07/05/patent.tech.idg/index.html).

In Case A, for example, the four founders of the first venture agree on a 60:40 equity split, recognizing that the original founders mostly contribute ideas whereas the former investment bankers mostly contribute human capital. Similarly, a clause in a funding prospectus specifying the number of shares retained by founders after they quit the company (and are no longer able to contribute human capital) can be interpreted as an indirect valuation of the intellectual capital component of the venture. In Case B, the firm's proposed five percent equity position in the initial venture is consistent with a traditional royalty payment and reflects that it contributes brand name only, while the entrepreneur contributes ideas. The firm would not be willing to license an idea that could not be developed independently. A royalty would have compensated the firm for allowing the venture to use an existing brand instead of developing a new brand over time at some cost. Also, that the firm does not try to finalize the initial plan or launch the interactive business after the entrepreneur leaves indicates that it did not think the ideas were new and/or valuable. That the entrepreneur pursues the second plan, establishes specific ownership splits right away, and obtains venture capital financing indicates that he thought the venture included ideas that constitute intellectual property.

More generally, a New Institutional economic perspective might predict that rather than seeking patent protection, New Economy companies facing important "speed costs" may seek to protect intellectual property through various implicit and explicit contract clauses such as ownership splits or protection of ownership shares if employment is terminated by outside investors. It is consistent with this approach to argue that intellectual property has value as long as some outside agent is willing to invest resources into a venture, in which the mix of human capital may change

substantially.[7] Whether or not there is misappropriation of intellectual property in either case therefore depends on a detailed analysis of the various business models and business processes in relation to preexisting ideas. While intellectual property may result from informal collaboration, a competitive market cannot function if a single competitor has a residual claim to generic economic ideas and common business practices. Such claims make efficient contracting impossible by increasing transaction costs and distorting the rewards to innovation and risk-taking.

Employment Contracts and Internal Investor Relationships

A vast literature in traditional and institutional economics investigates certain aspects of employment contracts. This literature is substantially influenced by principal-agent issues and asymmetric information, contract theory, and the like. In our two model cases, employment contracts (or their absence) and the treatment of human capital play an important role: Employment contracts and partnership agreements allow an evaluation of who owns the right to intellectual property created during employment. Employment and/or partnership agreements may also create fiduciary responsibilities toward the employer or each other, which, if violated, give rise to legitimate legal claims. Finally, partnership and employment agreements may help understand the value of human effort relative to ideas being generated by the employee.

[7] While many venture funding contracts and related documents will "bind" the founders to the company for a substantial time beyond the event that allows outside investors to liquidate their investment, it is also typical for such contracts to give outside investors, through their board participation, the authority to fire the founders of the company. Implicit in such a clause must be the belief that the intellectual property – the idea – has value above and beyond the human capital of the founders.

Subquestions of Relevance

The most relevant questions related to employment contracts and the relationships between inside investors in the two cases concern the significance of the absence of formal employment or partnership agreements (and lack of incorporation) or the time elapsed since termination of employment for the existence or non-existence of fiduciary responsibilities. A second set of subquestions concerns the relative split between human and intellectual capital implicit in employment or partnership agreements.

Case A Facts

Case A is characterized by a general absence of formal contracts of any kind. The original venture is never incorporated. There is no written partnership agreement between the original two founders nor once the former investment bankers are brought in. The four founders verbally agree on a 60:40 ownership split. Even though the venture foresees specific managerial roles for the four co-founders, these roles are never formalized in employment contracts of any kind. The venture started by the two former investment bankers upon their departure from the original venture is also not incorporated until the venture first receives outside funding from a venture capital firm.

Case B Facts

Case B is more of a mixed bag of formal contracts than Case A. Both the contracts in place, and the absence of certain contracts, are key facts of the case. Although ownership shares in the initial venture are not contracted for, there is no question that the initial business plan was

undertaken jointly between the firm and the entrepreneur: the entrepreneur worked for the firm under a standard employment contract while developing the plan. An important question is whether any relationship or obligation continues after the entrepreneur leaves the firm. The employment contract includes no restrictive covenants, such as long-term provisions or non-competition clauses, and no such covenants subsequently are written or claimed when the firm shuts down or when the partnership formally dissolves a year later. But as plaintiffs, the partners make a claim to a share of the human capital the entrepreneur accumulated while working on the initial business plan which, they argue, ultimately benefits the second plan. The entrepreneur argues that the firm has no ongoing claim to the value of his individual human capital.

Traditional Conclusions

A traditional economic response to the absence of formal employment or partnership agreements in Case A might be to claim that no "formal" relationships were desired, but rather that the relationships between all parties involved were designed to be non-committal, giving each party the right to walk away at any point without any obligation to the venture jointly started. This would imply that no claims based on alleged fiduciary responsibilities toward the original venture or partners of that venture have merit. Similarly, with respect to Case B, the existence of a formal employment contract would be used as a basis for assessing whether the parties involved violated any fiduciary responsibilities towards their old employer. The detailed stipulations of such a contract would have to form the basis of a legal opinion on whether or not there was a breach of fiduciary responsibility. The absence of restrictive covenants or additional contracts generally would indicate a lack of fiduciary responsibility on a going forward basis once employment ends.

NIE Conclusions

Institutional economics can be used to derive an alternative but, in our eyes, more credible interpretation of the absence of formal partnership and employment contracts in Case A, and to put any details of the employment contract in the Case B case in an institutional context that allows interpretation of the contract detail in the environmental context.

Oral rather than written partnership and employment agreements may be an optimal response to "speed costs" and the associated need for flexibility and continuous redefinition of roles and responsibilities. As a result, the absence of written partnership or employment contracts should not be interpreted as a deliberate choice not to enter mutually binding relationships, but rather as generating the same kinds of mutual obligations that would be generated by a written contract. Unlike the traditional approach, we would therefore conclude that there may well be claims based on the violation of fiduciary responsibilities as a consequence of oral partnership and employment agreements.

Similarly, any employment contracts written in the Old Economy may have to be interpreted differently in a New Economy setting. In particular, an appropriate duration of a fiduciary responsibility towards an old employer should be assessed in relation to the "speed of progress" in the relevant area. More precisely, the stock of intellectual (and potentially human) capital a former employer lays claim on through an employment contract is likely to decay more rapidly in an environment with rapid technological change than in a mature industry.

Using Case B as an example, the employment contract in place applies to the entrepreneur's role in the firm, but the lack of restrictive covenants or new contracts after the entrepreneur leaves the firm does not necessarily mean that there are no ongoing relationships or obligations from a New Economy perspective. But institutional economic principles regarding efficient contracting suggest that there were none. The firm knows human capital has potential market value, and they know the entrepreneur can increase his human capital through exposure to firm-specific ideas or by developing new ideas while working at the firm. They also know he (and human capital) is mobile, especially in a New Economy context. If the firm ever has any economically valid claim to his human capital, that claim ends with near certainty when he resigns and it certainly ends when the firm's partnership dissolves without making such a claim. This indicates that a highly competitive labor market had extracted from the entrepreneur, and returned to the firm, the expected value of his human capital *ex ante.* The firm's claim to some portion of the value of the venture *ex post* is an attempt to renegotiate its employment relationship with the entrepreneur.

External Financing and Value Implications

In both of our model cases, the second venture obtains outside investment, while the original plan does not. Assuming that it can be shown that there is either misappropriation of protected intellectual property or a violation of fiduciary responsibilities, attention shifts to the question of economic damages. What is the dollar value of the harm inflicted on the parties whose ownership rights are violated?

Subquestions of Relevance

Assuming some form of intellectual property is misappropriated in each of our model cases, we first consider the circumstances under which the respective ventures either are, or are not, financed by outside investors. Then, based on the factual circumstances, we consider how much this intellectual property is worth. Both considerations involve a number of subquestions related to financing, outside ownership, and the value of early-stage ventures: What explains the time path and pattern of outside investment? Does investment staging reflect the value of a venture? Is there a "typical" length between stages, and why? At what stage are venture capital transactions good indicators of value? Does inside and/or outside investment reflect the public value of a venture? If there is more than one investment, which one is relevant to determine value?

Case A Facts

After the two former investment bankers leave the original venture and form a new venture, funding from a venture capital firm arrives almost immediately. The lead VC firm at that stage was the same VC firm that the two investment bankers had negotiated with (apparently unsuccessfully) to obtain funding for the first venture. At the time the initial VC funds are received, the venture has neither a written business plan nor a viable product/service. Based on the ownership share received in exchange for the investment amount at that time, the value of the venture at that point in time is, say, $X. In the following two months, the venture receives two additional injections of funds, each substantially larger than the previous one, leading to a valuation of the firm about $75X. At this point, the venture still does not have a written business plan, but has made some progress in developing its product. In particular, a first version of a website is launched (with mixed results) and a board of directors is assembled. Therefore, the

relevant valuation question is at what point in time the value of the venture should be measured to most accurately reflect any economic damages to the two co-founders of the first venture not included in the second.

Case B Facts

Financing circumstances of Case B are quite different than Case A, mostly by virtue of the time that passes from development of the first plan to funding of the second. Nearly three years elapse between the time the entrepreneur leaves the firm and the time the second venture is fully funded. As in Case A, the lead VC firm was the same VC firm that considers, but does not fund, the first plan. But in this case, venture funding takes much more time and effort to obtain. Two versions of the plan go unfunded because the VCs wants to see a prototype of the technological platform for the on-line interaction that is the central value proposition of the plan. Nearly a year after the entrepreneur presented the first version of the plan, the third version including the platform design is funded. By then, the firm he used to work for has already shut down. The new venture receives two larger financing rounds within six months, its fourth and final round within a year, and shortly thereafter successfully launches an Internet site.

Traditional Conclusions

Assuming that a finder of fact concluded that the relevant date of harm in either case is the earliest point in time at which value of the venture is measurable with the help of an outside investment, traditional economic analysis would suggest that this date should be used to measure damages. This is because two sides voluntarily engage in an economic transaction and that consequently such a transaction represents "fair market value" of the company. The only reason

why future transactions lead to vastly higher market values of the venture, according to this view, would be that the value of the venture has increased, for example, as a result of unexpected and positive deviations from the previously expected development path. Because the founders of the original venture excluded from the second venture would have had no impact on these positive developments, it would be improper to measure their damages based on a valuation at a date later than the first venture investment.

NIE Conclusions

An analysis more deeply rooted in the concepts of institutional economics would question the traditional analysis in two respects. It would question whether any and all transactions between outside investors and inside shareholders represent simple exchanges of cash for ownership making it possible to calculate "fair market value" mechanically (cash injected divided by ownership percentage received in exchange). It would also question whether a significant increase in market value thus calculated (75-fold in Case A) can only be attributed to underlying changes in value through unanticipated and positive deviations from the expected development path of the venture.

The first argument is based on the notion that the relations between founders and venture capitalists are complex and multidimensional, involving a number of expectations on the behavior of either party. Typically, the complexity of the relationship and the need for flexibility make it costly to write a complete contract specifying all the mutual obligations. Rather, much of the content of the relationship between entrepreneur and venture capitalist is implicit. This is particularly true in early stages of the relationship, when much of the perceived value of the

venture is based on unrealized potential. At that stage, venture capitalists provide not only cash, but also industry knowledge, managerial skills, and help in procuring more funding in the future. Because ownership percentage is exchanged for cash and for the promise to contribute many other benefits to the venture, the value derived by dividing cash injected by the ownership percentage obtained in exchange does not represent fair market value at this stage. As time progresses and the venture becomes more developed, fewer and fewer of these non-monetary services provided by venture capitalist are needed, and with each consecutive stage of funding the exchange represents fair market value more closely. Certainly, by the time of an initial public offering, anonymous outside investors do not promise any other services, but indeed exchange cash and nothing but cash for ownership in the venture. Therefore, all else equal,[8] later-stage investments are more likely to represent fair market value than early-stage funding rounds.

While these general institutional economic principles would apply to both cases, the differences in timing between Cases A and B suggest different conclusions. The explosion in global ecommerce has resulted from the introduction of technological advances to the market at an unprecedented rate. Increased amount of funds available to venture capitalists for investment have shifted investment objectives and funding requirements. Venture capitalists respond quickly to shifting sources of value because they operate in highly competitive capital markets. In Case A all three financing rounds are completed in less than three-months. Even in this fast-paced market, it is difficult to conclude that later rounds of financing are predicated on meaningful differences in progress that enhanced the value of the venture in such a short period

[8] In most cases, all else will not be equal since some value-enhancing progress will likely be made as time progresses. This complicates the analysis but does not change the basic insight that valuations based early stage investment dollars only will likely underrepresent the true value of the venture.

of time. It is much more likely that the individual rounds of financing constitute a single economic event. Case B presents exactly the opposite situation. In that case nearly three years elapse between development of the first and second business plans, far too long for both to be viewed as interdependent in New Economy terms. In the intervening span of time, rapid financial and technological changes redefined the relevant ecommerce capital and product markets, making it difficult to conclude that over this entire period there are no changes in the fundamentals of what the market perceives as a viable and valuable investment opportunity.

CONCLUSIONS

Our discussion of Cases A and B shows how a traditional and a New Institutional economics approach to New Economy commercial litigation is likely to lead to different conclusions regarding key claims involving intellectual property, fiduciary obligation, and enterprise valuation. In many cases, these differences will lead to opposite overall results in a New Economy setting.

We believe, and we hope to have shown, that "speed costs" now play an important role in explaining the institutional arrangements that govern the New Economy. The speed of technological change, the increased role of venture capital for new venture financing, and the shift toward an information economy characterized by decreasing marginal costs at scales traditionally considered very large all contribute to a rapid race to market. Consequently, institutional arrangements are chosen with the need for speed at the forefront of entrepreneurs' minds. The result is many more implicit contracts and much looser institutional arrangements than those characteristic of the Old Economy.

To allow the ideas of New Institutional Economics, which are so central to much of the innovation on the Internet, to continuously drive economic growth through the growth of the Internet and related products, it is critical that New Institutional Economics penetrate not only the thinking of entrepreneurs in Internet ventures, but also the thinking of lawyers, regulators, judges and juries who decide the fate of many New Economy companies in American courtrooms and internationally. We believe that economic analysis in future court cases would benefit tremendously from rigorous theoretical work and empirical evidence underlining our less formal arguments.

From our perspective as practitioners, some of the most fruitful areas of research include a better understanding of the process of creation and protection of intellectual property in an environment to which the traditional means of intellectual property protection may be ill-suited. Also, a deeper understanding of the relationships between entrepreneurs and venture capitalists and associated issues of explicit versus implicit contracting would help shed light on the valuation questions of tantamount importance in many New Economy cases.

The advent of the New Economy has not only created a vast area for applying ideas of New Institutional Economics in the entrepreneurial realm, it has also created the need for new theoretical and empirical work that helps us understand why institutional arrangements in the New Economy are different from more traditional arrangements. We hope that scholars of institutional economics will recognize this need and focus research efforts on answering some of the questions we hope to have raised in this paper. We are confident that such research will be rewarding both academically and practically, providing opportunities to inform and influence the law and the future of the institutional-economics based New Economy in a non-trivial way.