

HIGH-VELOCITY LABOR ECONOMICS: A REVIEW ESSAY OF *WORKING IN SILICON VALLEY: ECONOMIC AND LEGAL ANALYSIS OF A HIGH-VELOCITY LABOR MARKET* BY ALAN HYDE

KENNETH G. DAU-SCHMIDT†

There seems a general consensus among industrial relations scholars that the “velocity” with which workers move from one job to the next is picking up in our economy.¹ Gone are the halcyon days in which workers enjoyed long-term, perhaps even lifetime, employment with one firm, working stepwise up the firm’s vertically integrated job ladder. These employees were governed by the firm’s “internal labor market”—a series of rules for promotion and compensation negotiated and administered by human relations experts and the workers’ representatives.² Instead, today, workers are likely to experience much shorter job tenure over their work lives, either by contract or subcontract, passing from employer to employer. Employers are now enabled, even required, by the new information technology and globalization of the economy, to organize in lean “niche” firms which specialize in one aspect of production or supply and to “outsource” all other aspects to other horizontally specialized firms.³

The general consensus is that this acceleration of the labor market has been bad for workers, and has presented new problems for employers as well.⁴ Increased job turnover has placed increased risk and responsibility

† Willard and Margaret Carr Professor of Labor and Employment Law, Indiana University - Bloomington; JD 1981, University of Michigan - Ann Arbor; PhD (Economics) 1984, University of Michigan - Ann Arbor.

1. See RICHARD S. BELOUS, *THE CONTINGENT ECONOMY: THE GROWTH OF THE TEMPORARY, PART-TIME AND SUBCONTRACTED WORKFORCE* 15-17 (1989) (addressing high turnover rates among today’s employees); PETER CAPPELLI, *THE NEW DEAL AT WORK: MANAGING THE MARKET-DRIVEN WORKFORCE* 1 (1999) (noting that one result of market changes is the decrease of employee loyalty to particular employers); STEPHEN A. HERZENBERG, ET AL., *NEW RULES FOR A NEW ECONOMY: EMPLOYMENT AND OPPORTUNITY IN POSTINDUSTRIAL AMERICA* 108-10 (1998) (discussing how current trends have led to higher employee turnover, and the impact of this change).

2. Kenneth G. Dau-Schmidt, *Employment in the New Age of Trade and Technology: Implications for Labor and Employment Law*, 76 *IND. L.J.* 1, 5-12 (2001) (citing the advantages and disadvantages of internal labor markets compared to shorter-term spot markets for labor).

3. *Id.*

4. CAPPELLI, *supra* note 1, at 153-4; Dau-Schmidt, *supra* note 2, at 4-5.

on employees. In addition to increased risk of unemployment, workers have become more responsible for their own training and benefits. Why would an employer retrain employees whose skills have become obsolete when the average tenure at the firm is only a few years? Given the higher turnover rate of employees, even if the employer provides a pension, it will have to be of the more mobile “defined contribution” variety that leaves the risk of investment on the employee. Temporary or contingent employees are also less likely to enjoy employer-provided medical benefits; these employees are either left with the responsibility of providing their own insurance or to suffer the considerable risk of medical bills.⁵ For employers, increased turnover allows for increased flexibility and decreased benefits expenses, but creates problems of evaluating new employees and monitoring their work. Higher turnover also increases the potential for “theft” of trade secrets or customers by departing employees, thus imperiling employer investments in these business assets.⁶

Alan Hyde’s new book, *Working in Silicon Valley: Economic and Legal Analysis of a High-Velocity Labor Market*,⁷ provides an interesting and important exception to this general consensus. Using the example of high tech “information workers,” Hyde argues that sometimes high velocity labor markets can be good for employees and necessary to enable the full realization of their employers’ investments in information technology. Hyde’s basic thesis is “that the contracts and labor market intermediaries characteristic of Silicon Valley’s high-velocity labor market exist in order to realize the endogenous economic growth that comes from the production and diffusion of valuable information.”⁸ He provides a detailed account of these employment contracts and practices, based on his extensive interviews of participants in this labor market, and then a unique economic analysis of this market based on the translation of information economics into labor economics.

The fundamental insight that drives Hyde’s theoretical analysis is his observation that “all the firm’s technical property has life only in the minds and bodies of its employees and is realized in labor markets.”⁹ Accordingly, it is important “to treat the labor market as in part a market for information.”¹⁰ Hyde cites several respectable models of information economics that suggest that, due to “network effects,” information can

5. Dau-Schmidt, *supra* note 2, at 4-5.

6. Eric A. Posner, COVENANTS NOT TO COMPETE FROM AN INCOMPLETE CONTRACTS PERSPECTIVE, (Chicago Law & Econ., Working Paper No. 137, 2001); Paul H. Rubin & Peter Shedd, *Human Capital and Covenants Not to Compete*, 10 J. LEG. STUD. 93 (1981).

7. ALAN HYDE, *WORKING IN SILICON VALLEY: ECONOMIC AND LEGAL ANALYSIS OF A HIGH-VELOCITY LABOR MARKET* (2003).

8. *Id.* at 50.

9. *Id.* at 70.

10. *Id.* at 69.

sometimes be more valuable when shared among competitors and that economic growth depends primarily on this sharing of such information.¹¹ Accordingly, employees with valuable information might be actively sought by other employers, or may enjoy their own start-up opportunities. These employees can do themselves, their employers and the economy in general, considerable good by passing from job to job to transmit this information. The primary policy implication of this analysis is that the state should not enforce covenants not to compete or broad trade secret protections that hinder the transmission of employees and information among firms.

Hyde's book is interesting and useful from both empirical and theoretical perspectives. Hyde's tone sets forth a detailed picture of the express and implied terms and conditions of employment that govern employment relationships in Silicon Valley, as well as the technological factors and larger legal context that give impetus to these terms.¹² Topics covered include the following: a brief history of Silicon Valley, express and implicit contract terms, hiring flexible labor, H-1B visas, labor market intermediaries, employee organization, stock options, pensions, health insurance, and discrimination. Such a detailed depiction is made possible only by the hours of painstaking interviews and ethnographic research undertaken by Professor Hyde for this project. Hyde presents a useful comparison of practices in Silicon Valley with employment practices in the less economically prosperous Route 128 district of Massachusetts, where covenants not to compete are enforced.¹³

Hyde is also undoubtedly correct in his fundamental insight that employees embody the employer's technical property and can be an important avenue for the dissemination of such information. The primary question that remains in his analysis is the general applicability of his analysis. How many industries are impacted by the information transmission aspect of the employment relationship to the extent that it drives the basic terms of that relationship? Assuming that this phenomenon is not universal, should the legislatures and courts, in the formulation of public policy, distinguish between such cases with respect to the impact on the employment relationship? If so, how?

11. *Id.* at 55-56 (citing, for example, Paul A. David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332 (1985), and W. BRIAN ARTHUR, INCREASING RETURNS AND PATH DEPENDENCE IN THE ECONOMY (1994)).

12. HYDE, *supra* note 7, at 4-23, 93-254.

13. *Id.* at 33.

I. THE TRADITIONAL ECONOMIC ANALYSIS OF DURATION OF EMPLOYMENT AND INVESTMENTS IN INFORMATION

The traditional economic analysis of the employment relationship describes two paradigms regarding the duration of the employment relationship: a "spot market" for labor which yields short-term employment and an "internal labor market" which yields long-term employment.

A spot market for labor is envisioned as a place employers go each day to purchase the type and amount of labor they need for that day's projects.¹⁴ Under such an arrangement, the employment relationship is very ephemeral, lasting perhaps as little as a few minutes. The workers' wages might vary from day to day, depending on the supply and demand for a given type of labor. Payment would be made only for current production and in cash, with workers left to purchase their own benefits out of their wages. This arrangement holds both advantages and disadvantages for employers and employees. A spot market for labor provides employers with the ultimate flexibility in planning production since they purchase only the labor they currently need. However, it requires the employer to evaluate and closely monitor employees each day, and places on employees the risks and responsibilities of obtaining training and benefits.¹⁵

Such rapid turnover in the labor market also aggravates a problem for employers with respect to investments in general training and information. Becker's theory of human capital distinguishes between particular training that is useful to only one employer and general training that is useful to many employers.¹⁶ Becker argues that employers will invest in particular training, but not general training, because other employers will bid away employees with valuable general training, preventing the employer from realizing an adequate return on her investment. Accordingly, under Becker's model, employees are left to make all investments in general training. A problem arises when employees cannot adequately finance such general training because the investment is more than the employee can finance given imperfections in the capital market.¹⁷ Trade secrets and customer lists are some of the examples commonly given of such expensive general information.¹⁸ Employers will invest in such general information only if they can establish sufficient control or an enforceable property claim over this information so that they can recoup a sufficient return on their investment. Absent this, the traditional economic model predicts that too little of such information will be produced.

14. GEORGE J. BORJAS, LABOR ECONOMICS 401 (1996).

15. Dau-Schmidt, *supra* note 2, at 4-5.

16. GARY S. BECKER, HUMAN CAPITAL 33-51 (3d ed. 1993).

17. Rubin & Shedd, *supra* note 6.

18. *Id.*

The alternative paradigm to a spot market for labor in the traditional economic analysis is the internal labor market.¹⁹ Under this paradigm, employers solve some of the problems of the spot market by employing their workers for longer periods of time, perhaps for life, and regulating their relationship with a “market” of administrative rules for promotion and compensation that is internal to the firm. A longer employment relationship saves search costs by reducing turnover, and allows wages to vary from productivity over the course of the employment relationship.²⁰ The disengagement of wages from production allows employers to defer employees’ wages over his “life-cycle” for the purposes of efficient monitoring, investment in training, and provision of health and pension benefits.²¹ In particular, economists have argued that, by establishing a longer employment relationship and using trade secret protection and covenants not to compete, employers can establish adequate control and ownership of general information to encourage their efficient investment in the production of such knowledge.²² Of course, long-term employment and the internal labor market have their own problems of increased administrative costs and lessened flexibility of employers to respond to changes in markets.²³

At any given time in the economy, there are short-term employees who operate in an environment akin to a spot market for labor and long-term employees governed by an internal labor market. Predictably, short-term employees tend to be found in jobs where individual productivity is easy to evaluate and in which there is little investment in training; for example, landscape gardening or apparel manufacture.²⁴ Long-term employees tend to be found in jobs where individual productivity is hard to evaluate and there is a high investment in training; for example, airplane assembly workers and college professors.²⁵ As previously stated, academics have observed that recently our economy seems to have been moving away from the paradigm of long-term employment and internal labor markets and toward a spot market for labor. As the new information

19. PETER B. DOERINGER & MICHAEL J. PIRE, *INTERNAL LABOR MARKETS AND MANPOWER ANALYSIS* 27 (2d ed. 1985).

20. With long-term employment, wages can vary from current production as long as the discounted value of wages over the course of the employment relationship equals the discounted value of the employee’s production. Economists have found empirically that for many employees wages are below productivity early in their work-life and then above productivity late in their work life. ROBERT G. EHRENBERG & ROBERT S. SMITH, *MODERN LABOR ECONOMICS: THEORY AND PUBLIC POLICY* 193-201 (1982); GILBERT R. GHEZ & GARY S. BECKER, *THE ALLOCATION OF TIME AND GOODS OVER THE LIFE CYCLE* ch. 3 (1975).

21. Kenneth G. Dau-Schmidt, *supra* note 2.

22. Rubin & Shedd, *supra* note 6.

23. Dau-Schmidt, *supra* note 2, at 7-8.

24. *Supra* note 20, at .

25. *Id.*

technology has allowed international outsourcing and coordination of production, firms have come to specialize in only certain parts, or “niches,” of supply and production. This new international business environment has placed a premium on employer flexibility and undermined the vertical structure of production within firms that facilitate long-term employment.²⁶ As a result, employees’ careers are now more likely to consist of a series of movements from employer to employer, rather than a series of promotions with the same employer.

Commentators have generally bemoaned the effects of this acceleration of the employment relationship on employees and investments in training. It is argued that the new “contingent” employment relationship of temporary, part-time and subcontracted workers has decreased job security, employee bargaining power, employees’ ability to organize, employer provided benefits and on-the-job training.²⁷ There is good theoretical and empirical support for all of these assertions. Although there is some debate over how new the contingent employment phenomenon is, empirical estimates suggest that employee turnover is rising while average job tenure is falling.²⁸ Transitory employees have always been harder to organize because they have less of an attachment to a given workplace, and therefore less incentive to undertake the investment necessary to organize that workplace, and they are generally easier to replace.²⁹ Independent of its effect on the velocity of the employment relationship, the new information technology has also undermined employees’ bargaining power in the United States by facilitating international production and trade with countries that have much lower wages. Employer provision of health insurance benefits and pensions has declined in recent years.³⁰ More importantly, for the purpose of this essay, employer-provided on-the-job training has declined in recent years in the United States, despite increasing

26. CAPPELLI, *supra* note 1, at 99-100; Dau-Schmidt, *supra* note 2, at 10-12.

27. See, e.g., BELOUS, *supra* note 1 (recognizing the disadvantages of contingent workers); CAPPELLI, *supra* note 1, at 153-54 (comparing employment changes in the United States to the situation in Japan); Dau-Schmidt, *supra* note 2, at 10-12 (discussing how the current economic environment discourages internal labor markets and lifetime employment); HERZENBERG, ET AL., *supra* note 1, at 108-10 (discussing how shorter tenures makes it difficult for employees to gain experiential learning and effective mentoring).

28. See BELOUS, *supra* note 1, at 15-17 (describing how the current market favors short-term workers over long-term workers); Arne L. Kalleberg, *Part-Time Work and Workers in the United States: Correlates and Policy Issues*, 52 WASH. & LEE L. REV. 771, 771 (1995) (“[B]etween 25 to 30% of all employees in the U.S. civilian labor force, or 29.9 to 36.6 million workers, in 1988 were either part-time workers, temporary workers, contract employees, or independent consultants.”).

29. LABOR MARKET INSTITUTIONS AND THE FUTURE ROLE OF UNIONS (Mario F. Bognanno & Morris M. Kleiner eds., 1992).

30. Patricia Schroeder, *Does the Growth in the Contingent Work Force Demand a Change in Federal Policy?*, 52 WASH. & LEE L. REV. 731, 733-36 (1995).

demands for ever-higher levels of employee skills.³¹

II. THE CONTRARY EXAMPLE OF THE HIGH-VELOCITY LABOR MARKET OF THE SILICON VALLEY

In his book, *Working in Silicon Valley*, Hyde documents that at least some employees in the Silicon Valley do very well in a high-velocity labor market. Highly skilled information workers in California enjoy high wages, stock options, and a seemingly endless stream of lucrative job and start-up opportunities. However, health insurance and pensions are not provided by employers, and average job tenure of employees is only about one or two years.³²

Moreover, based on the success of Silicon Valley relative to Massachusetts' Route 128, Hyde argues that it is helpful, perhaps even necessary, to the success of employers' investments in information technology that her employees move on every year or two and impart the information they have learned to other work places. Unlike in Massachusetts, Silicon Valley employees are free to move from employer to employer and take with them valuable information. California does not enforce covenants not to compete and has only modest trade secret protection, eschewing the "inevitable disclosure" rule and limiting the enforcement of trade secret agreements to the scope of common law protections.³³ According to Hyde, a high-velocity labor market leads to greater productivity, not only because it increases employer flexibility, but also because the employees act as a valuable conduit for information by traipsing from firm to firm over the course of their careers.³⁴

Hyde specifically distinguishes the prototype of the employment relationship in a high velocity labor market from the traditional prototype of the employment relationship in an internal labor market with long-term employment.³⁵ As described by Hyde, the typical implicit employment contract of a Silicon Valley information worker prescribes that the employee accept substantial risk with respect to unemployment and variation in compensation, in return for a promise of future "employability" in that the worker will learn enough on the job to be more valuable to other employers when he leaves the firm, and the employer will not interfere with such an exit or the employee's use of his newly acquired

31. LAURIE J. BASSI, ET AL., *THE ASTD TRAINING DATA BOOK 3* (1996); CAPPELLI, *supra* note 1, at 44-45, 152-153.

32. HYDE, *supra* note 7, at 15-22. As Hyde reports, information workers in the Silicon Valley think that there is "something wrong" with a resume that shows someone has been at the same place for five years. *Id.* at 255.

33. *Id.* at 32-40.

34. *Id.* at xvi-xvii.

35. *Id.* at xiii.

information.³⁶ In contrast to the traditional implicit promise of long-term employment, the value of the employment contract in the high velocity labor market is premised on the assumption that the employee will not stick around more than a few years.

How can we explain this contradiction of the traditional economic analysis in which both employees and employer investments in general information do very well in a high turnover labor market? Hyde argues that the traditional economic model does not take adequate account of the importance of employees in the disbursement of information. In addition, it does not recognize the benefits to employers who invest in the development of such information in having it broadly disbursed.

As previously mentioned, Hyde identifies workers as the very embodiment of the employer's investment in information, correctly pointing out that such investments can achieve realization only through the work of employees.³⁷ Indeed, Hyde gives at least one example of technical information that has been successfully transmitted *only* through the transfer of workers from one firm to another: the building of an operational TEA laser.³⁸ More representative of the phenomenon, however, is Hyde's recounting of the primal myth of Silicon Valley, in which the "traitorous eight," a group of talented but mistreated engineers, left the Shockley Transistor Corporation in 1956, going on to found a competitor, Fairchild Semiconductor. Fairchild Semiconductor eventually begat the "Fairchildren," who, in turn, left Fairchild to initiate much of the growth and development of Silicon Valley's information industry.³⁹ In the information industry, workers' inter-firm connections to other workers with knowledge of the same or related technology are more important to a person's success in his career than any connection to a particular employer or job. Given Hyde's description of the phenomenon, the importance of inter-firm connections to employees seems driven by the speed with which the technology changes in this industry, making the latest information very valuable, but only for a brief while.⁴⁰ The rapid rate of technological development and employee connections among these firms also leads to a "knowledge inversion" between employees and employers, in that the employees know much more about the best means of production than the employer.⁴¹

36. *Id.* at 255-56.

37. *Id.* at 70.

38. *Id.* at 58 (describing the "famous tale of the TEA laser, where all its technical aspects were published, yet no one succeeded in making one without employing someone who had developed one someplace else"). This example, of course, raises the question of how the *first* operational TEA laser was built.

39. *Id.* at 9, 29.

40. *Id.* at 11-12.

41. *Id.* at 10, 29, 56-58.

Having identified labor with an essential role in the transmission of information, Hyde then argues that analyses of the labor market that miss this role are incomplete. He then comprehensively surveys existing information economics literature to glean what industrial relations scholars can learn from it about the employment relationship.⁴² Hyde argues that increased mobility of employees can lead to greater success for employer investments in information technology, because the possibility of cashing-in after success and changing jobs gives the employees greater incentive to succeed.⁴³ Positive network effects and increasing returns to scale are also employed to explain the success of technological investments in Silicon Valley in light of employee mobility.⁴⁴ The existence of positive externalities might also be used to explain the “\$20 question” of why employers along Route 128 in Massachusetts don’t voluntarily agree to employee mobility so that they can better compete with Silicon Valley.⁴⁵

42. *Id.* at 27-60.

43. *Id.* at 52.

44. *Id.* at 55. Network effects are positive or negative externalities that may arise from uniformity in technology across a network. Michael Katz and C. Shapiro, *Network Externalities, Competition, and Compatibility* 75 AM. ECON. REV. 424 (1985). Externalities are benefits or costs of an activity or investment that are realized by members of the society at large, although not entirely realized by the person undertaking the activity or investment. HAL R. VARIAN, *INTERMEDIATE MICROECONOMICS: MODERN APPROACH* 543-46 (1987). Accordingly these benefits or costs are “external” to the person’s decision whether to undertake the activity or investment. For example, computer users experience less software incompatibility problems by using the same operating system across an entire network of computers. One’s decision to adopt the standard operating system benefits not only that person, but everyone else networked to his or her computer, by reducing compatibility problems. This positive network effect is one reason why it would be such a daunting task for any software manufacturer to displace Windows as the standard operating system. Unfortunately this uniformity in operating systems also makes us vulnerable to worms and viruses that only need to be designed for one system to cause great damage. This is an example of a negative externality that is a network effect. Increasing returns to scale are increased productivity or costs savings that are realized by increasing the scale of production. *Id.* at 319-20. For example, making one microchip in a lab would be very expensive. A person would have to develop special tools and techniques, just to create one chip. However, if one makes a million chips, one will learn the best techniques by which to make such chips and can invest in special machinery that will make many chips at low cost. Indeed, the production of microchips is one of the classic examples used in economics graduate schools to demonstrate the idea of increasing returns.

45. For an explanation of positive externalities, *see id.* The question presented in this sentence is called the “\$20 question” based on an old joke about economists. An economist and a friend are walking down the street when the friend points down and says “Look a \$20 bill!” The economist does not look down and instead keeps walking saying “There can’t be a \$20 bill there, if there were, someone would have already picked it up!” In the same spirit, most economists would say there cannot be benefits to high tech firms legal production against employer restrictions on employee mobility since the firms would have “already picked up the \$20” and voluntarily given the employees such mobility by contract. However with positive externalities from investments in information technology and the public nature of much information, individual employers may not have adequate

Hyde gives a convincing account that inter-firm employee networks and mobility have been crucial to Silicon Valley's success.⁴⁶ He also provides several theoretical economic models which bolster the idea that the sharing of information will not necessarily result in under-investment in such information, and indeed may be the primary determinant of economic growth.⁴⁷

Of course the point of Hyde's empirical and theoretical analysis is to discern implications for public policy with respect to labor and employment law. What do we learn about industrial relations policy by taking into account the benefits of sharing information through employee mobility?

One point that Hyde makes early in the book is that existing labor and employment law was drafted according to the paradigm of long-term employment and internal labor markets.⁴⁸ Accordingly, our collective bargaining and employee benefits laws are based on a conception of long-term employment that is becoming increasingly irrelevant in our society.⁴⁹ Indeed, the definition of "employees" covered by most of our laws is based on pre-outsourcing notion of employment that does not include many of today's most vulnerable employees.⁵⁰ Hyde, acknowledges that he is not the first to make this point,⁵¹ nor is it necessary to go through his analysis of information economics to conclude that the definition of an employee in American law is outdated.⁵²

individual incentive to grant such mobility voluntarily, even though it would benefit the industry as a whole.

46. *Id.* at 11-18.

47. *Id.* at 44-56, 71-88 (citing Paul M. Romer, *Endogenous Technological Change*, 98 J. OF POL. ECON. 71 (1990); Philippe Aghion and Jean Tirole, *The Management of Innovation*, 109 QU. J. OF ECON. 1185 (1994); James J. Anton and Dennis A. Yao, *Expropriation and Inventions: Appropriable Rents in the Absence of Property Rights*, 84 AM. ECON. REV. 190 (1994); Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 AM. ECON. REV. 561 (1971); Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J. OF LAW & TECH. 1 (1999); Ariel Pakes and Shmuel Nitzan, *Optimum Contracts for Research Personnel, Research Employment, and the Establishment of "Rival" Enterprises*, 1 J. OF LAB. ECON. 345 (1983); Paul M. Romer, *The Origins of Endogenous Growth*, 8 J. OF ECON. PERSPECTIVES 3 (1994)(providing a useful summary for non-economists).

48. HYDE, *supra* note 7, at.

49. To remedy this problem Hyde recommends national health insurance and a revamping of national pensions. *Id.* at 260. As Hyde argues, if the market cannot solve the problems of health insurance and retirement in the high-productivity/ high-wage industry of the Silicon Valley, how will it ever solve them for the rest of us? *Id.* at xix.

50. *Id.*

51. *Id.*

52. See, e.g., Kenneth G. Dau-Schmidt, *The Labor Market Transformed: Adapting Labor and Employment Law to the Rise of the Contingent Work Force*, 52 WASH. & LEE L. REV. 879, 883-85 (1995) (noting that the definitions of "employee" within the NLRA and OSHA exclude certain contingent workers); Jonathon P. Hiatt, *Policy Issues Concerning the*

The original insight of Hyde's information economics analysis is that, due to the value of spreading information through employees, increased employee mobility may be good for employees, as well as employers and the economy in general. Moreover, it may be necessary for the law to limit employers' ability to restrict employee mobility, and later use of acquired information, in order to promote economic growth and prosperity. Hyde champions California's law, which leaves employee covenants not to compete unenforceable and limits employer trade secret protection. He argues that "economic theory and Silicon Valley reality" demonstrate that "social advantage is normally maximized by free labor mobility" and that "employers seeking exemption to this general rule should have to [demonstrate] the specific disincentive to the creation of information that free mobility would bring."⁵³ This would seem a sound rule for public policy even if one does not agree with all of Hyde's economic analysis. Indeed, even under the traditional economic analysis a strong argument for the free mobility of labor can be mounted. The simple neoclassical economic model suggests that valuable resources, such as skilled employees, can be most efficiently employed only if they are free to go to their most valued use. Accordingly, restraints on mobility should be disfavored under the law, and allowed only where a genuine societal interest, such as efficient investment in information technology, can be demonstrated.⁵⁴

A primary question concerning Hyde's analysis is how generally applicable it is to workers in the economy as a whole. Silicon Valley's labor markets for information workers seem to be very dependent on the fast pace of technological advance and the knowledge inversion between employers and employees. Without this fast pace of development, employers could perhaps learn information more efficiently through licensing and would have greater incentive to protect property interests in information because it would have more enduring value. Clearly Hyde does not believe his analysis applies to all workers, and he provides convincing examples of biotech workers, professionals and engineers who might enjoy similar relationships to fast paced technical information.⁵⁵

Contingent Work Force, 52 WASH. & LEE L. REV. 739, 746 (1995) (arguing that the notion of the employer-employee relationship must be redefined to reflect the emergence of the contingent worker).

53. HYDE, *supra* note 7, at 67.

54. At least the general rhetoric of the common law with respect to employee covenants not to compete is in accord with this analysis. ALVIN L. GOLDMAN, *LABOR AND EMPLOYMENT LAW IN THE UNITED STATES* 97-98 (1996).

55. HYDE, *supra* note 7, at 256. Another example of workers who enjoy a knowledge inversion and who can have stronger inter-firm ties than intra-firm ties is academics. Query as to why the academic labor market developed faculty governance and tenure to address the problem rather than lucrative contingent pay and high mobility?

However, it seems that he is sometimes overly optimistic as to the number of workers whose employment relationship is organized around the dissemination of information and, accordingly, how many employees will benefit from the new higher velocity of the labor market. In the introduction to his book, Hyde discusses high-velocity labor markets in comparison to other labor market institutions such as collective bargaining and employee ownership stating that "for the first time in my career, I feel I am studying labor market institutions whose limits lie on the horizon, not in our face; that create wealth and jobs, not destroy them; that reward maturity, not dependence."⁵⁶ In the closing chapter of his book Hyde speculates about high-velocity labor markets leading to broad-based social change; however, he does expressly recognize that such markets "offer much to workers with considerable bargaining power" and "[t]he task is now to make these job markets work for everybody."⁵⁷

The resolution of the issue of how many employees are benefiting from the acceleration of the labor market is an empirical question that fits nicely in the proposals for future research developed by Hyde in his book.⁵⁸ One rudimentary measure of who is benefiting from increased labor mobility in a given labor market, employers or employees, would be to look at who is leaving whom. If discharge and layoff rates are rising in a given market, this suggests that employers and not employees are benefiting from the new "mobility." However, if employee quit rates are rising in a given labor market this suggests that employees are using their freedom of movement to gain better opportunities.

III. CONCLUSION

Alan Hyde's book, *Working in Silicon Valley: Economic and Legal Analysis of a High-Velocity Labor Market*,⁵⁹ is an important and original contribution to the growing literature on the changes that have occurred in the employment relationship in the global information economy. Hyde presents a definitive analysis within the industrial relations and legal literatures of an interesting and important frontier in this brave new world: Silicon Valley. Based on his analysis, Hyde makes a convincing argument that the role of labor mobility in the dissemination of information has been previously overlooked. In addition, important insights can be gained by recognizing the identity of workers with information and examining the

Kenneth G. Dau-Schmidt, *Laboring in the Academic Marketplace: the Case for Tenure*, 1 EMPLOYEE RTS. & EMPL. POL'Y J. 293 (1997).

56. HYDE, *supra* note 7, at xx.

57. *Id.* at 257.

58. *Id.* at 258-61.

59. *Id.*

existing literature of information economics to glean insights about the employment relationship. Hyde's principle policy conclusion is that the law should promote unfettered employee mobility both for the benefit of employees and the economic development of society as a whole. To this end, jurisdictions should adopt laws similar to those that have nurtured Silicon Valley in California, holding employee covenants not to compete unenforceable and limiting employer trade secret protections. Hyde's book is a must read for industrial relations experts and legal academics who are interested in the evolution of the employment relationship in the new age of global trade and information technology.