

CREDIT WHERE IT'S DUE: The Law and Norms of Attribution

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*Who steals my purse steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands;
But he that filches from me my good name
Robs me of that which not enriches him,
And makes me poor indeed.***

Introduction

Attribution is foundational to the modern economy. The reputation we develop for the work we do proves to the world the nature of our human capital. Credit is instrumentally beneficial in establishing a reputation, and intrinsically valuable simply for the pleasure of being acknowledged. Indeed, credit is itself a form of human capital. If professional reputation were property, it would be the most valuable property that most people own. In Hollywood, screen credit is wonderful on a blockbuster and terrible on a flop. In academia, being an author or inventor is often more valuable than owning the copyright or patent. In high velocity labor markets,¹ attributions of creativity and competence are the core of references or resumes. Credit matters in an information economy because it is difficult to measure worker

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** William Shakespeare, *Othello*, act 3, scene 3.

¹ The term "high velocity labor market" is a vivid description of an economic sector characterized by an extremely mobile labor force; the term is Alan Hyde's. See ALAN HYDE, *WORKING IN SILICON VALLEY: AN ECONOMIC AND LEGAL ANALYSIS OF A HIGH VELOCITY LABOR MARKET* (2003).

knowledge directly in the way that the ability of typists and machinists can be tested simply by watching them perform a task.

Attribution plays important functions in addition to its role in human capital. First, it is one of the principal psychic and economic rewards of innovation. The twentieth-century corporation transformed the reward function of attribution in a manner that law in the twenty-first century knowledge economy must address. Corporate intellectual property and corporate employment were initially regarded as a threat to innovation and, therefore, to entrepreneurship, but firms avoided malaise by devising attribution schemes to reward and promote innovation. Second, attribution serves a trademark function: the same novel would sell better with John Grisham's name on the cover rather than mine, and a scientific study produced by a respected university scientist is more likely to be considered reliable than one conducted by pharmaceutical company employees. Moreover, attribution marks the divide between news and propaganda, as suggested by the furor over U.S. efforts to place American government-produced reports on the occupation of Iraq in Iraqi and U.S. news media as if they were written by Iraqi or U.S. news media employees.² Attribution even serves a legitimating function: when Hollywood studios became concerned about unauthorized duplication of DVDs, they created a series of short ads featuring technical workers explaining how piracy affects their livelihood by hurting sales of major motion pictures. Deploying the emotion of a set builder in a flannel shirt – a guy who in no circumstances will ever have a claim to intellectual property rights in a film – is a persuasive rhetorical strategy because it links the sanctity of corporate copyrights to the paychecks of real people.

Although attribution is ubiquitous and important, it is largely unregulated by law. Intellectual property law does not because corporations own IP and there is no American equivalent of the moral right of attribution.³ Nor has employment law filled the gap. In the absence of law, economic sectors that value attribution have devised non-property regimes founded on social norms to acknowledge and reward employee effort and to attribute responsibility for the success or failure of products and projects. Whether it is screen credit, scientific authorship, or the employee of the month, norms play at least as large a role as legal rules in mediating among different possible candidates for praise or blame. Attribution is one of many areas of the work

² Jeff Gerth, *Military's Information War is Vast and Often Secretive* NY Times, Dec. 11, 2005 at A1.

³ A right of attribution in copyrighted works is protected under the moral rights doctrine. See, e.g., David Vaver, *Moral Rights Yesterday, Today, and Tomorrow*, 7 INTL J.L. & INFO. TECH. 270 (2000).

relationship in which norms dwarf the significance of law in the creation and enforcement of rights.⁴ To understand attribution – a topic of central importance both to employment law and to intellectual property – we must understand the norms governing it.

Attribution has recently gained scholarly attention in law, the sciences, and the humanities. Intellectual property scholars have explored the trademark aspects of author designations to advocate trademark or copyright protection.⁵ Others examine the complex meanings of scientific authorship attribution reform in academic publishing.⁶ And, of course, literary scholars have long contemplated the significance of author attributions. My purpose is broader. Through a conceptual merger of intellectual property and employment law, this article studies how credit and blame are allocated in many sectors of society that tend to be below the radar of intellectual property law. Regardless of who owns patents, copyrights, trademarks, trade secrets, or other workplace knowledge, workplace rules and norms regulate why some contributors are credited as creators, some only acknowledged for assistance, and some not noted at all.

Working from assessment of how attribution systems operate, I offer a theory of how such systems should operate and why greater legal recognition of attribution rights is desirable. The right I propose would be neither a property right in the intellectual property sense nor a liability rule in the tort sense (unlike, for example, the torts of publicity or defamation), both of which give a qualified right to prevent sale or dissemination of a work without proper attribution. Rather, I argue for greater attention to attribution rights within the existing legal regime of employment contracts. The proposal is a specific

⁴ See, e.g., Cynthia Estlund, *Rebuilding the Law of the Workplace in an Era of Self-Regulation*, 105 COLUM. L. REV. 319 (2005); Susan Sturm, *Second Generation Employment Discrimination: A Structural Approach*, 101 COLUM. L. REV. 458 (2001).

⁵ Jane C. Ginsburg, *The Right to Claim Authorship in U.S. Copyright and Trademarks Law*, 41 HOUS. L. REV. 263 (2004); Jane C. Ginsburg, *Essay – The Author's Name as a Trademark: A Perverse Perspective on the Moral Right of Paternity?* Columbia Law School Pub. Law & Leg. Theory Working Paper No. 05-91, available at <http://ssrn.com/abstract=724343>; Roberta Rosenthal Kwall, *The Attribution Right in the United States: Caught in the Crossfire Between Copyright and Section 43(a)*, 77 WASH. L. REV. 985 (2002); Greg Lastowka, *The Trademark Function of Authorship*, 85 BOSTON U. L. REV. 1171 (2005); Laura A. Heymann, *The Birth of the Authornym: Authorship, Pseudonymity, and Trademark Law*, 80 NOTRE DAME L. REV. 1377 (2005).

⁶ See *infra* at notes 80 - 86.

instantiation of the legal theory of reflexive law: an effort to regulate behavior with the goal of protection by the shaping of norms and through self-regulatory structures.⁷ My goal is to make all aspects of attribution more efficient and fair without encroaching unduly on the free circulation of ideas or undermining the flexibility of existing norms-based approaches to attribution. Because innovation is spurred by information spillovers linked to employee mobility; people should have attribution rights to enable that mobility without restricting the use of the information that enables innovation. In short, legal rights to knowledge must be bifurcated into *exclusivity rights* (traditional IP rights to control the knowledge) and *attribution rights* (rights to control reputation).

Part I demonstrates the importance of attribution, with particular attention to its historic development. Part II posits six desirable characteristics of any attribution regime, describes the variety of formal and informal attribution systems in various industries, and explores how the current mix of legal rules and social norms measure up to the six ideal characteristics. Part III explains, based on evidence and economic theory, why extant contract-based and norms-based attribution regimes fail optimally to protect attribution interests. Part IV proposes a new approach to employment contracts designed to shore up the desirable characteristics of existing norms-based attribution systems while allowing legal intervention only in the circumstances of market failure. I propose that a right of attribution, whose existence would be determined by workplace or industry norms, be regarded as a legally enforceable implied term of every employment contract. The right to public attribution would be waivable upon proof of a procedurally fair negotiation. The right to attribution necessary to build human capital, however, would be inalienable. Thus, while *The Economist* would remain free to insist that its writers use no bylines, it would be contractually obligated fairly to attribute articles in its own internal employee assessments and in the context of recommending writers for jobs at other organizations. A breach of the implied agreement would not, unlike moral rights, entitle the employee to block access to the work itself; the only remedy would be for the lost value of human capital. As explained in the conclusion, the variation in attribution norms that currently exists among economic sectors and different workplace cultures can and should be preserved through the contract approach I suggest. My proposal

⁷ The vast literature on reflexive law is summarized and applied to the workplace context in Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, 89 MINN. L. REV. 342 (2004). See also REFLEXIVE LABOUR LAW: STUDIES IN INDUSTRIAL RELATIONS AND EMPLOYMENT REGULATION (Ralf Rogowski & Ton Wilthagen, eds. 1994); PHILIPPE NONET & PHILIP SELZNICK, LAW AND SOCIETY IN TRANSITION: TOWARD RESPONSIVE LAW 64 (1978).

also strikes an appropriate balance between expansive and narrow legal protections for workplace knowledge and, in that respect, addresses one of the most vexing current debates at the intersection of intellectual property and employment law.

I. Attribution Matters

The most important but least studied function of attribution is its role in creating and signaling human capital. In an information economy, especially one characterized by high degrees of labor turnover, human capital is fantastically important to employees and to firms.⁸ Particularly in the case of highly-educated or highly-skilled employees or people who possess a great deal of tacit knowledge, assessing the nature and value of human capital is difficult.⁹ The abilities of a software designer or music producer cannot be measured the way the speed of a typist or the competence of a machine operator can. When the cost of errors in assessment is great, or when assessments about human capital need to be made frequently or rapidly, easily interpreted information *about* human capital is valuable because it reduces search costs. Thus credit becomes a form of human capital itself because it translates and signals the existence of a deeper layer of human capital.

Attribution has a commodity value distinct from the value of the intellectual property or human capital to which it is attached. The commodity value of credit is entirely informational: it tells consumers, current and

⁸ The study of human capital was catalyzed by GARY BECKER, *HUMAN CAPITAL* (1964) and by THEODORE W. SCHULTZ, *INVESTMENT IN HUMAN CAPITAL* (1971). See also RICHARD CRAWFORD, *IN THE ERA OF HUMAN CAPITAL: THE EMERGENCE OF TALENT, INTELLIGENCE, AND KNOWLEDGE AS THE WORLDWIDE ECONOMIC FORCE AND WHAT IT MEANS TO MANAGERS AND INVESTORS* (1991) (business management advice); JOHANN PETER MURMANN, *KNOWLEDGE AND COMPETITIVE ADVANTAGE: THE COEVOLUTION OF FIRMS, TECHNOLOGY, AND NATIONAL INSTITUTIONS* (2003) (economic history).

⁹ Tacit knowledge is knowledge that cannot readily be reduced to writing and tends to be acquired by doing, rather than by the usual method of teaching a body of information. See, e.g., ARTHUR S. REBER, *IMPLICIT LEARNING AND TACIT KNOWLEDGE: AN ESSAY ON THE COGNITIVE UNCONSCIOUS* (1993); Mark Lehrer & Kazuhiro Asakawa, *Managing Intersecting R&D Social Communities: A Comparative Study of European 'Knowledge Incubators' in Japanese and American Firms*, 24 *ORG. STUD.* 771 (2003); Roy Lubit, *Tacit Knowledge and Knowledge Management: The Keys to Sustainable Competitive Advantage*, 29 *ORGANIZATIONAL DYNAMICS* 164 (2001); Frederick A. Starke et al., *Coping with the Sudden Loss of an Indispensable Employee: An Exploratory Case Study*, 39 *J. APPLIED BEHAV. SCI.* 208 (2003).

prospective employers, creators, and the world at large about products and their creators. The commodity value of credit is dissipated if the right to it is transferred because the information is lost. Attribution is a form of signal and it operates in labor and other markets plagued by information asymmetries in which reliable signals are important.

For nearly a century, American intellectual property law tended to assume that intellectual property and attribution rights did and should substantially overlap. Intellectual property rights – patents, copyrights, and, to some extent, trademarks -- were thought to be a principal method by which law acknowledged creativity. Of course, since intellectual property rights have long been assignable and there is nothing new in the recognition that major contributors to projects are not always joint authors or joint inventors, there was never a complete equivalence between IP ownership and attribution. Nevertheless, today more than ever, intellectual property is divorced from creators. To most employees most of the time, what matters is not that you own your patent or copyright, but that you can truthfully claim to be the inventor or author of it.

The divorce of intellectual property from credit was slow in coming, precisely because the credit function of authorship and invention was so firmly entrenched in thinking about the purposes of intellectual property. Even as nineteenth-century American courts were digesting the idea that invention and authorship were rarely the solitary activity of single individuals, but were likely to occur in workplaces and to be funded by firms, judges still insisted upon employee ownership of intellectual property rights because of the power of the moral claims to credit for creativity. Meanwhile, Germany and France reacted to the rise of corporate creation by developing moral rights explicitly to protect both a right of attribution and a right of integrity.¹⁰ By the early twentieth century, American courts accepted the corporate control of intellectual property and abandoned the view that intellectual property rights had to be tied to actual inventor and authors.

Yet it remains important to attribute authorship of ideas, texts, and technologies, to actual persons, even if the attribution does not affect intellectual property rights. Not surprisingly, almost every group that creates

¹⁰ On the evolution of judicial attitudes toward employee ownership of the fruits of workplace creativity, see Catherine L. Fisk, *Removing the Fuel of Interest from the Fire of Genius: Law and the Employee Inventor, 1830-1930*, 65 U. CHI. L. REV. (1998); Catherine L. Fisk, *Authors at Work: The Origins of the Work for Hire Doctrine*, 15 YALE J. LAW & HUMS. (2003). The nineteenth century origins of moral rights in the late nineteenth century are discussed in the sources cited *infra* note 47.

anything adopts a process for attributing responsibility. Paradoxically, in the modern information economy where we have moved away from personal rights to intellectual property in favor of corporate rights, we increasingly value attribution because labor mobility and the decline of personal relationships have limited access to other sources of information about employees.

As explained below, attribution serves four principal functions. Attribution is, first, is a reward and an incentive for future creativity. Second, it is a form of discipline that punishes unacceptable work. Third, attribution enables consumers to assess quality and sellers to create a brand. Finally, attribution serves a humanizing function, linking the products of work to the reality of human endeavor. Each of these functions requires that the right to attribution be inalienable, at least in some contexts, so that the people who are credited or blamed for a work are in fact the ones behind it. Attribution matters differently in different contexts, however. The functions of attribution can still be served in some contexts when it is alienable vis a vis the public, but it can never be alienable as a measure of human capital.¹¹ Within every organization attributions are made for purposes of pay, promotion, or blame, for those purposes attribution must be inalienable.

A. The Reward Function

People throughout recorded history have valued the reputations they gain by associating their names with their work. Even when the author, inventor, discoverer, or artisan made little or no money from the work itself, it has long been an honor to be credited with good work. Great artists of all kinds have destroyed work that they thought did not measure up to their standards, even when they might have profited more (at least in the short term) from selling their lesser works rather than destroying them. American intellectual property law – which, as is well known, was intended to be an instrument to “promote the progress of science and the useful arts” by according copyrights and patents to authors and inventors – was premised on the idea that people will have a greater incentive to create if creators enjoy not merely the income stream from sales of the intellectual property itself but also the economic and psychic benefits of the reputation gained by being the creator.¹²

¹¹ See, e.g., Heymann, *The Birth of the Authonym*, *supra* note 5 at 1422-1433; *McIntyre v. Ohio Elections Commission*, 514 U.S. 334 (1995) (right to speak anonymously is protected by the First Amendment).

¹² U.S. CONST. Art. I, sec. 8.

Nineteenth-century courts believed that actual attributions of authorship were an important reward above and beyond the economic value of the intellectual property rights themselves. Courts did not conclude that employers were the owners of patented inventions or copyrighted works of authorship until the turn of the twentieth century.¹³ Nineteenth-century courts were aware that equating IP ownership with attribution had both intrinsic and instrumental motivations: intrinsically it acknowledged the moral value of creativity, and instrumentally it encouraged creativity by linking the honors of creativity to the actual inventor rather than to the firm. Thus, for example, American patent law has always required the true and original inventor to be identified in the patent application,¹⁴ even though patents are routinely issued to entities other than the inventor based on a pre-invention assignment agreement. Patent law confers an inalienable right to attribution because Congress and courts believed that attribution was a valuable reward for inventors even when the patent itself was assigned. Whose work is sufficient to “count” him or her as an inventor for purposes of the legally-mandated attribution is governed by a complex web of social norms regarding invention and the purposes of patenting.¹⁵ In time past, social norms suggested that patents could not or should not be sought by artisans as opposed to scientists because they were not deemed worthy of the honor, as has been shown by work on early nineteenth century German optics.¹⁶ Who can and should be credited with invention is thus culturally specific and wrapped up as much in norms about honor and credit as in the supposedly simple fact of who conceived a new idea.

¹³ Fisk, *Removing the Fuel of Interest*, *supra* note 10; Fisk, *Authors at Work*, *supra* note 10.

¹⁴ 35 U.S.C. § 101 (patents are available to “[w]hoever invents or discovers any new or useful process, machine,” etc.); 35 U.S.C. § 115 (patent applicant “shall make oath that he believes himself to be the original and first inventor of the process, machine [etc.] for which he solicits a patent”). A patent application must be rejected if the true inventor is not the applicant, 35 U.S.C. § 102(f), and a patent issued to anyone other than the true inventor is invalid. *Agawam Woolen Co. v. Jordan*, 37 U.S. 583, 602 (1868); *Banks v. Unisys Corp.*, 228 F.3d 1357, 1359 (Fed. Cir. 2000); *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1381 (Fed. Cir. 2000); *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1349 (Fed. Cir. 1998).

¹⁵ Fisk, *Removing the Fuel of Interest*, *supra* note 10; B. ZORINA KHAN, *THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790-1920* (2005).

¹⁶ Myles W. Jackson, *Can Artisans Be Scientific Authors? The Unique Case of Fraunhofer’s Artisanal Optics and the German Republic of Letters* in *SCIENTIFIC AUTHORSHIP: CREDIT AND INTELLECTUAL PROPERTY IN SCIENCE* (Mario Biagioli & Peter Galison, eds., 2003).

Scholars and judges of the early twentieth century feared that corporate intellectual property would undermine the reward function of attribution. The fear was part of a more general concern that large firms threatened entrepreneurship because creative and potentially entrepreneurial people might believe that their own work and risk-taking would not be noticed or rewarded. For example, Joseph Schumpeter hypothesized in his 1911 book, *The Theory of Economic Development*, that economic development is driven, in part, by innovation and entrepreneurship, and the entrepreneur is in turn driven by “the joy of creating” and “the will to conquer.”¹⁷ Schumpeter believed that “[i]n the modern corporation, entrepreneurial gains are as a rule merged with many other elements into the profit item, and the individuals who fill the entrepreneurial function are separated from them – accepting the salaries and other prerequisites of executives in lieu of them.”¹⁸ Schumpeter worried that bureaucratization and automation of the entrepreneurial process would undermine the “will to conquer” and lead to a decline in entrepreneurship.¹⁹ The twentieth century challenge, as Schumpeter correctly diagnosed, was to preserve the entrepreneurial spirit within the harness of bureaucratic work. Attribution was crucial in that endeavor. At the same time, the rise of bureaucratic human resources management in the twentieth century placed a premium on attributing good and poor work for purposes of promotion on the hierarchical job ladders that characterized the large mid-twentieth century corporation.²⁰ The creation of meaningful attribution systems thus became the strategy by which bureaucratic firms attempted to avoid the destruction of entrepreneurial capitalism that Schumpeter predicted when he suggested that capitalism would be undermined by its own success in building large bureaucratic corporations.²¹

Twentieth century firms developed attribution systems by creating internal reward programs for encouraging employees to develop ideas. Inventions were typically rewarded both with some monetary bonus and with

¹⁷ JOSEPH A. SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT* (1911); See also Richard Swedberg, *Introduction* in RICHARD SWEDBERG, ED., *JOSEPH A. SCHUMPETER: THE ECONOMICS AND SOCIOLOGY OF CAPITALISM* 40 (1991).

¹⁸ Joseph A. Schumpeter, *Comments on a Plan for the Study of Entrepreneurship* in SWEDBERG, *id.* at 417.

¹⁹ *Id.*

²⁰ SANFORD JACOBY, *EMPLOYING BUREAUCRACY*; DANIEL NELSON, *MANAGERS AND WORKERS: ORIGINS OF THE TWENTIETH CENTURY FACTORY SYSTEM IN THE UNITED STATES 1880-1920* (2d ed. 1995).

²¹ JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 131-143 (1942, repr. ed. 1976); SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT* *supra* note 17.

the implicit promise to recognize the idea as the employee's and to celebrate the individual's creative achievement within the firm. An early example of such a system was the one developed at Kodak. Kodak was a firm whose business model was built on rapid innovation and the aggressive use of patents and trade secrets.²² In addition, Kodak early recognized the importance of trademarks and marketing and thus knew the benefits of associating a name with an idea. A company acutely aware of the value of intellectual property and that aggressively asserted its claims to intellectual property vis a vis its employees had to come up with a system for motivating workers who could not claim intellectual property rights. Starting in 1913 and continuing through much of the twentieth century, the company paid its front-line employees for useful suggestions in the areas of "Cost Reduction, Accident Prevention, Improvement of Product, and General Maintenance."²³ It published lists of such suggestions and the dollar amounts awarded, which were sometimes nominal but sometimes significant.²⁴ Kodak publications for employees pushed the suggestion system, urging employees not to be shy about submitting their ideas.²⁵ Articles in those publications featured employees who had received unusually large awards for their suggestions.²⁶

Kodak's was typical of the attribution systems at many large twentieth-century technology companies. Du Pont, like Kodak, aggressively

²² See REESE V. JENKINS, *IMAGES AND ENTERPRISE: TECHNOLOGY AND THE AMERICAN PHOTOGRAPHIC INDUSTRY 1839-1925* (1975). The Kodak R & D story, as told by the head of Kodak R & D, is found in C.E. KENNETH MEES, *FROM DRY PLATES TO EKTACHROME FILM: A STORY OF PHOTOGRAPHIC RESEARCH* (New York: Ziff-Davis Pub. Co. 1961).

²³ CAMERA WORKS BULLETIN, Nov. 25, 1913. The system's rewards (both monetary and honorific) were not available to "supervisory and technical employees whose duties involve the submission of new ideas." EMPLOYEES' GUIDEBOOK, 1947 ed., at 48-49.

²⁴ See e.g. CAMERA WORKS BULLETIN, Nov. 25, 1913; CAMERA WORKS BULLETIN, June 1916; CAMERA WORKS BULLETIN, July 1917; KODAK PARK BULLETIN, May 1917; KODAK PARK BULLETIN, July 1919; KODAK PARK BULLETIN, Mar.-Apr. 1920; *Suggestion Awards*, KODAK MAG., March 1929, at 19.

²⁵ See e.g. Clayton Benson, *No Practical Value!*, KODAK MAG., Feb. 1930, at 16. The Kodak employee manual advised employees that "[s]ubstantial amounts have been paid to employees for suggestions resulting in reduction of costs, improvement of the quality of products, and improved safety and fire-prevention methods and appliances," and exhorted employees to "[l]ook upon any new idea as being of possible value to the Company and submit it for consideration through the suggestion system on the blanks provided in all departments." EMPLOYEES' GUIDEBOOK, 1947 ed., at 48-49.

²⁶ See e.g. *Printing Department Employees Win Suggestion Awards*, KODAK MAG., June 1927, at 27; *A \$382.00 Award*, KODAK MAG., Feb. 1930, at 23.

claimed intellectual property rights to all employee innovations. Like Kodak, it had an elaborate research and development program and developed a bonus program to motivate salaried employees to invent without the prospect of financial gain from the intellectual property they might develop. At Du Pont as elsewhere, employees were critical of the reward system; it was too easy and too common, a Du Pont employee complained, for superiors in the lab to take credit for the work done by subordinates. While some complained about the modest dollar value of the bonuses, others seemed more concerned about the vagaries in who was credited. Reputation loomed as large as money, and the lost opportunity to be entrepreneurial about one's reputation loomed as large as any.²⁷

As these examples suggest, when corporations secured control of employees and their intellectual property, managers devised alternatives to intellectual property ownership to provide financial and psychic rewards deemed necessary to encourage innovation. Notwithstanding the widespread recognition of the importance of such processes, they operated (and continue to operate) almost entirely outside the scope of legal regulation. Firms even resisted characterizing the bonus programs as contracts for fear of losing discretionary control over credit determinations, although they encouraged employees to believe that the systems were fair and consistent. Inasmuch as mid-twentieth century employment law generally gave firms substantial leeway to revise employment terms at will, the informality of attribution systems was not out of the mainstream of employment practices.

Even today, it is widely recognized that the reward function of attribution underpins the system of corporate ownership of workplace knowledge. The economic critique of employee ownership of workplace intellectual property rests on the contention that individuals do not need the incentive of intellectual property ownership because lucrative employment provide sufficient incentive.²⁸ Thus, the argument goes, the reward function of intellectual property ownership is most efficiently allocated to the firm. The analysis rests on the assumption that the inventive employee will at least be credited with the invention so that his employment will be lucrative in proportion to his creativity and, thus, the incentive to invent will remain.

²⁷ Catherine L. Fisk, *Working Knowledge: Trade Secrets, Restrictive Covenants in Employment, and the Rise of Corporate Intellectual Property, 1800-1920*, 52 HASTINGS L.J. 441 (2001).

²⁸ Robert Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1 (1999); Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. LEGAL STUD. 683 (1980).

B. The Discipline Function

Author attribution as a form of discipline is a concept that is quite familiar to literary scholars, though perhaps less so to legal scholars. Copyright prior to the first English Copyright Act, the 1710 Statute of Anne, was almost entirely about disciplining rather than rewarding authors; copyright was a system of printing privileges that enabled censorship. Early copyright regulation named the author so that appropriate authorities could institute prosecutions for heresy, sedition, or libel.²⁹ Attribution mattered because religious authorities were not satisfied to punish only the publisher of heresy and to spare the heretic himself. Once copyright became property, the disciplinary function of authorship also encompassed defining and policing plagiarism, libel, and copyright infringement.³⁰

The disciplinary function of associating a person with an idea exists outside the realm of copyright and literary works too. Historically, scientific claims were linked to authors to police heresy; today they are linked to authors to police fraud.³¹ Attributing information is considered an important deterrent to gossip and rumor mongering. Of course, attribution is not always a servant of truth: protecting the anonymity of sources, and especially of leaks, is often thought to be the best guarantor of truth. The recent efforts of the government to identify who leaked the information about the covert program of government surveillance of U.S. citizens, one might argue, is designed as much to deter the revelation of truthful information as to prevent the spread of false information.³² All, of course, are forms of discipline.

There is a long tradition, extending back to craft guilds of the pre-modern period, of craftsmen placing their seal on work as an assurance of quality.³³ Such a system has obviously positive and negative reputational effects, depending on the quality of the product. Today, of course, many professional licensing regimes (including in law, medicine, and engineering)

²⁹ See, e.g., MARK ROSE, *AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT* (1993).

³⁰ PAUL K. SAINT AMOUR, *THE COPYWRITERS: INTELLECTUAL PROPERTY AND THE LITERARY IMAGINATION* (2003).

³¹ Mario Biagioli, *Documents of Documents: Scientists' Names and Scientific Claims*, 27 *PoLAR* 1 (2004); Mario Biagioli, *The Instability of Authorship: Credit and Responsibility in Contemporary Biomedicine*, 12 *LIFE SCIENCES FORUM/THE FASEB JOURNAL* 3 (1998).

³² Josh Meyer & Daryl Strickland, *Justice Department to Probe Leak of NSA's Domestic Surveillance Program*, *LOS ANGELES TIMES*, Dec. 30, 2005.

³³ See Heymann, *supra* note 5 at 1413 (collecting sources).

require that the professional certify the quality of work, and discipline is imposed on the person who certifies that the work is satisfactory if the work either falls below some standard or if the seal is placed wrongfully.³⁴ In academia, credit and responsibility remain clearly tied to the name of the scholar, not the copyright owner, and responsibility for the truth of claims falls on the natural person whose name is listed as author because the name is the link between the person and the claim.³⁵ And in the world of print journalism, which tries to walk the fine and shifting line between corporate promotion of information products and the objective and reliable reporting of truth, the identification of by-lines and contributing reporters is a deliberate effort to deter fraud and to focus blame when problems happen anyway. In this perspective, the name recognition of Judith Miller or Jayson Blair saves the brand of *The New York Times*; the fault for journalistic scandals can be attributed to individuals rather than to the paper as a whole.³⁶

C. The Branding Function

Within legal scholarship recently, and within literary scholarship for generations, many have explored the significance of attribution in shaping perceptions of copyrighted works.³⁷ The phenomenon of how attribution of creation creates a sort of brand or a trademark that attaches both to the object and to the putative creator is less thoroughly studied when the works in question are other than literary texts, but it is as old if not older than the phenomenon of literary authorship.³⁸

For as long as creator attributions have been made the question has arisen whether the attributions must be accurate, in the sense of referring to a particular person by a name that was traceable to that person. To some extent, it was accepted that the right of attribution had to be inalienable in order for the branding function to retain its value. Consumers of both scientific information and novels would be justifiably disappointed if the name of the putative author was no longer a reliable indication of veracity or quality. Of course there may be circumstances in which attribution to a fictive person is a mark of the

³⁴ Attribution within the context of professional certification is discussed *infra* at II.C.5.

³⁵ Mario Biagioli, *Documents of Documents*, *supra* note 31 at 14.

³⁶ Attribution issues in print journalism, particularly with respect to scandals such as that involving Jayson Blair, are discussed *infra* at II.C.3.

³⁷ See, e.g., Heymann, *supra* note 5.

³⁸ The original “trade mark,” the mark that an artisan was required by the guild to attach to any product made, dates in Europe to a pre-Renaissance period well before the phenomenon of literary authorship. See *id* at 1413.

quality; readers of Nancy Drew novels expect them to be authored by “Carolyn Keene” even though she does not exist and the books were written by a number of different people according to specifications established by the publisher.

Whereas the credibility of scientific fact was in part tied to the author’s name, the author needed in some contexts to avoid being too overtly pushy in publishing his work, lest his work lose credibility that way. Steven Shapin remarked that “a disengaged and nonproprietary presentation of authorial self,” enhanced credibility by removing the possibility that the scientist had a mercenary interest in publishing his work. As Roger Chartier also observed, “The trope of reluctant authorship and resistance to printed publication was very common in early modern culture, but it acquired particular meaning with scientific texts: it assured their credibility since it proved that there was no economic interest attached to the published knowledge claims.”³⁹

As modern marketing developed, the use of author attributions to vouch for the quality of a product became standard. Rand-McNally, which was quite aggressive in claiming all patents and copyrights to all of its maps and globes, nevertheless used the names and photographs of its leading cartographers in its advertising to convince the public of the quality of its products. The J. Paul Goode atlas and globe, and even the particular methods he used for portraying the round earth on a flat map with minimal distortion, were attributed to him and his academic credentials (he was a professor at the University of Chicago), were featured prominently in their brochures.⁴⁰ Whereas centuries before, the name of Gerhardus Mercator was linked to his projection in the way that Euclid’s theorem or Copernicus’ theory or Galileo’s was, by the early twentieth century the name of the geographer became an advertising device more than a celebration of the contributions of the creator.⁴¹ The use of a personal name as a trademark presents ambiguities when the

³⁹ STEVEN SHAPIN, *A SOCIAL HISTORY OF TRUTH: CIVILITY AND SCIENCE IN SEVENTEENTH CENTURY ENGLAND* (1994); Roger Chartier, *Foucault’s Chiasmus: Authorship Between Science and Literature in the Seventeenth and Eighteenth Centuries*, in *SCIENTIFIC AUTHORSHIP* *supra* note 16.

⁴⁰ The Rand McNally company records are in the Newberry Library in Chicago as part of the John M. Wing Foundation on the History of Printing. The Goode documents are in Rand McNally Series 3, Box 7, Folders 69 and 75. I discuss Rand McNally’s approach to attribution and employee intellectual property in detail in Catherine L. Fisk, *Working Knowledge: Employee Innovation and the Rise of Corporate Intellectual Property* (2006) (unpublished manuscript, on file with the author).

⁴¹ MARK MONMONIER, *RHUMB LINES AND MAP WARS: A SOCIAL HISTORY OF THE MERCATOR PROJECTION* (2004).

person and the company that bears her name have a parting of the ways, as happened recently to the English fashion designer Elizabeth Emanuel, who originally made her reputation designing Princess Diana's wedding dress. Should the business to whom the name was assigned as a trademark own the right to use of the name, forcing the person to do business under some name other than her own, and perhaps prompting customer confusion as to whether the person remains involved with the company? Or is the departure of the person from the firm grounds to revoke the assignment because it is misleading to suggest the continuing involvement of person with the firm via the name?⁴²

The branding aspects of attribution raise other ambiguities about how to allocate responsibility for work. When some executives of Coca Cola attempted, beginning with enormous fanfare and ending in spectacular failure, to change the flavor of the signature cola drink about twenty years ago, most of the flak fell on the company, not on the chemists who developed the new flavor or the executives or marketing people who thought it was a good idea. And when the innovation fell flat, the Coca Cola brand had to be resuscitated as well as -- or even more than -- the reputations of the responsible employees. One hundred years ago, a spectacular failure of technological innovation would have harmed the reputation of the inventor as much or more than the company that bore his name. Disaggregating corporate and individual attribution is difficult.

Attribution enables the economy of authority and influence to operate, as Andy Warhol's famous quip ("In the future everybody will be world famous for fifteen minutes") suggests.⁴³ Attribution is thus akin to celebrity. Intellectuals are not immune to this: universities seem unable to resist the temptation to count citations as a measure of academic accomplishment, even as they decry the practice because citation counts reward a controversial position on a salient or trendy topic more than a thoughtful analysis of an important but unstudied one. The work a renowned scholar is appealing to journals that want to enhance their own reputation by publishing important work. It is a positive feedback loop: the journal's reputation is enhanced by

⁴² Elizabeth Florence Emanuel v. Continental Shelf 128 Ltd., Opinion of Advocate General, Case C-259/04, a preliminary ruling for the High Court of Justice of England and Wales, by the person appointed by the Lord Chancellor under section 7b of the Trade Marks Act of 1984, available at <http://curia.edu.int/jurisp> (last visited Jan. 31, 2006) (departure of Emanuel from the firm that bears her name is not grounds for revocation of the assignment of the trademark).

⁴³ OXFORD DICTIONARY OF QUOTATIONS 803 (Elizabeth Knowles, ed., 5th ed.) (attributes quote to a volume released to mark Warhol's exhibition in Stockholm, February – March, 1968).

publishing the work of a renowned scholar, and the scholar's reputation grows by publishing in a preeminent journal.

D. The Humanizing Function

The late twentieth-century erasure of the name of natural person from the responsibility for the innovation has dehumanized intellectual property and the ideas and work embodied or reflected in it. The severing of the link between people and ideas does not always serve the interests of the corporations that own the intellectual property. Today's huge anti-piracy campaign illustrates the risks. People on peer-to-peer file-sharing networks feel less guilt about unauthorized copying of copyrighted music or DVDs than they might feel about shoplifting. The dire "FBI Warnings" that precede every DVD or videocassette you've ever watched are just so much noise. To crack down on unauthorized duplication, the copyright owners had to marshal actual (and preferably not too wealthy) musicians and performers to make the case that copyright infringement is stealing. In a world of corporate production, and in particular skepticism about corporate production, author attributions serve a humanizing function. Dave the set painter who inveighs against piracy by lamenting its impact on working class Hollywood does just that.⁴⁴

Attribution humanizes bureaucratic work processes and legitimates business by humanizing it in the eyes of the public. It translates employee effort for public view both for the benefit of employees and for the benefit of the firm. The ubiquitous posters in service workplaces that honor the "employee of the month" reward and motivate employees by holding them up for compliments as they simultaneously humanize the firm to customers by suggesting it's the kind of place that honors its employees. Executives everywhere from Wal-Mart to Paramount Pictures are aware that they have to humanize their work processes in order to shore up the legitimacy of their property rights.

Yet there are times in which the actual creator must remain anonymous in order to portray the humanity of someone else. The tradition of keeping speechwriters well in the background is necessary to preserve the cult of the personality in contemporary American politics. We participate in a willing suspension of disbelief when we attribute speeches to the candidate or politician, and treat the speeches as a window into the heart and mind of the speaker. At some level we know, or at least we suspect, that some of what he

⁴⁴ David the set-painter was a real person. See Patrick Goldstein, *The Big Picture: Hollywood Deals With Piracy, A Wary Eye on CDs*, L.A. TIMES, Sept. 9, 2003, at E1.

says is not what he really thinks, or that the turns of phrase may not reflect his own personality, but we treat him as if he is speaking his own heart and mind and projecting his own personality, not giving voice to the carefully considered position of a committee of advisors and speechwriters. Moreover, there is a long history to treating pseudonymous writing as suggesting that the author is especially “authentic.”⁴⁵ Perhaps in today’s world skepticism about authenticity is even greater. The desire to link the word to the person – both moving backward to the “actual” author and forward through the actor to the character played by the actor -- is especially acute in a world in which the glut of television, Internet, and digital media blur the boundary between our sense of reality and the words and images that constantly surround us.

In sum, contemporary attribution is valuable to creators, to their employers, to consumers of information and of products, and to manufacturers and sellers of anything. As will be seen, its importance is reflected in the ubiquity of attribution norms in every imaginable occupation. Its diverse functions are reflected in the variety of such norms.

II. The Operation of Contemporary Attribution Processes

Like any landscape painting, the following effort to portray the entire field of legal and norms-based rights of attribution cannot cover everything or even do justice to most. I begin with a survey of legal regulation. I then describe six criteria we should use to evaluate how well any law- or norms-based attribution regime serves the values of attribution that have been identified so far. Finally, I provide a sample of the array of non-legal attribution systems that exist. My goal is to identify the major landmarks of law, normative evaluation, and norms. Of necessity, I can paint only some in detail, while evoking a sense of the smaller features and omitting others entirely.

A. Legal Rights to Attribution

International law articulates a general right to recognition for the fruits of one’s creativity. Although the right probably emanates from the *droit moral*, which in European countries gives authors a right to attribution for their copyrighted works regardless of copyright ownership, the International Covenant on Economic, Social, and Cultural Rights recognize the right of

⁴⁵ Heymann, *supra* note 5; JENNIE ERDAL, *GHOSTING: A DOUBLE LIFE* (2004) (a memoir of years spent working as a ghost writer).

attribution in general terms, not limited to works that would be eligible for copyright.⁴⁶ French and German laws accord moral rights of attribution and integrity to the author. The moral right of integrity empowers authors to prevent certain changes to the work, even if the author is not the copyright owner. The moral right of attribution (sometimes called the right of paternity) entitles the author to credit. The Berne Convention, to which the United States is a signatory, also recognizes a right of attribution. Indeed, the right of attribution is one of the strongest of the Berne rights.⁴⁷ In the United States, there may be a widespread agreement on a norm of recognition for creativity, absent an agreement to waive the recognition, but there is no general legal right to be credited for one's work.

The right of attribution protected by trademark law focuses mainly on the linking of words, designs, numbers, or sounds to goods and services, and the businesses that sell them. The purpose of a trademark is to identify and distinguish goods or services as coming from a single source.⁴⁸ Thus, it

⁴⁶ International Covenant on Economic, Social and Cultural Rights, Article 15(1), G.A. Res. 2200A, U.N. GAOR, 21st Sess., Supp. No. 16 at 49, U.N. Doc. A/6316 (1966) (entered into force Jan. 3, 1976). The ICESCR recognizes the right to “benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.”

⁴⁷ Article 6bis, Berne Convention for the Protection of Literary and Artistic Works, Paris Act of July 24, 1971, as amended on Sept. 28, 1979, 25 U.S.T. 1341, 828 U.N.T.S. 221, available at <http://www.wipo.int/treaties/ip/index.html>. On moral rights, see Roberta Rosenthal Kwall, *Copyright and Moral Right: Is an American Marriage Possible?* 38 VAND. L. REV. 1 (1985); Jane C. Ginsburg, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, 64 TUL. L. REV. 991, 996 (1990); Henry Hansman & Marina Santilli, *Authors' and Artists' Moral Rights: A Comparative Legal and Economic Analysis*, 26 J. LEGAL STUD. 95 (1997); Edward J. Damich, *The Right of Personality: A Common-Law Basis for the Protection of the Moral Rights of Authors*, 23 GA. L. REV. 1 (1988). Recent comparisons of American, French, and German approaches to moral rights include Dana Beldiman, *Fundamental Rights, Author's Right and Copyright – Commonalities or Divergences?* 29 COLUM. J. L. & ARTS 39 (2005) (reviewing CHRISTOPHE GEIGER, *DROIT D'AUTEUR ET DROIT DU PUBLIC A L'INFORMATION – APPROCHE DE DROIT COMPARE* (2004)), and Adolph Dietz, *ALAI Congress: Antwerp 1993, the Moral Rights of the Author: Moral Rights and the Civil Law Countries*, 19 COLUM.-VLA J.L. & ARTS 199 (1995).

⁴⁸ 15 U.S.C. § 1127 (a federal trademark is “a word, name, symbol, or device” used “to identify and distinguish” goods “from those manufactured or sold by others and to indicate the source of the goods”; a federal service mark is used to “identify and distinguish the services of one person, including a unique service, from the services of others and to indicate the source of the services”). See generally ROBERT C.

functions as a form of attribution. Trademark law explicitly recognizes both sides of the attribution problem: false attributions can harm the true creator both by unjustly denying them the positive reputation effects of being associated with a good product (“passing off”) and by unjustly giving negative reputation effects of being wrongly associated with a bad product (“reverse passing off”).⁴⁹ As will be explained below, all norms-based attribution regimes attempt to deal with the need to allocate credit and blame in proportion to contributions to avoid both passing off another’s work as one’s own and reverse passing off one’s own work as someone else’s.

Until recently, trademark law had been developing a line of cases creating a right of attribution to published works.⁵⁰ The Supreme Court put a stop to it in *Dastar Corp. v. Twentieth Century Fox Film Corporation* when it held that there is no right of attribution for screen credit under the Lanham Act.⁵¹ *Dastar* held that a film whose copyright had expired could be sold without crediting the original “authors” of the work. The original “authors” were, of course, not all the original creators of the film, they were owners of the expired copyright. Intellectual property scholars have generally been critical of the absence of an attribution right even if not of the result in *Dastar*.⁵²

DORR & CHRISTOPHER H. MUNCH, PROTECTING TRADE SECRETS, PATENTS, COPYRIGHTS, AND TRADEMARKS (3d ed. 2002).

⁴⁹ Indeed, this was part of the reasoning in the Court’s opinion in *Dastar* for finding no right of attribution. According to the Court, *Dastar* would have faced a trademark suit whether or not it attributed the work. The prior “author,” Twentieth Century Fox likely would have sued *Dastar* for reverse passing off (that is, selling the revised films as being Twentieth Century Fox’s) if *Dastar* had attributed the films to Twentieth Century Fox; as it happened, *Dastar* did not attribute the film and Fox sued passing off (failing to attribute). Thus, in the Court’s view, the Lanham Act claim was an effort of Twentieth Century Fox to extend its control over the content of the programs beyond the expiration of the copyright; it was not really an effort to protect its reputation as a prior author of the work. 539 U.S. at 36.

⁵⁰ Jane C. Ginsburg, *The Right to Claim Authorship in U.S. Copyright and Trademarks Law*, 41 HOUS. L. REV. 263 (2004); Roberta Rosenthal Kwall, *The Attribution Right in the United States: Caught in the Crossfire Between Copyright and Section 43(a)*, 77 WASH. L. REV. 985 (2002).

⁵¹ 539 U.S. 23 (2003). The relevant provision of the Lanham Act is section 43(a), 15 U.S.C. 1125(a), which prohibits the use of a “false designation of origin” in connection with the provision of “goods or services.”

⁵² See Greg Lastowka, *The Trademark Function of Authorship*, 85 B.U. L. REV. 1171 (2005); Jane C. Ginsburg, *The Author’s Name as a Trademark: A Perverse Perspective on the Moral Right of “Paternity,”* 23 CARDOZO ARTS & ENT. L.J. 379

Generally speaking, United States copyright law does not require the author of a work to be identified. There are two partial exceptions. First, under the Visual Artists' Rights Act of 1990 (VARA), a limited category of "recognized" visual artists have a waivable right of attribution for a "work of visual art," which essentially includes paintings, drawings, prints, sculptures or photographs that exist in limited editions of 200 copies or less and are not works made for hire.⁵³ Second, the multiple authors of joint works (defined by statute as a "work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole") are entitled to control the uses of their work and thus are in a position to insist on attribution.⁵⁴ Cases and scholarship on joint authorship note the difficulty of determining when collaborators on a collective work have made sufficiently significant contributions to be entitled to joint authorship, and under existing law it is extremely difficult for one collaborator to claim joint authorship without the express concurrence of other authors.⁵⁵

The credit function of inventor attribution is well established in patent law because of the longstanding requirement that a patent, to be valid, must correctly identify the true and original inventor.⁵⁶ Scholars of patent law acknowledge, however, that, notwithstanding a body of law governing who

(2005); Jonathan Band & Matt Schruers, Dastar, *Attribution and Plagiarism*, 33 AIPLAQJ 1 (2005).

⁵³ 17 U.S.C. 106A (defining who are visual artists) 101 (defining works of visual art). See RayMing Chang, *Revisiting the Visual Artists Rights Act of 1990: A Follow Up Survey on Awareness and Waiver*, 13 TEX. INTELL. PROP. J. 129 (2005) (an empirical examination of actual practices under VARA).

⁵⁴ 17 U.S.C. 101.

⁵⁵ See, e.g., Roberta Rosenthal Kwall, "Author-Stories": *Narrative's Implications for Moral Rights and Copyright's Joint Authorship Doctrine*, 75 S. CAL. L. REV. 1 (2002); Rochelle Cooper Dreyfuss, *Collaborative Research: Conflicts on Authorship, Ownership, and Accountability*, 53 VAND. L. REV. 1161 (2000); F. Jay Dougherty, *Not a Spike Lee Joint? Joint Authorship of Motion Pictures*, 49 UCLA L. REV. 225 (2001). Leading cases include Thomson v. Larson, 147 F.2d 195 (2d Cir. 1998) (rejecting claim of dramaturg that she was joint author of *Rent*); Childress v. Taylor, 945 F.2d 500 (2d Cir. 1991); Aalmuhammed v. Lee, 202 F.2d 1227 (9th Cir. 2000) (rejecting joint authorship of motion picture); Seshadri v. Kasraian, 130 F.3d 798 (7th Cir. 1997) (paper written by professor and student was joint work; relying on correspondence between the two persons and the listing of author names beginning with student's).

⁵⁶ 35 U.S.C. § 116-117; 37 C.F.R. § 1.45 – 1.48. A patent may be invalidated if the named inventor "did not himself invent the subject matter sought to be patented." 35 U.S.C. § 102(f).

qualifies as a true and original inventor, the attribution of invention is governed largely by norms. Anecdotal reports suggest that the legal consequences of false attribution are invoked only when the norms-based system breaks down.

Another partial attribution right is provided by the common law torts of publicity, false light privacy, and, to some extent, defamation. The right of publicity protects the interest of celebrities to control the use of their name or likeness; the tort of invasion of privacy allows anyone to prevent their name or likeness to be used for commercial purposes or to portray them in a false light; and the tort of defamation prohibits false and damaging statements about a person. The right of publicity, like trademark, focuses on names and on pictures or other representations of a person's likeness.⁵⁷ In that sense, it allows a person to be associated with the persona that her work creates.⁵⁸ The law of defamation and false light privacy protect more generally a reputation, focusing not on the association of the name or likeness with a product but instead on the attribution of facts to the person. All three of these torts can be seen to protect, at least in a general sense, the value of a person's reputation and the right of people to control what actions or characteristics will be

⁵⁷ The analogy between the right of publicity and moral rights is developed in Roberta Rosenthal Kwall, *Preserving Personality and Reputational Interests of Constructed Personas Through Moral Rights: A Blueprint for the Twenty-First Century*, 2001 ILL. L. REV. 151. A recent work urging greater reliance on the analogy between trademark law and the right of publicity is Stacey L. Dogan & Mark A. Lemley, *What the Right of Publicity Can Learn from Trademark Law*, available at <http://ssrn.com/abstract=862965> (November 2005). David Vaver has also remarked on the conceptual similarity of moral rights the torts of defamation and publicity under English law. *Moral Rights Yesterday, Today and Tomorrow*, 7 INTL J.L. & INFO. TECH. 270, 271 (2000).

⁵⁸ Mark P. McKenna, *The Right of Publicity and Autonomous Self-Definition*, 67 PITT. L. REV. ___ (2005). A few cases have upheld false light privacy claims brought by employees against their employers, though none in the context of a failure to credit or falsely blaming employee for work quality. *Shepards Pharmacy v. Stop & Shop Co., Inc.*, 640 N.E.2d 1112 (Mass. App. 1994) (employer appropriated plaintiff's name and likeness in advertisement announcing purchase of plaintiff's business and employment of plaintiff because the advertisement was made before the purchase and employment agreement were finalized); *Negron v. Rexam Cosmetic Packaging, Inc.*, 2006 WL 240528 (Conn. Super. 2006) (rejecting false light privacy claim by employee against employer who posted photos of employee and his dog on a fishing trip because photos were not publicized outside the workplace); *Aranyosi v. Delchamps, Inc.*, 739 So.2d 911 (La. App. 1999) (rejecting defamation and false light privacy claims for lack of evidence of malice); *Aker v. New York and Co., Inc.*, 364 F. Supp. 2d 661 (N.D. Ohio 2005) (allowing defamation claim in context of a public search of plaintiff's person outside a retail store).

attributed to them. But none offers the kind of comprehensive protection for false attributions that make it difficult for some employees in some contexts to accurately portray their abilities and accomplishments.⁵⁹ Moreover, the significant free speech concerns about these torts suggest that a radical expansion to generally protect reputation may not be desirable.⁶⁰

Employment agreements occasionally provide some form of attribution right, particularly when the agreement calls for the payment of a bonus upon achieving certain goals. Most states will enforce, through an action for breach of contract, an express employer promise to pay a bonus to an

⁵⁹ See, e.g., John Ashby, Note, *Employment References: Should Employers Have an Affirmative Duty to Report Employee Misconduct to Inquiring Prospective Employers?* 46 ARIZ. L. REV. 117 (2004) (critically examining the current law on defamation and failure to disclose problems in the context of references for former employees); J. Bradley Buckhalter, *Speak No Evil: Negligent Employment Referral and the Employer's Duty to Warn (or, How Employers Can Have Their Cake and Eat It Too)*, 22 SEATTLE UNIV. L. REV. 265 (1998). Notwithstanding the common perception that employers face possible defamation liability for giving negative references, a sampling of recent cases rejecting such claims makes clear that it is quite difficult to overcome the employer's privilege to make false statements in the context of job references. *Noel v. River Hills Wilsons, Inc.*, 7 Cal. Rptr. 3d 216 (Cal. App. 2003) (rejecting claim because mere negligence is not enough to constitute malice necessary to lose privilege); *Kenney v. Gilmore*, 393 S.E.2d 472 (Ga. 1990) (granting employer defendant's motion for summary judgment finding that defamatory statements in job reference were privileged); *Lawrence v. Syms Corp.*, 969 F. Supp. 1014 (E.D. Mich. 1997) (communication of former employee's past work performance is privileged); *Brunsmann v. West Hills Country Club*, 785 N.E.2d 794 (Ohio App. 2003) (proof of actual malice to defeat privilege requires clear and convincing evidence that former employer acting out of spite made defamatory statements with knowledge of falsity or reckless disregard of truth); *Young v. Jackson*, 572 So. 2d 378 (Mo. 1990) (employer permissibly revealed private health information about one employee to allay fears of other employees as to safety of working conditions); *Welch v. Tellabs Operations, Inc.*, 2003 WL 22970992, 800 N.E.2d 726 (table) (Mass. App. 2003) (unreported) (former employer privileged to give defamatory job reference because of public interest in providing legal protection against defamation claims in reference context).

⁶⁰ See, e.g., F. Jay Dougherty, *All the World's Not a Stooge? The "Transformativeness" Test for Analyzing a First Amendment Defense to A Right of Publicity Claim Against Distribution of a Work of Art*, 27 COLUM. J.L. & ARTS 1 (2003); Gary Williams, *On the QT and Very Hush, Hush: A Proposal to Extend California's Right to Privacy to Protect Public Figures from Publication of Confidential Personal Information*, 19 LOY. L.A. ENT. L.J. 337 (1999).

employee.⁶¹ However, courts often find that the entitlement to the bonus lies within the employer's sole discretion, and therefore deny employee claims.⁶² Bonus agreements are among the many areas where courts are unwilling to treat employment policies as binding contracts. Because employment agreements tend to be informal, oral, and to change over time, judges tend to be skeptical about employee assertions about promises to pay bonuses for outstanding work, just as they are skeptical about promises of job security or fair disciplinary processes.⁶³

A variation on the express contract theory is the covenant of good faith and fair dealing, which is used when the employer did not breach a contract by failing to pay a bonus, but instead attempted to avoid the obligation to pay a bonus earned by firing the employee before the date on which the obligation to pay the bonus actually accrued. A handful of cases have addressed this problem by finding breach of the covenant of good faith and fair dealing, which some states recognize as an implied term in employment agreements. The classic case is *Fortune v. National Cash Register Company*, in which an at-will salesman was entitled, under the terms of the company bonus agreement, to be paid a certain bonus for sales made within sales territory assigned to him

⁶¹ See, e.g., *Ringle v. Bruton*, 86 P.3d 1032 (Nev. 2004) (upholding a jury verdict awarding employee bonus under terms of express agreement); *Kelly v. Stamps.Com, Inc.*, 2005 WL 3485644 (Cal. App. 2005) (unreported) (allows claim under California Labor Code that employee entitled to bonus earned under an express contract).

⁶² See, e.g., *Ferrand v. Credit Lyonnais*, 2003 WL 22251313 (SDNY 2003) (collecting cases) (unreported), *on reh'g* 292 F. Supp. 2d 518 (SDNY 2003); *Coats v. General Motors Corp.*, 3 Cal. App. 2d 340 (1934).

⁶³ A recent effort to address the poor fit between traditional contract doctrines and the evolving and informal nature of most employment agreements, see Robert C. Bird, *Employment as a Relational Contract*, 8 U. PA. J. LAB & EMP. L. 149 (2005). One complaint about bonus regimes, especially those in law firms or investment banks where the bonus is a substantial part of the compensation package, is a lack of transparency about the criteria used to measure performance and how they are applied in a particular case. In an English case involving a media analyst who sued for employment discrimination, the employment appeal tribunal was reported to have said, "No tribunal should be seen to condone a City bonus culture involving secrecy and/or lack of transparency because of the potentially large amounts involved, as a reason for avoiding equal pay obligations." A reform proposed has been for banks and law firms to be more transparent about the criteria for awarding bonuses, as has allegedly been done in advertising and media industries, so that employees can both assess their own performance in light of management's goals, and management is clearer in identifying its goals for employees. Lina Saigol, *City Braced for Litigation on Bonuses*, FINANCIAL TIMES Feb. 2, 2006 at 2.

if the territory was assigned to him on the date of the order, a smaller bonus if the territory was assigned to him at the date of delivery and installation, and a larger bonus if the territory was assigned to him on both dates.⁶⁴ A sale was made into Fortune's territory and Fortune was fired before the date of delivery. The Supreme Judicial Court of Massachusetts held that if the company fired Fortune in order to avoid paying him the bonus due on the date of delivery, it breached the covenant of good faith and fair dealing implied in Fortune's employment agreement, even though, as an at will employee, Fortune could have been fired for good, bad or no reason.⁶⁵

The extant cases, like *Fortune*, take as established that the employee either was or was not entitled to the bonus. No cases have recognized the problematic nature of the determination whether the bonus was earned. Perhaps this is because the only cases litigated are the ones where the bonus agreement was explicit and where the criteria for determining whether the employee had earned the bonus were sufficiently clear and objective so as to make a strong case that the employee had performed up to the standard. Apart from these cases in which employees have entered into a contract expressly requiring attribution as part of a bonus program, there is no recognized contract right to attribution.

⁶⁴ *Fortune v. National Cash Register Co.*, 364 N.E.2d 1251 (Mass. 1977).

⁶⁵ Other cases recognizing availability of a covenant of good faith and fair dealing claim to prevent actions that would deprive an employee of an earned bonus include *Magilione v. Aegis Family Health Ctrs.*, 607 S.E.2d 286 (N.C. App. 2005) (recognizing claim for breach of covenant of good faith and fair dealing when employer changed bonus calculation method in a manner that prevented employee from receiving a bonus per an express bonus agreement); *Lopresti v. Rutland Regional Health Servs, Inc.*, 865 A.2d 1102 (Vt. 2004) (covenant of good faith and fair dealing would provide claim for accrued bonus benefits but no such claim exists on the facts, though employee does have claim for termination in violation of public policy); *A. Brod, Inc. v. Worldwide Dreams, LLC*, 791 N.Y.S.2d 867 (N.Y. Sup. Ct. 2004) (unpublished) (covenant of good faith and fair dealing can be used to challenge actions short of firing that prevent a party from receiving benefits under contract, but cannot duplicate claims for breach of contract). Other states do not recognize the covenant in employment agreements, although in most cases the rejection of the covenant is a rejection of an effort to use an implied contract theory when the court has found no express contract to exist. *See, e.g.*, *Buist v. Van Haren Elec., Inc.*, 2004 WL 2291354 (Mich. App. 2004) (unreported) (rejecting claim for breach of covenant of good faith and fair dealing in connection with alleged breach of bonus agreement; court found no express agreement and relies on earlier Michigan decisions rejecting applicability of covenant of good faith and fair dealing in employment context); *Barber v. SMH (US), Inc.*, 509 N.W. 2d 791 (Mich. App. 1993)).

B. Assessing Attribution Regimes

In this section, I posit and defend criteria that should be used to assess the operation of an attribution regime. Inasmuch as norms-based attribution regimes create and define valuable rights, one can assess them in the same fashion as a public law regime of rights. The vast literature on the value of fairness and due process in governance, as well as the theoretical and empirical studies of the benefits of procedural fairness and participatory governance in the workplace, suggest that some combination of the following six criteria be used in assessing a workplace attribution regime.⁶⁶

Transparency. For the same reasons that most legal systems are and should be relatively transparent -- laws are known and courts are public -- the credit system should be too. The criteria for granting credit should be relatively transparent or publicly known. Transparency motivates people to do the work to earn credit and enables people to conform their conduct so as to avoid blame. The process by which the criteria will be applied should be known or at least discoverable by the people to whom the system applies unless, as explained below, there are good reasons for secrecy.

Third parties may also have an interest in relatively transparent criteria for allocating credit. To the extent that the economic value of credit is a signal, the signal will be less effective (and therefore less efficient) if there is uncertainty about the significance of credit. In other words, the third-party benefit of credit is informational, and muddiness of the signal undermines the value.

Participation. Some degree of participation in a governance process is beneficial both intrinsically and instrumentally. Instrumentally, it is often likely to produce accuracy as to facts. The people who have the best information about the abilities and accomplishments of workers are the

⁶⁶ The value of process generally is discussed in Robert S. Summers, *Evaluating and Improving Legal Processes – A Plea for ‘Process Values’*, 60 CORNELL L. REV. 1 (1974). The value of fair process in the workplace is explored in PHILIP SELZNICK, *LAW, SOCIETY, AND INDUSTRIAL JUSTICE* (1969); Tom R. Tyler & Stephen L. Blader, *The Group Engagement Model: Procedural Justice, Social Identity, and Cooperative Behavior*, 7 PERSONALTY & SOC. PSYCHOLOGY REV. 349 (2003); E. ALLAN LIND & TOM R. TYLER, *THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE* (1988); TOM R. TYLER & STEVEN L. BLADER, *COOPERATION IN GROUPS: PROCEDURAL JUSTICE, SOCIAL IDENTITY, AND BEHAVIORAL ENGAGEMENT* (2000).

workers themselves. Effective unions are thought to contribute to productivity because they institutionalize a mechanism for information sharing in the workplace about the creation and use of tacit knowledge as well as safety issues or cost-saving techniques.⁶⁷ Participation of workers is likely to protect legitimacy of the system and the appearance of fairness that are necessary to employee motivation. Participation has intrinsic value as well. A basic insight of the literature on democracy generally, and workplace democracy in particular, is that participation in governance is intrinsically valued, even if it does not lead to better decisions.⁶⁸

Equality. The equality value applies in the articulation of criteria for credit: in the same workplace it seems desirable that if hours worked matters, they matter equally for all, or if the importance of ideas contributed matters, they matter equally for all contributors. Equality also applies to the application of the criteria: if credit is to be given according to effort, it should not be reserved only for the boss's current lover. Equality in the criteria and their application will motivate people; arbitrary granting of credit will often act as a disincentive to effort. Equality also benefits third parties by enhancing the clarity of the signal conveyed by the attribution. It helps when reading journal articles with multiple authors to know that the first author listed is always the primary researcher, the most senior member of the research team, or the person whose last name begins with the first letter in the alphabet.

Due Process. Due process refers primarily to the processes used to resolve disputes regarding attribution. Whereas participation refers primarily to involvement of people in the quasi-legislative process of determining the credit criteria, the due process value refers to the involvement of the competing claimants in the quasi-adjudicative process of resolving disputes about the application of criteria in a particular case.

The basic elements of due process are notice, a hearing, and a requirement that an unbiased and competent person make a decision based on evidence. An appropriate process could address some of the bias problems in attribution. To do that, the process would need to begin before or at the same time the creative process begins, at least by putting the participants on notice of the need to be cognizant of the attribution issues that may arise in their collaboration. Of course plans for how the parties think they might resolve the

⁶⁷ See Paul Osterman, *The Wage Effects of High Performance Work Organization in Manufacturing*, 59 INDUS. & LAB. RELS. REV. 187 (2006); RICHARD FREEMAN & JAMES MEDOFF, *WHAT DO UNIONS DO?* (1984).

⁶⁸ As to the value of workplace participation, see RICHARD FREEMAN & JOEL ROGERS, *WHAT WORKERS WANT* (1999).

attribution issues might be subject to revision as the process continues and again when it concludes, once everyone knows who wound up actually doing which parts of the work. The challenge would be to marry an awareness of the significance of attribution to the flexibility and generosity that makes ideal collaboration possible.

Efficiency. All four of the process values identified above – transparency, participation, equality, and due process – can be expensive to achieve. Efficiency asks whether the benefits to be gained from improving the system are worth the costs that will be imposed. The basic idea is that where credit determinations are enormously valuable and do not happen terribly frequently (as in the case of screen credit in a major motion picture), it may be worth investing significant resources in getting it right. For credit determinations that happen daily in a firm or frequently in the life of a person, and where the economic and social benefits of credit (or costs, in the case of blame) are correspondingly less likely to be large in any particular instance, it may not make sense for the group to spend substantial resources in getting it right. Thus, choosing the employee of the week in the local supermarket may require less process than choosing who is the lead author of a lead article in a leading academic journal.

Substantive Fairness. Perhaps the most difficult to capture but most elemental notion of a just attribution system is one that gives credit where it is due. The substantive fairness value connotes the idea that credit should bear some relationship to the value of the contribution, whether that is measured in terms of the number of hours worked or the value of the ideas contributed. It applies in articulating criteria for how credit should be attributed: it would be unfair to say that only people born on Tuesday are eligible for screen credit. The problem is defining when credit is “due.” In some cases, it seems perfectly acceptable for one’s boss to take credit for the work of subordinates. When a politician gives a brilliant speech, no one feels it unjust that the politician does not remind the world that the speechwriter deserves the credit. When a company scores a major sale, the person in charge of the deal may not offend anyone’s sensibility by receiving the congratulations of the CEO for closing the deal. And yet in other contexts, it may be wrong to fail to give credit. At the celebratory party after the deal is signed, it may indeed be poor form not to acknowledge the members of the team who worked long hours to bring it about. If the speechwriter seeks a reference to get another job, it may be outrageous, or even a breach of an implicit contract, for the politician to deny that the speechwriter wrote (or worked on) the speech. Context is everything in determining when credit is due. In addition, norms of substantive fairness change. As described below, it used to be conventional in advertising

for the person in charge of an ad campaign to take the credit for it at annual awards ceremonies; now it appears to be conventional to give credit to a large number of contributors to the campaign.

C. Contemporary Attribution Norms and Processes

Bearing those assessment criteria in mind, consider the operation of attribution schemes in five disparate areas of the economy: Hollywood, academic and scientific publishing, business, politics, and the professions. I chose these five areas because collectively they cover a large segment of the economy and individually they are sufficiently distinct from one another to give a fair sense of the variety of attribution regimes that exist. Each of these areas relies primarily on non-legal norms, with a modest degree of legal backup, to create and administer credit systems. All value accurate attribution in some contexts, thus suggesting widespread adherence to a norm of attribution. In the more formal systems, the “right” of attribution operates much like intellectual property rights; in the less formal systems it seems a stretch even to call it a norms-based intellectual property system as much as simply an effort to motivate workers through humane personnel practices or civil interpersonal relations.

1. *Hollywood*

Hollywood (both motion picture and television production) has a highly formal credit system that is thoroughly infused with legally enforceable rules. There are elaborate and legally enforceable rules for granting screen credit. The rules govern whose name will appear and whose will not, and there are rules governing who can be listed under which job title (director, screenplay by, key grip, etc.) and the order and size of the print in which names are listed. The credit rules are the subject of negotiations between the guilds representing various workers and the production companies, but currently the administration of credit is left entirely to the guilds representing each of the forms of talent. One of the most important things that Hollywood guilds do is to administer the credit system.⁶⁹

⁶⁹ See Dougherty, *supra* note 55; Lastowka, *supra* note 52; Robert Davenport, *Screen Credit in the Entertainment Industry*, 10 Loy. Ent. L.J. 129 (1990); Robert L. Gordon, *Giving the Devil Its Due: Actors' and Performers' Right to Receive Attribution for Cinematic Roles*, 4 Cardozo Arts & Ent. L.J. 299 (1985); Michael H. Davis, *The Screenwriter's Indestructible Right to Terminate Her Assignment of Copyright: Once a Story is "Pitched," A Studio Can Never Obtain All Copyrights in the Story*, 18 Cardozo Arts & Ent. L.J. 93 (2000); Stuart K. Kauffman, *Motion Pictures, Moral Rights, and the Incentive Theory of Copyright: The Independent*

Notwithstanding the formality and legally enforceable nature of screen credit rights, informal norms also play a significant role. Producer credits, one of the most important on a movie, are not governed by collective bargaining agreements because the studios do not recognize the Producers Guild as a union. Therefore, some (including a producer of the 2006 Academy Award winning movie *Crash*) complain that producer screen credits are accorded by the Producers Guild unfairly.⁷⁰ Because the guild agreements limit the number of people who can be credited in some roles on any one film, power relations among various possible contenders for credit affect who is listed. Individual workers with significant bargaining power (actors, directors, writers, and producers) negotiate for specific treatment on each project, which may or may not reflect the same level of artistic contribution as compared to others who receive a similar type of credit on a different film or who receive the same credit (or no credit) on the same film.⁷¹ For example, some screenwriters complain that the credit system for screenplays is not sufficiently transparent and favors successful writers at the expense of those without established reputations.⁷² In addition, some complain about the rules for allocating credit between first writers and rewriters, and between directors and producers on the one hand and writers on the other.

In addition, some contributors to a project (lawyers, caterers, and others) may be credited even though they are not subject to guild agreements providing for credit. They may negotiate for credit in the contract in which they agree to work on the project, or they may be given credit at the whim of

Film Producer as "Author," 17 Cardozo Arts & Ent. L.J. 749 (1999). Leading cases on screen credits include: *Marino v. Writers' Guild of America East, Inc.*, 992 F.2d 1480 (9th Cir. 1993); *Baer v. Chase*, 392 F.3d 609 (3^d Cir. 2004); *Williams v. UMG Recordings, Inc.*, 281 F. Supp. 2d 1177 (C.D. Cal. 2003).

⁷⁰ Bob Yari, a producer of *Crash*, has sued the Academy of Motion Picture Arts and Sciences, seeking an injunction that producer credits be determined using a transparent and fair process akin to those used to grant writing and directing credits. See Peter Guber, *Op-Ed, The Producers*, N.Y. TIMES, Mar. 5, 2006, at 15.

⁷¹ The WGA agreement, which allows individual writers to negotiate for terms better than the collectively bargained minimum, specifically prohibits separate deals for screen credit. The negotiation for screen credit happens in the interstices of the system established by the WGA, not in derogation of it. See WGA 2001 Basic Agreement, Art. 9.

⁷² Michael Alan Eddy sued the WGA over its refusal to allow Eddy to participate in the credit arbitration for *The Last Samurai*. The federal judge dismissed the suit in October 2004 on the ground that the guild has wide discretion in credit administration. Dave McNary, *Calmer Seas in New Year Daily Variety*, Feb. 18, 2005, at A2.

the producer or director as a form of thanks. There are significant differences in the processes of credit attribution for star actors, directors, producers, and writers than for the best boys, grips, set painters, and still another set of norms governing credit for caterers, assistants, lawyers, and accountants.

The Writers Guild of America (WGA), the union representing 12,000 writers, administers the credit system for screenwriters. The collective bargaining agreement between the WGA and the Alliance of Motion Picture & Television Producers states that “credits for screen authorship shall be given only pursuant to the terms of and in the manner prescribed in” the Theatrical Schedule A, a thirty-page addendum to the Basic Agreement. Theatrical Schedule A specifies the criteria for screen credit. Disputes over credit are resolved pursuant to the WGA Credits Manual, which is not part of Theatrical Schedule A but is approved by the WGA’s board of directors and by a vote of the WGA membership.⁷³ The WGA has a committee that decides which names to submit to the studios to list as screenwriters. Theatrical Schedule A prohibits screen credit to more than two writers “except that in unusual cases, and solely as a result of arbitration,” three writers or “two writing teams” (each of which can be no more than two writers) may be credited.⁷⁴ It also states, however, that the writers may agree among themselves as to screen credit if they agree unanimously and so long as the number of credited writers and the form of credit are consistent with Schedule A.⁷⁵ Writers who disagree with the Guild’s determination can seek arbitration. In 2002, 67 of 210 feature film writing credits were arbitrated.⁷⁶ The WGA is considering the possibility of including “noncredited writers” in the end credits even if they are not listed in the opening credits as the writers of the screenplay.⁷⁷

As compared to some other credit systems, the Hollywood system rates fairly high in terms of transparency, participation, equality, and due process. Transparency is relatively high because the rules are written down, and disputes over credit are covered in the press. Some degree of transparency is likely to ensure both the fact and the appearance of fairness and regularity. It is not entirely transparent, however. The identity of the WGA arbiters and the

⁷³ See *Marino v. Writers Guild of Am., East, Inc.*, 992 F.2d 1480 (9th Cir. 1993) (describing WGA arbitration procedures).

⁷⁴ Theatrical Schedule A paragraph 4.

⁷⁵ *Id.* Paragraph 7.

⁷⁶ Dave McNary, *Credit Issues*, DAILY VARIETY, Dec. 18, 2003 at A10.

⁷⁷ *Id.* See also Zorianna Kit, *Everyone Wants to Take Credit*, THE HOLLYWOOD REPORTER, Mar. 30, 1999 (describing the credit system for producers which, because the Producers Guild is not a recognized union and has no contract with the studios, operates without contractual constraint).

names of writers in credit arbitrations are both kept secret. There are good reasons for this; arbiters are insulated from pressure and the anonymity of claimants helps ensure that decisions are not affected by favoritism.

Participation is high because the right to establish the rules is collectively bargained between the producers and the guild. The rules for allocating credit and for resolving disputes about it are developed by the guild, approved by the guild's board, and voted on by entire guild membership. Equality and fairness are fairly high, at least at a formal level, because the arbitration process aims to ensure that screenwriting credit is given in proportion to the size and significance of contributions, and the small number of arbitrators who do these cases tends to result in consistency across cases. In practice, however, a lack of equality is one of the most common complaints about the system. Due process is high because there is a three-step arbitration process. Because the system costs significant time and effort, the credit system seems to work only for those contributors (directors, producers, writers, and actors) for whom the financial value of credit is large enough to make it economically sensible to invoke the whole cumbersome process.

The credit system for others seems to be more governed by norms, charity, and power than by law, although there may be some way in which allocation is done in the shadow of the law because of a culture of regularity (if one exists) and the possibility that a guild will make noise about it. Stop-motion animator Mike Jittlov had a contract with Disney that provided no credit to him as an animator. So he spelled out his name in the parade of marching toys that he animated.⁷⁸ Also the system depends on existence of guilds and sophisticated lawyers on both sides both in the negotiating of guild agreements and in negotiating individual contracts – repeat players. In short, the screen credit system in Hollywood for most contributors looks rather unlike the credit system in other industries.

2. *Science and Medicine*

Attribution in the physical and biological sciences, as well as in the social sciences, exhibits many of the same characteristics one sees in Hollywood. Attribution is valuable and is explicitly recognized by everyone to be divorced from intellectual property ownership. Large-scale collaborations are common, and there is a perceived need to have rules and processes for attribution that are more or less uniform throughout the “industry,” so to speak. It is not enough, that is, for each university or laboratory to have its own

⁷⁸ Russell Kay, *Easter Eggs*, COMPUTERWORLD, Sept. 18, 2000.

attribution system; the attributions are relied on and therefore must be reliable to outsiders throughout the field.⁷⁹

Science and medicine use several formal and informal methods of attributing work. The problem of attributing authorship and credit in science has recently gained significant attention within scientific communities and among scholars of intellectual property and related fields.⁸⁰ One reason scientific attribution has received so much attention is that in the scientific field intellectual property rights and attribution rights are so clearly separate. Unlike popular books, films, magazines, or most other copyrighted works, scientific publications (like much academic writing) are usually far less valuable as intellectual property than as claims to truth. In addition, most university and corporate scientists who develop patented inventions have agreed as a condition of employment to assign the patent to their employer or funding source. Thus, the value of scientific authorship is widely recognized to be in the attribution, not in the intellectual property. Because the value of attribution is great, attribution has gained attention. But in science, unlike in other academic fields, a large amount of the work is collaborative, and so the need for and difficulty of making attribution are great as well.

As collaborative research mushroomed in the late twentieth century, the listing of authors and contributors in articles published in scientific journals was perceived, at least by journal editors, as in something of a crisis in the early 1980s, and it prompted an effort to change and regularize the norms of attribution.⁸¹ Science thus offers a unique case study of the failure of one set of attribution norms and an attempt to replace them with new norms and more enforcement. The list of perceived problems that led to the change is long but it is important to consider it in some detail. Among the problems were disputes over whom to include as authors, and in what order. More significant from the

⁷⁹ See generally CORYNNE MCSHERRY, WHO OWNS ACADEMIC WORK? BATTLING FOR CONTROL OF INTELLECTUAL PROPERTY (2001).

⁸⁰ See generally Biagioli, *Documents of Documents*, supra note 31; Biagioli & Galison, supra note 16; Arti Kaur Rai, *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 94 NORTHWESTERN L. REV. 77 (1999).

⁸¹ On the increase in collaboration, see Blaise Cronin, Debora Shaw & Kathryn La Barre, *A Cast of Thousands: Coauthorship and Subauthorship Collaboration in the 20th Century as Manifested in the Scholarly Journal Literature of Psychology and Philosophy*, 54 J. AM. SOC. INFO. SCI. & TECH. 855 (2003); Blaise Cronin, Debora Shaw & Kathryn La Barre, *Visible, Less Visible, and Invisible Work: Patterns of Collaboration in 20th Century Chemistry*, 55 J. AM. SOC. INFO. SCI. & TECH. 160 (2004). On the problems of too many authors, see Kim A. McDonald, *Too Many Co-Authors?* CHRON. HIGHER ED., Apr. 28, 1995 at A35.

standpoint of third parties was the inconsistency of the significance of the order of listing from one institution to another prevented one from using the order of author names as evidence of the degree of contribution.⁸² Another problem was scientists faking data then including another scientist as a “guest author” to improve credibility. Relatedly, journal editors were concerned that companies were paying academics to put their name on studies conducted by the companies’ researchers. A more serious though less prevalent problem was that no one knew whom among dozens of authors to hold accountable for incorrect or fraudulent results; even legitimate co-authors could not guarantee the integrity of other authors’ work on the project. From the standpoint of universities and funding sources, a large number of authors made it difficult to detect when the same research was published multiple times with different authors listed, and academic promotion committees had a hard time evaluating scholars based on number of publications rather than amount of work done. Junior scholars and graduate students complained about not getting any credit when only the senior researchers’ names were put on publications;⁸³ In addition, there were concerns that researchers needed to disclose both their role in published studies and the funding source for the study in order to prevent drug companies from both designing studies likely to favor the companies’ products and suppressing unfavorable results of studies.⁸⁴

Responding to these concerns, and in particular to scandals having to do with fraudulent data, the International Committee of Medical Journal Editors (ICMJE) published a set of criteria for listing authors of papers published, and for ordering names in the case of multiple authors.⁸⁵ The success of the new rules in changing practices regarding listing authors and other contributors is still being studied.⁸⁶ What is clear is that the new rules

⁸² See David W. Shapiro, Neil S. Wenger & Martin F. Shapiro, *The Contributions of Authors to Multiauthored Biomedical Research Papers*, 271 JAMA 438 (1994) (“the nature or extent of contributions of authors cannot be reliably discerned by authorship or order of authorship”).

⁸³ Drummond Rennie, Veronica Yank, Linda Emanuel, *When Authorship Fails: A Proposal to Make Contributors Accountable*, 278 JAMA 579 (1997). See also Thomas Bodenheimer, *Uneasy Alliance: Clinical Investigators and the Pharmaceutical Industry*, 342 NEW ENGLAND J. MED. 1539 (2000).

⁸⁴ Richard Smith, *Maintaining the Integrity of the Scientific Record*, 323 BRITISH MED. J. 588 (2001).

⁸⁵ Rennie, Yank & Emanuel, *supra* note 83; Biagioli, *The Instability of Authorship*, *supra* note 31.

⁸⁶ Seong Su Hwang *et al.*, *Researcher Contributions and Fulfillment of ICMJE Authorship Criteria: Analysis of Author Contribution Lists in Research Articles with Multiple Authors Published in Radiology*, 226 RADIOLOGY 16 (2003); Tamara Bates, *et al.*, *Authorship Criteria and Disclosure of Contributions: Comparison of Three*

changed some norms of acknowledgement and authorship and improved the clarity and consistency of attribution criteria.⁸⁷

Although the norms of attribution in scientific publishing have been formalized to increase transparency and equality, attribution through eponymy remains ad hoc. There is the Salk polio vaccine, Fermat's theorem, Boyle's law, Krohn's disease, and the innumerable stars, plants, and other natural things or phenomena named for their inventor or discoverer. Although studies of the eponymous discovery phenomenon suggest some arbitrariness in the naming process, discoveries have tended to be named for the researcher who: (1) made the first reported observations of the phenomenon or filed the first case reports or disease descriptions of the condition; (2) related isolated cases to one disease, or recognized isolated phenomena as being part of one phenomenon; (3) spent years of study and observation on the same phenomenon; (4) developed a new procedure; (5) already was famous or prominent in the field; or (5) described his or her own condition.⁸⁸

The new rules for authorship in biomedical journals go some distance toward achieving transparency, equality, efficiency, and substantive fairness. There is some reason to believe that senior researchers still have substantial and unreviewable discretion whether to credit junior scholars, graduate students and postdocs, and thus abuses may remain. While there is no evidence that all interested groups were represented in the development of the criteria, and thus participation at that level was low, there remain of course possibilities for individuals to negotiate for credit on a case-by-case basis.

3. *Business*

General Medical Journals with Different Author Contribution Forms, 292 J. AM. MED. ASSN. No. 1 (2004). There are also studies of authorship patterns for journals not covered by the new rules. J.E. Bird, *Authorship Patterns in Marine Mammal Science, 1985-1993*, 39 SCIENTOMETRICS 99 (1997); Cronin, Shaw & La Barre, *A Cast of Thousands*, *supra* note 81.

⁸⁷ There have been recent studies of acknowledgement (as opposed to citation or authorship) practices to identify the significance of acknowledgement as a form of scientific contribution. C. Lee Giles & Isaac G. Councill, *Who Gets Acknowledged: Measuring Scientific Contributions Through Automatic Acknowledgement Indexing*, 101 PNAS 17599 (Dec. 21, 2004), available at www.pnas.org/cgi/doi/10.1073/pnas.0407743101.

⁸⁸ Michael S. Okun, *Neurological Eponyms – Who Gets the Credit?* 12 J. HIST. NEUROSCIENCES 91 (2003).

Businesses attribute credit in collaborative projects to identify, motivate, and reward productive, creative, and diligent employees. A number of generalizations about the nature of credit can be made here; details about the differences among industries are explored below. Rewards are usually in the form of money or promotion. Indeed, monetary bonuses and promotions are sometimes seen as proof of the existence of the contribution rather than as rewarding a contribution whose existence was proven on other grounds.⁸⁹ The bonus thus has a value, beyond the amount of the money paid, as a marker of accomplishment. Non-monetary rewards are sometimes given: Some firms, particularly in low-wage sectors, publicly praise the "Employee of the Week." The work of manufacturing employees is sometimes acknowledged to the public by stamping the employee's name on the product (which used to be common on the bottom of paper bags) or in a package insert saying something like "This product was assembled/inspected by Lucy X." Many firms have annual awards ceremonies. Valued employees are singled out for praise in newsletters or over the company email system. Annual performance appraisals of employees are often used to acknowledge good work. All of these nonmonetary forms of credit are valuable both intrinsically and as signals of underlying value.

Corporate attribution processes vary widely. When firms pay bonuses in cash, ranging from the relatively modest sums to large payments, or give stock options, they typically create some form of regularized process for gathering information about employee performance. The criteria are typically publicized to employees and efforts are made to achieve at least the appearance of even-handedness and a fair process. Some attributions operate entirely internal to the firm, like the Kodak reward system. Others operate on an industry-wide basis. When bonuses are substantial, as is the case in law firms and investment banks, there is sometimes litigation when a firm declines to pay. In one case in which the hiring letter from a Japanese bank to a senior equities trader promised a "discretionary bonus scheme which is not guaranteed in any way," and later fired the trader without paying a bonus notwithstanding that he had earned substantial profits for the company, the English High Court awarded damages of 1.35 million pounds. The court explained that the refusal to pay "was plainly perverse and irrational and did

⁸⁹ Terry Besser, *Rewards and Organizational Goal Achievement: A Case Study of Toyota Motor Manufacturing in Kentucky*, 32 J. MGT. STUDIES 383 (1995); Allan Halcrow, *We've Listened ... & Learned*, 76 WORKFORCE 152 (1997); Bobbi Lambert, *Give Your Company a Checkup*, 74 PERSONNEL J. 143 (1995); J. Michael Crant & Thomas S. Bateman, *Assignment of Credit and Blame for Performance Outcomes*, 36 ACAD. MGT. J. 1 (1993).

not comply with the terms of the employer's discretion."⁹⁰ Such cases are rare because few employees are paid enough to make a bonus worth litigating over. Consequently, attribution systems in most businesses remain largely outside the purview of law. Examples of the operation of several different attribution systems in different sectors of the economy follow.

Graphic Design and Advertising

Industry-wide attribution systems exist in the fields of graphic design and advertising. Both sectors use credit in a way that emulates screen credit, although the process for attribution is a less systematic and less transparent than in Hollywood, and is not the product of formal negotiations between management and employee representatives. As in Hollywood, projects in graphic design and advertising tend to be collaborative, with many people contributing ideas, technical skills, and work to produce a finished product. In the past in graphic design, the annual industry honors for outstanding work (the graphic design equivalent of the Oscars) usually attributed the entire work to one star designer, the head of the design company, or to the company itself. Recently, design annuals have tended to contain long credit listings similar to screen credits in a film. Editors of the annuals who publish graphic design works compile a hierarchical list of contributors. Originally the lists were limited to art directors, designers, photographers, and illustrators, but recently they have grown to include printers, paper manufacturers, copywriters, clients, film separators, and even font designers.⁹¹

Similarly, advertising firms have begun crediting more contributions than was common in the past. When a new advertising spot is released or submitted for an award, the agency that produced it submits a formal credit list. The industry practice is for the director of the group that developed the ad to approve the credit list. Creative directors acknowledge that giving credit is subjective. Inclusion on the credit list is important for job advancement, as a standard procedure in a job interview is to show a book of ad campaigns on which the applicant is credited. The expansion in who is credited, however, can undermine the utility of the credit list; if the contributions of too many people are listed, the ability to determine the extent of the contributions of any one of them is compromised and people may conclude that any particular

⁹⁰ Lina Saigol, *City Braced for Litigation on Bonuses*, FINANCIAL TIMES, Feb. 2, 2006 at 2.

⁹¹ Zuzana Licko & Rudy VanderLans, *Sins of Omission*, 51 PRINT 20 (1997).

person's contribution was insignificant. As a consequence, word of mouth remains an important way of verifying claims to credit.⁹²

An absence of empirical studies of credit in these fields makes it difficult to assess how well the systems operate. A lack of transparency and participation by low-level employees suggest that there are a number of ways in which credit in both graphic design and advertising can be misallocated. It is difficult to verify contributions, the incentives for opportunism are great, and even people acting entirely in good faith may have difficulty identifying who did what on a project. It is unclear how well known the criteria for granting credit are, whether they are relatively uniform, and uniformly followed, across or within firms, and how much input employees have into defining and applying the criteria. Thus it is difficult to assess how the systems rate in terms of equality and due process. On the other hand, it may be that the informality and flexibility allow the system to operate efficiently by calibrating the degree of process in making credit determinations to the value of the credit in a particular case.

Software and Information Technology

Many ways in which firms reward their employees generally are found among computer and information technology businesses. They use credit to motivate employees, to reward employees for particular contributions, and to identify talent for internal promotion. Credit also serves as a form of credentialing that facilitates firms' assessment of job applicants from outside the firm.⁹³ Among the most common ways of acknowledging and rewarding work are praise, gift certificates, bonuses for specific tasks or efforts, attention from upper management, awards ceremonies, including the IT department in important projects, stock options, and profit-sharing.⁹⁴

⁹² See Joan Voight, *When Credit Is Not Due*, 45 ADWEEK 24 (2004).

⁹³ See Julia Vowler & Bill Goodwin, *Supplier Certification Can Give You an Edge*, COMPUTER WKLY., Dec. 4, 2004, at 37; Jeff Moad, *Techies Plug in to Hot Skills*, EWEEK, Apr. 9, 2001, at 64; Jeff Moad, *Solving the Cert Puzzle*, EWEEK, Mar. 17, 2003, at 49; Jeff Moad, *IT Pros Flock to PM Certifications*, EWEEK, Mar. 17, 2003, at 52; Joanna Bean, *Colorado Springs, Colo., Experts Publish Software-Help Books*, GAZETTE (Colorado Springs), Dec. 19, 1999.

⁹⁴ PETER S. COHAN, THE TECHNOLOGY LEADERS 40 (1997); Thomas Hoffman, *DHL Program Seeks to Hold On to IT Staff*, COMPUTERWORLD, Jan. 17, 2005, at 1; Stacy Collett, *Round-the-Clock IT: Making the Balance Work*, COMPUTERWORLD, June 14, 2004, at 32; Mary Brandel, *100 Best Places to Work in IT*, June 14, 2004, COMPUTERWORLD, June 14, 2004, at 21; Jason Snyder, *2005 InfoWorld Compensation Survey*, INFOWORLD, June 13, 2005, at 39, available at

Software developers, unlike some other information technology professionals, are hired to construct creative works. With a few exceptions, programmers who write software for their company to sell generally are not credited outside the company, in part to prevent competitors from luring away employees.⁹⁵ Internally, however, credit is given for a variety of purposes. Source code comments are text added to the program's code to help the people who will maintain the code. It is considered good programming practice for the person who writes a piece of code to put their name in a comment in the source, and for subsequent programmers who modify the source to include their names with the date and description of their changes.⁹⁶ Companies use credit as well as opportunities for employees to pursue their own ideas to encourage innovation.⁹⁷ Credit is so important that subversive claims to it are sometimes made. Computer programmers are known to hide amusing screens called "Easter eggs" in their software, often listing the people who wrote the software.⁹⁸

http://www.infoworld.com/article/05/06/13/24FEcompsurvey_1.html.

⁹⁵ Josh Lerner & Jean Tirole, *Some Simple Economics of Open Source Software*, 50 J. INDUS. ECON. 197, 223-24 (2002). Adobe Acrobat 6.0 is one exception. Choosing "About Adobe Reader 6.0" from the Help menu leads to a screen where the user can see the list of everyone who worked on the product, from engineering to marketing. See also Stuart Roch, *The New Studio Model – A Search for Studiopia*, GAME DEVELOPER, Oct. 1, 2004, at 16 ("Very often, [video game developers'] work is hidden from view by publishers fearful of recruiters and competitive studios"); Tamara Chuang, *Video-Game Trailblazers Remember First Heyday of Home Entertainment Trend*, ORANGE COUNTY REG., Feb. 23, 2004 (noting that in the early 1980's, the video game programmers at Mattel "weren't allowed to put their names on games because Mattel feared that would attract headhunters scouting for other game developers").

⁹⁶ Jack G. Ganssle, *Comments on Comments*, EMBEDDED SYSTEMS PROGRAMMING, Mar. 1, 2002, at 73.

⁹⁷ Evan I. Schwartz, *Sparking the Fire of Invention*, TECHNOLOGY REV., May 2004, at 32. See also Shane Schick, *Tough Times Put Innovation Under Scrutiny*, COMPUTING CANADA, Mar. 28, 2003, at 1. Occasionally, programmers have been able to develop projects for their employers, on their own time, which they have sold to their employers. See Steve Alexander, *Arrested Development*, COMPUTERWORLD, Aug. 25, 1997, at 92 (citing a programmer who moonlighted, at his employer's request, to create a certain piece of software, for which he was paid about 10% of his annual salary and was promoted into management).

⁹⁸ Russell Kay, *Easter Eggs*, COMPUTERWORLD, Sept. 18, 2000. "In the software world, many programs are released simply under a company brand, with no mention of the individuals who put in a lot of work on the product. So you often see Easter Eggs listing the people who worked on the project as a sort of hidden "We made this!"

Open Source Software

The open source software movement offers interesting examples of how credit is given in an environment dedicated to free dissemination of ideas. Open source software is software for which the source code is freely available to the public: “everybody has the right not only to use the software, but also to extend it, to adapt it to his or her own needs, and to redistribute the original or modified software to others.”⁹⁹ Social norms govern “ownership” of open source code: owners are those recognized by the community to have the exclusive right to distribute modified versions.¹⁰⁰ Attribution is important to many participants in the open source movement, even though exclusivity is shunned. Code for open source projects is distributed with files listing the names of contributors.¹⁰¹ Different projects describe contributions in different levels of detail.¹⁰² According to open source norms, “Removing a person’s name from a project history, credits or maintainer list is absolutely *not done*

signature.” *The Easter Egg Archive: Frequently Asked Questions*, at <http://www.eeggs.com/faq.html> (last visited Aug. 3, 2005). See also David Pogue, *The 1998 Egg Awards*, MACWORLD, May 1998, at 170 (“In recognition of their lack of recognition, programmers have learned to take matters into their own hands. . . . In the lingo of programmers, they create *Easter eggs*. Now, because most software companies frown on such frivolous expenditures of talent, programmers must *hide* their Easter eggs (which is why they’re called Easter eggs)”).

Sometimes even those who write malicious code want credit for it. In 1992, a group of self-proclaimed “virus authors” called Phalcon/Skism told a reporter at *Computerworld* that they wrote viruses and post them to web boards in order to impress the other members of the board. Although they hid their real names, they often put their code names and the name of their group into the viruses they released. Michael Alexander, *Challenge, Notoriety Cited as Impetus for Virus Developers*, COMPUTERWORLD, Feb. 10, 1992, at 1, 8.

⁹⁹ Klaus M. Schmidt & Monika Schnitzer, *Public Subsidies for Open Source? Some Economic Policy Issues of the Software Market*, 16 HARV. J. LAW & TEC. 473, 475 (2003). See also The Open Source Definition, version 1.9 at http://opensource.org/docs/def_print.php (last visited June 13, 2005).

¹⁰⁰ Eric S. Raymond, *Homesteading the Noosphere*, FIRST MONDAY, Oct. 5, 1998, at www.firstmonday.org/issues/issue3_10/raymond.

¹⁰¹ See Matthias Stürmer, *Open Source Community Building*, Mar. 2, 2005 at 17-18 at <http://opensource.mit.edu/papers/sturmer.pdf> at 124-146 (reporting interviews with open source participants). The files are not necessarily kept up to date. When asked about the credit system, Guido Wesdorp of open source browser editor Kupu said, “Yes, we have a credits text file in the package. I don’t think it mentions all the developers. Maybe I should correct that.” *Id.* at 128.

¹⁰² See Stürmer, *supra* note 101 at 146.

without the person's explicit consent."¹⁰³ Open source projects may also acknowledge contributors by featuring them on the project's website.¹⁰⁴ There is some evidence to suggest that some programmers participate in the open source movement at least partly out of a desire to build their reputation.¹⁰⁵ One open source programmer explained the credits file has a "business value" to him as a self-employed person: "This is my reference."¹⁰⁶ Others have acknowledged the value of a reputation in the "gift culture" of open source, where "social status is determined not by what you control but by *what you give away*."¹⁰⁷ Although programmers often deny seeking reputation, the taboo against removing someone's name from a program is considered by some to be

¹⁰³ Raymond, *supra* note 100 (emphasis in original). The credits files that are distributed with open source licenses vary in terms of filename and format. Sometimes the most significant contributors are listed in an "Authors" file, while others appear in a separate file called "Thanks." *See also* Stürmer, *supra* note 101, at 124 (quoting an interview with Bertrand Delacrétaiz, who explains that minor contributions to the Apache Software Foundation's Cocoon are included in the status file as they are incorporated into the code, but larger contributions are listed in the credits file). Sometimes the files list specific contributions, and sometimes they do not, but a file called "Changelog" lists exactly what was done at each update of the code. It is common for the project to include a general note of thanks to everyone who contributed suggestions. In addition to its Authors file, GNU Backgammon includes a screen within the application to show the credits list for those who want to look it up.

¹⁰⁴ *See* Stürmer, *supra* note 101, at 146 (interview with Gregor Rothfuss); Schmidt & Schnitzer, *supra* note 99, at 483.

¹⁰⁵ Schmidt & Schnitzer, *supra* note 99, at 482, observe that a "programmer who solved a difficult problem or contributed an important new piece of software signals her outstanding abilities to the outside world. She is recognized by her peers, may get better future job offers, may be invited to participate in commercial open-source projects, or may have better access to the venture capital market if she wants to start her own business." They worry that the desire for reputation gives open source programmers an incentive to produce works only for "sophisticated users who can evaluate the difficulty of the task and the importance of the contribution," but not for the general population of consumers. On the range of motives for participating in the Opens Source Movement, see Lerner & Tirole, *supra* note 95 at 218; Karim Lakhani & Robert G. Wolf, *Why Hackers Do What They Do: Understanding Motivation and Effort in Free/Open Source Software Projects*, Sept. 2003, at <http://opensource.mit.edu/papers/lakhaniwolf.pdf>; PERSPECTIVES ON FREE AND OPEN SOURCE SOFTWARE (MIT Press 2005); Cristina Rossi & Andrea Bonaccorsi, *Intrinsic Motivations and Profit-Oriented Firms in Open Source Software. Do Firms Practise What They Preach?*, Feb. 2005, at http://opensource.mit.edu/papers/rossi_motivations.pdf.

¹⁰⁶ Stürmer, *supra* note 101 at 124.

¹⁰⁷ *See also* Schmidt & Schnitzer, *supra* note 99, at 481; Lakhani & Wolf, *supra* note 105 at 5-6.

explainable only by the desire for reputation, even if it is not accompanied by monetary rewards. Apart from reputation, there is the universal acceptance of the significance of credit as acknowledgement; one software developer said: "As a contributor you feel like my contribution is appreciated."¹⁰⁸

One of the most common challenges facing an attribution scheme is how to allocate credit and blame proportionately to the contribution to counteract the normal tendency of people to claim credit broadly and blame narrowly. Open source licenses are an example of an explicit effort to divorce credit from blame in attribution. All open source licenses seek to prevent bad modifications of the software from being attributed to the original authors.¹⁰⁹ There are different restrictions on what kind of credit should be given to contributors and whether modified code must have source code attached and a license for further redistribution. One common open source license, the GNU General Public License (GPL), requires that those who modify a GPL program must put a notice in the source files declaring that they changed the file in order that recipients of modified software "know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations."¹¹⁰ The Berkeley Software Distribution (BSD) License, another common license used for free software, originally required any advertising of software to contain the list of contributors to the software, but this became unwieldy as contributor lists grew large, and it was finally removed from the BSD license, although there are still software licenses including the advertising clause. The BSD license contains a clause protecting the original authors and contributors from being associated with a modified file.¹¹¹ The license used by the Apache Software Foundation (ASF), a non-profit organization which provides hardware and other infrastructure for open source projects, requires anyone who modifies and redistributes the source code to say that she changed the files and to include the copyright notices of

¹⁰⁸ Stürmer, *supra* note 101, at 142. Cf. Lerner & Tirole, *supra* note 95 at 213-14 (noting "ego gratification" as a motivator).

¹⁰⁹ <http://www.opensource.org/licenses/index.php> (last visited June 13, 2005).

¹¹⁰ GNU General Public License, at http://en.wikipedia.org/wiki/GNU_General_Public_License (last modified June 10, 2005) [hereinafter GPL]. A distinctive feature of the GPL is its requirement that all programs based on a GPL-licensed program must themselves be distributed along with their source code for free, with no restrictions on further redistribution. This ensures that a programmer's employer cannot suppress an employee's improvements to GPL software except by not redistributing it at all. *Id.* § 2(a).

¹¹¹ *BSD License*, at http://en.wikipedia.org/wiki/BSD_license (last modified June 8, 2005); *The BSD License Problem* at <http://www.gnu.org/philosophy/bsd.html> (last updated May 5, 2005).

the pre-existing software.¹¹² Disallowing names within the source files prevents “the creation of personal islands within the codebase,” discourages “the pattern where people try and touch as many files as possible to get their name in as many files as possible,” and directs all liability to the ASF rather than to individual contributors.¹¹³

Creative Commons, like the open source movement, is a nonprofit organization dedicated to free dissemination of copyrighted works. Creative Commons attaches a notice to books and other materials that it distributes stating that while users are free “to copy, distribute, display, and perform the work,” they must “give the original author credit” by attribution.¹¹⁴ It used to allow contributors to the site to disclaim attribution, but since virtually every contributor wanted attribution, they changed their default license option to include attribution.

The experience of organizations devoted to a robust public domain suggests that even those devoted to minimizing intellectual property rights still insist on attribution. Attribution is valued such that contributors must specifically choose to alienate their right to it, and the various organizations have developed a variety of creative, administrable, but in some cases fairly complex credit systems. The attribution regimes appear to be relatively transparent to those who work in software and information technology. The

¹¹² Apache License, Version 2.0, Jan. 2004, <http://www.apache.org/licenses/LICENSE-2.0.txt>; How the ASF Works – The Apache Software Foundation, at <http://www.apache.org/foundation/how-it-works.html> (last visited June 13, 2005).

¹¹³ Stürmer, *supra* note 101, at 146 (interview with Gregor Rothfuss); *Id.* at 124 (“We are very well protected. If for example I made an error in my code and some user of my Apache Cocoon software has problems because of that he can’t sue me since it’s all managed by the foundation”) (quoting an interview with Bertrand Delacrétaiz).

There are other examples of the same phenomenon. The widely-used Mozilla Public License requires anyone who modifies the code to include information about what they changed, when they changed it, and who wrote the original code. Like the others, the MPL also contains explicit denials of warranty and liability. Mozilla Public License version 1.1 § 7, 9, available at <http://www.mozilla.org/MPL/MPL-1.1.html> (last visited June 13, 2005); see also Open Source Initiative OSI – Licensing, at <http://www.opensource.org/licenses/index.php> (last visited June 13, 2005).

¹¹⁴ See, e.g., Creative Commons Deed Attribution-NonCommercial-NoDerivs 2.0. See www.creativecommons.org. A sample of the attribution deed is found in Eric von Hippel, *Democratizing Innovation* (MIT Press 2005), which is available at <http://web.mit.edu/evhippel/www/democ.htm>.

apparent lack of hierarchy within open source organizations suggests a reasonable degree of participation and equality in defining when and how credit will be given in open source as compared to for-profit software development firms. The attribution systems both at traditional firms and within open source seem reasonably efficient. There is no data on how disputes over credit are resolved, nor is it clear whether false claims of credit are made and what happens if they are. While this evidence does not suggest that rights of attribution can never be inalienable, or that the informal and norms-based regimes by which attributions are made need legal intervention, it does suggest that copyright licenses are an area where legal rights to attribution should exist.

Journalism

Norms vary and have evolved in the field of print and broadcast journalism as to when attribution should be made. Generally, the trend in journalism, as with other business sectors, appears to be in the direction of giving credit to more contributors. For example, *Time Magazine* did not give bylines until the 1970s, and then at first only to critics.¹¹⁵ *The New York Times* is the most prominent example. Its practice of expanding attribution appears to be partly a change in the traditionally hierarchical culture in which only a very small number of writers had bylines and people could write for the paper for years without ever seeing a byline. The change is partly a response to recent controversies about falsified stories and inaccurate attribution. For all these reasons, the paper increasingly credits, both by a byline at the beginning of a story and through acknowledgement of contributing writers and researchers at the end, several people who contributed to a story in different degrees.¹¹⁶ One such controversy illustrates the possibility either that norms are evolving or that abuses are now coming to light. Rick Bragg, a Pulitzer Prize winning reporter, was accused of using uncredited “stringers” to assist in the preparation of articles. The stringers conducted research out in the field, interviewed sources, and write some text of the story. According to reports, Bragg then would fly in to the location at the end, complete the story, and file it under his byline with the remote dateline. Although Bragg argued that his use of stringers was

¹¹⁵ *New York Times Suspension Exposes Issue Over Bylines*, WALL ST.J., May 27, 2003 at B1.

¹¹⁶ *Much Ado About Bylines*, THE VILLAGE VOICE, Sept. 24, 2003 at 26; Matthew Rose, Douglas Blackmon & Brian Steinberg, *New York Times Suspension Exposes Issue Over Bylines*, WALL ST.J., May 27, 2003 at B1; Howard Kurtz, *Bylines, Datelines and Fault Lines at the N.Y. Times*, WASHINGTON POST, June 2, 2003 at C1

consistent with common practice and was known to his editors, he nevertheless resigned his position with the *Times*.¹¹⁷

Newspaper writers, including at the prestigious *New York Times*, *Wall Street Journal*, and *Washington Post*, occasionally deploy deliberate nonattribution, known as a byline strike, as a way of publicly protesting objectionable workplace policies. In a byline strike, reporters refuse to allow their bylines to be published, counting on the importance of their bylines to savvy newspaper readers to alert readers to their complaints about the way management handled employment contract negotiations.¹¹⁸ Although reporters have no contractual right to prevent attribution, in byline strikes the newspapers accede to their wishes “in the interest of avoiding unnecessary controversy.”¹¹⁹ The success of such tactics suggests that all parties are aware that individual attribution is an important aspect of a newspaper’s credibility.

In broadcast journalism, the norms of attribution, particularly of contributing writers, are quite different.¹²⁰ It is common not to credit writers or researchers, perhaps because it is thought to be more distracting to use scarce air time to recite the names of people who contributed to a story.¹²¹ Perhaps the issue of uncredited contributors has yet to achieve the status of scandal because people do not tend to assume that the person who reports a story on the air necessarily wrote the story in the way that readers think equate a byline with exclusive authorship.

The most well-known example that maintains a norm of nonattribution is the weekly newsmagazine (which calls itself a newspaper), *The Economist*. It uses no bylines except, by tradition, on articles written by editors on the

¹¹⁷ Jacques Steinberg, *Times Reporter Steps Down Amid Criticism*, N.Y. TIMES, May 29, 2003, at A20; *New York Times Reporter Resigns Over Suspension*, NEWSDAY, May 29, 2003 at 1.

¹¹⁸ Steve Ritea, *The Protest that Knows No Name*, AM. JOURNALISM REV. Mar. 2003; *Reporters’ Bylines Are Withheld*, WALL ST.J., June 16, 2004 at A2; *Baltimore Sun Reporters Stage ‘Byline Strike’: Union Members Protest Plan to Hire Replacements in Case of Full Walkout*, WASHINGTON POST, June 17, 2003 at E4.

¹¹⁹ *Reporters’ Bylines Are Withheld*, WALL ST.J., June 16, 2004 at A2.

¹²⁰ Howard Kurtz, *TV Wary of Problems That Keep Popping Up in Print*, WASH. POST, July 14, 2003, at C1.

¹²¹ Occasionally, however, broadcast journalists do credit researchers. A segment on *All Things Considered* on National Public Radio on January 23, 2006, which included a report read by Lourdes Garcia Navarro from Baghdad also included a statement read by the anchor afterward crediting two persons identified as Iraqi employees of NPR for their contributions to the story.

occasion of their departure from the position. The names of editors and correspondents are found on the staff pages of the *The Economist's* website, but the publication does not credit articles to individuals in order "to speak[] with a collective voice," and to reflect that articles are often collaborative projects among multiple writers and editors, and, most importantly, to maintain the "belief that what is written is more important than who writes it."¹²²

Regardless of the practices with respect to crediting researchers, writers, editors, or producers to the public, there are norms that govern the claiming of credit or responsibility for collaborative projects within the industry, and these norms influence how reputations are made both within an organization (who the paper will nominate for a Pulitzer Prize, who it will promote) and to others in the industry (who wins a Pulitzer or other prize; how a journalist moves from one job to the next).¹²³ It is in this context that the inalienability of credit matters in the creation of human capital. Anecdotal evidence suggests that many journalists have experienced perceived unfairness and have felt that there was little recourse for them.¹²⁴

There appears to be two fairly clear tiers with respect to journalist attributions and the six fairness and efficiency criteria. Overall the system seems to operate quickly and cheaply, and thus seems fairly efficient, given the substantial importance both to individuals and to the organizations. Recognized journalists have good information and quite a bit of power about bylines and thus the norms with respect to them appear to rate high on the scale of transparency, equality, participation, due process, and substantive fairness. With respect to stringers and junior reporters, the situation seems quite different. For example, *The New York Times* credits stringers or free lancers

¹²² www.economist.com. Articles in surveys published in special supplements several times a year are also signed. The paper quotes Geoffrey Crowther, *The Economist's* editor from 1938 to 1956, as saying that anonymity keeps the editor "not the master but the servant of something far greater than himself. You can call that ancestor-worship if you wish, but it gives the paper an astonishing momentum of thought and principle." *Id.* It may also be that the paper relies on a worldwide network of stringers, as well as a staff of about 20 correspondents abroad, and thus wishes seamlessly to blend the work of its editors and correspondents with the on-the-ground research of stringers.

¹²³ On the importance of the Pulitzer Prize in creating reputation, see J. DOUGLAS BATES, *THE PULITZER PRIZE: THE INSIDE STORY OF AMERICA'S MOST PRESTIGIOUS AWARD* (1991) ("In newspaper journalism, the prize works a form of magic that defies logic or easy explanation. No other newspaper award – and there are at least three hundred – comes close to the high stakes of the Pulitzer").

¹²⁴ See *infra* III.A.

only in rare cases where “their pieces reflect unusual enterprise or unusual writing style,” which appears to be a discretionary determination of editors over which employees have little influence.¹²⁵

4. *Politics and Government*

The norms of attribution within the vast bureaucracies of government are fascinating and have been much in the news lately as Americans have tried to figure out whether to attribute memos written by young Justice Department lawyers to them later in their careers as they have been nominated for positions on the Supreme Court, or whom to hold accountable for memos advocating the legality of torture. Anyone who has worked for a government knows the multiple functions of author identification. The memos are almost always written to advise someone in a decisionmaking capacity about what the government’s official position or course of action should be; they usually do not represent the views of the decisionmaker until approved. The actual author(s) is/are identified so that the higher-ups know to whom to direct questions, which people are behind the work (which may say something about credibility), which department an initiative is coming from, and often who has reviewed and approved the contents. But government employees know that memos are sometimes used to assess the analytic or research abilities of the employees who wrote them, and authorship of an important memo can be a status marker.

Speech writers

Speech writers present an interesting example where there is obviously a norm of non-attribution. This is an area where we’re prepared to allow people to contract for anonymity, or, rather, for the transferability of attribution. We attribute a politician’s speeches to the politician, not to the speech writer. The alienability of attribution allows speech writers to earn a living and politicians to spend less time crafting speeches and more time on other tasks. Moreover, politicians can articulate more finely nuanced positions, and do so more eloquently, than if they had to write their own speeches. Of course, they could still do all that even if they had to give credit to speech writers. One might argue that in a regime in which voters, commentators, and the press treat speeches as evidence not merely of the policy agenda of the administration but also of the personality of the person, transferability of attribution may encourage an undesirable laziness in the way we think about politics and

¹²⁵ Matthew Rose, Douglas Blackmon & Brian Steinberg, *New York Times Suspension Exposes Issue Over Bylines*, WALL ST.J., May 27, 2003 at B1.

personality. We get away with it only by forgetting that the politician who gives a speech, especially when the politician has a large staff of advisers, speech writers, issues advisors, etc., is more of a spokesperson for group than an individual whose personal qualities (whether of intelligence, folksiness, judgment, or personal rectitude with respect to matters financial or sexual), somehow makes him or her more or less fit to govern. In other words, the complex of norms and contracts that enables the complete transferability of attribution in speech writing may facilitate a cult of the personality in politics that we would be better off without.

In contrast to Hollywood, where a norm of attribution humanizes a product by reminding the viewing public that real people are behind the massive fantasy of movies, the norm of non-attribution is what seems to the voting public to humanize politicians. A really good speech or turn of phrase (“Ask not what your country can do for you”; “The only thing we have to fear is fear itself”; “Mr. Gorbachev, tear down this wall”) can become an emblem of the person, not merely the policy proposal of the administration.¹²⁶ Yet the relationship between attribution and the humanity of the participants in a collaborative process is complex. A recent memoir by a ghost writer who made a respectable income for several years ghost writing not merely official writings and speeches but also love letters and personal correspondence, suggests that the ghost writing experience had some degrading qualities both

¹²⁶ Although conventional wisdom for a time credited Kennedy speech writer Ted Sorenson with the “Ask not” speech, a recent book asserts that Kennedy deserves substantial credit for it. THURSTON CLARKE, *ASK NOT: THE INAUGURATION OF JOHN F. KENNEDY AND THE SPEECH THAT CHANGED AMERICA* (2006). The “Tear Down This Wall” speech was given by President Reagan at the Brandenburg Gate of the Berlin Wall on June 12, 1987. See <http://www.reaganfoundation.org/reagan/speeches/wall.asp> (last visited Feb. 22, 2006). Credit for that speech has been taken by many, including Peter Robinson, who passes on the credit for “the key phrase” to “a woman I met at a dinner party,” and to Ronald Reagan who is the person responsible for keeping the phrase in the speech. See Peter Robinson, *Tearing Down That Wall*, *HOOVER DIGEST* (1997), available at <http://www.hooverdigest.org/974/robinson.html> (last visited Feb. 22, 2006). FDR’s famous first inaugural, in contrast to inaugural speeches since Lincoln’s brilliant second inaugural, “show[ed] the advantages of full-scale ghostwriting -- although he encouraged the myth that he wrote his famous first inaugural address in one vigorous night of work at Hyde Park. According to biographer Kenneth Davis, Roosevelt hand-copied a draft by speechwriter Raymond Moley, apparently so it would look like his own work.” David Von Drehl, *History Will Judge the Message and Its Messenger: Not All Oratory By Presidents Created Equal*, *WASHINGTON POST*, Jan. 30, 2005 at A36.

for herself and for the person for whom she wrote.¹²⁷ A ghost, after all, is usually portrayed as a hollowed out human being who is not really alive. In the case of the ghost writer, the memoir makes clear that both the writer and the person who hired her were ghosting.

Judicial Opinions

Judges traditionally receive substantial and largely uncredited assistance from law clerks in drafting opinions, even if judges decide for themselves how the case should come out. There are good reasons (apart from tradition) for the norm of non-attribution. The authority of judges might be doubted if it were commonly recognized that recent law school graduates do much of the work of providing reasons. It is difficult to separate the idea from its execution, and thus hard to attribute responsibility for the decision on each point, the original articulation of rationale, the evolving reasoning through multiple revisions, and the final wording. It is both psychologically and politically desirable to encourage law clerks to elide their role in persuading the judge, for if clerks could publicize their disagreement with their judge, judges might either be less candid with their clerks or would have to defend their reasons other than just in the written opinion. Most lawyers and judges regard both the role of the law clerk in drafting and the norm of non-attribution as unproblematic in most cases, although some judges have remarked publicly that judges should eschew clerk drafting of opinions. And even those judges who find it unproblematic to have clerks draft substantial portions of opinions, or at least early drafts of opinions, would likely be troubled if a judge delegated the entirety of the opinion-writing task in every case to clerks.¹²⁸

There is an interesting norm of attribution regarding clerks' work. While it is entirely acceptable to note which judge one clerked for during which term, many consider it poor form for a former clerk to say anything about one's work beyond "My judge had before her the case of *So and So v. Such and Such*, or maybe, I worked with my judge on *So and So v. Such and Such*. Yet hiring decisions for people who clerked are explicitly made on the assumption that during the clerkship the law clerk received valuable training about legal analysis and learned how that judge, and perhaps others on the same court, approaches cases, and that the former clerk will, in the new job, impart that knowledge to his or her law practice colleagues or students.

¹²⁷ See generally ERDAL, *supra* note 45.

¹²⁸ Stephen J. Choi & G. Mitu Gulati, Which Judges Write Their Opinions (and Should We Care)?, available at <http://ssrn.com/abstract=715062>.

(Non)Attribution norms in politics and government are perhaps the most troubling to assess in terms of the fairness and efficiency criteria because we recognize both the desirability that government speak with an official voice, rather than the voices of many individuals, and the desirability that government be accountable. Here, too, there is a tension between the view that government requires a heightened sense of confidentiality and secrecy to protect the candor and efficacy of deliberations of government from undue influence and outside threat and the countervailing view that in a democracy transparency and accountability are essential.

5. *Professional Certification*

In contrast to the worlds of business and academia, where attribution is governed only by norms or by contract (as in the case of Hollywood), the professions have legally mandated requirements of attribution as well as norms. The legal requirements of attribution are almost uniformly designed to enforce the disciplinary function of attribution, the norms of attribution operate pretty much as they do in other sectors, as rewards and as brands. Because the legal requirements of attribution are distinct, it is to those that I devote the most attention here.

All U.S. states have statutes for professional registration of building design professionals such as architects and engineers.¹²⁹ The basic principle in most states is that each architect and engineer who is licensed to design buildings and structures has a seal which law requires that he or she affix to plans, drawings, specifications or other formal design documents to certify that architect or engineer personally prepared or reviewed it. For example, in Indiana the engineer's seal "attests that: (1) The work embodies the engineering work of the registrant; (2) the registrant or an employed subordinate supervised by the registrant prepared the documents . . . (3) The registrant assumes full professional responsibility for the documents; and (4) The work meets standards of acceptable engineering practice."¹³⁰ Licensing boards in many states are empowered to take action against an architect who uses his or her seal or allows it to be used on documents that the architect has

¹²⁹ STEVEN G. M. STEIN, 1-1 CONSTRUCTION LAW § 1.01[a], Release 54, June 2005.

¹³⁰ Indiana Statutes § 25-31-1-16. *See also* 22 Texas Administrative Code § 137.33 ("(a) The purpose of the engineer's seal is to assure the user . . . that the work has been performed or directly supervised by the professional engineer named and to delineate the scope of the engineer's work. (b) License holders shall only seal work done by them, performed under their direct supervision . . . Upon sealing, engineers take full professional responsibility for that work.")

not personally prepared or supervised the preparation of.¹³¹ Engineers and architects have been disciplined by licensing boards for allowing their seal or signature to be used for plans they did not create and for which they did not supervise the drawing. Though rarely imposed, criminal sanctions for misuse of a seal also exist in many states.¹³²

The responsibility of engineers for defects in buildings has at times been a subject of some controversy within the professional engineering circles. A particularly revealing example arose from the collapse of a suspended walkway in a Hyatt Hotel in Kansas City, Missouri, in which 114 people were killed and nearly 200 were injured. The incident raised questions about whether accepting responsibility for the defects was a price to be paid by the engineers.¹³³

The cause of the collapse may have been that in the rush to complete the hotel building on a fast track, the engineers left unspecified (that is, for the fabricators to work out) a detail about how suspended walkways were to be connected to the supporting rods. The engineers' sketch suggested a single set of rods should connect the walkways to the ceiling but on the construction site it became apparent that such a design was unworkable so two sets of rods were used. During construction, engineer Daniel Duncan was asked about the design change six times, and each time said that the change was safe. Jack Gillum, the head of Duncan's firm, placed his seal on the documents as the engineer of record.

After the walkway collapsed, no criminal charges were filed against the engineers, and insurance companies settled the civil suits. The Missouri licensing board did, however, revoke the two engineers' licenses. The licensing board rejected the defense that the project was too complex for the engineers to have personally checked every detail and found Duncan guilty of gross negligence because he made assurances about the safety of the design without actually checking it.¹³⁴ Gillum was found responsible as well, based

¹³¹ Wyoming Statutes § 33-4-115. Pennsylvania's licensing board can take action against "[a]n architect who impresses his seal or knowingly permits it to be impressed on drawings, specifications or other design documents which were not prepared by him or under his personal supervision." 63 P.S. § 34.12.

¹³² STEIN, *supra* note 129 at § 1.01[c] & n.65.

¹³³ This account of the incident is drawn from Sarah K. A. Pfatteicher, "The Hyatt Horror": Failure and Responsibility in American Engineering, 14 J. PERFORMANCE CONSTRUCTED FACILITIES 63 (2000), and from Duncan v. Missouri Board of Architects, Professional Engineers and Land Surveyors, 744 S.W.2d 524 (1988).

¹³⁴ 744 S.W.2d at 541.

on the licensing law that held a professional engineer “responsible for the contents of all” documents he sealed.¹³⁵ The Court of Appeals of Missouri, in affirming the licensing board’s decision to revoke both engineers’ licenses, explained that “the whole thrust of” the law requiring engineers to put their seal on plans “is to place individual personal and professional liability upon a known and certificated engineer.” In the court’s view, the statute authorized discipline of “the engineer responsible for the project whether the improper conduct is that of himself or attributable to the employees or others upon whom he relies.”¹³⁶ Other state licensing boards also revoked Gillum’s and Duncan’s licenses.¹³⁷ The American Society of Civil Engineers’ Committee on Professional Conduct found Gillum “vicariously responsible . . . but not guilty of gross negligence nor of unprofessional conduct” and suspended him for three years.¹³⁸ Duncan was not a member of the ASCE, so his liability was not addressed by that organization.

There are multiple reasons and many norms governing when a professional will put her name on a case. Lawyers want their names on pleadings to make a reputation and as a measure of their hard work and to have some control over the course of litigation. Judges use the names on briefs as a measure of the importance the case and the reliability of the arguments made, and other lawyers use the names on pleadings, like doctors use signatures on medical records, as a way to know whom to contact in case of questions. But where law requires the naming of the professional, it is usually for purposes of accountability for poor work. Rule 11 of the Federal Rules of Civil Procedure, which requires lawyers to sign all court filings in order to hold accountable those who sign frivolous filings, is another form of professional certification designed to attribute poor work for the purposes of deterrence and punishment.¹³⁹ The legislatures that enacted the engineer and architect’s seal

¹³⁵ Missouri Revised Statutes § 327.411.

¹³⁶ 744 S.W.2d at 538.

¹³⁷ Pfatteicher, *supra* note 133 at 65. Duncan never worked again as an engineer. Gillum, however, became president of a southern California engineering firm in 1992, and California restored his license in 1994.

¹³⁸ *Id.* at 65 (quoting ASCE-Committee on Professional Conduct, *Disciplinary Proceedings: Case of Mr. Jack Gillum, M. ASCE*, Docket No. 1982-6 (1986)).

¹³⁹ Rule 11 provides, in pertinent part, that “[e]very pleading, written motion, and other paper shall be signed by at least one attorney of record” and that “[b]y presenting to the court (whether by signing, filing, submitting, or later advocating) a pleading, written motion, or other paper, an attorney . . . is certifying that . . . it is not being presented for any improper purpose . . ., the claims, defenses, and other legal contentions therein are warranted by existing law . . ., [and] the allegations and other factual contentions have evidentiary support . . .” FED. R. CIV. P. 11.

regulations and the Advisory Committee that adopted Rule 11 deemed neither the norms of professional competence and zeal nor the reputation costs of ineptitude, nor even possible malpractice liability sufficient to counteract the incentives for misfeasance.

Greater transparency, equality, and due process were thought necessary when putting a name on a case would be the basis for punishment, and thus it was in these cases where legislatures decided that the norms-based systems of attribution were inadequate. With the enactment of the Sarbanes-Oxley Act in the wake of the Enron scandal, we see a similar instinct: greater individual accountability is necessary in some work environments where wrongdoing can be too easily buried in collective responsibility.¹⁴⁰ Given the serious punishments that violations of these statutory attribution systems can visit, transparency and due process are valued highly. In all of these areas, legislatures imposed a requirement of individual attribution with greater attention to transparency, equality, and due process than previously exhibited by the norms-based systems. They did so for the purpose of disciplining offenders.

* * *

One of the most intriguing things about the attribution regimes described above is the variety and nuance that exists for making attributions. Norms perform credit, blame, branding, and humanizing functions for a welter of collaborative projects. In a few areas (such as professional responsibility) norms are supplemented but not supplanted by laws, and when they are the requirements of equality and transparency are taken very seriously. Across fields over the last generation there has been a tendency to expand the number of people and the types of contributions that are attributed. Credits have grown longer and more elaborate in the movies and in advertising and graphic design; more researchers are acknowledged in print journalism and in science. The expansion of attribution may be because the financial rewards for attribution have increased, and it may be in part because workplace hierarchies are less stable in a post-60's culture than they used to be. As attribution has grown more prevalent, norms have adjusted to explain, with the appropriate nuance, where and to what degree blame will be allocated when a project fails.

¹⁴⁰ Sarbanes Oxley Act, Pub. L. 107-204, 116 Stat. 745 (2002); JOHN T. BOSTELMAN, *THE SARBANES-OXLEY DESKBOOK* (2003).

III. When and Why Attribution Regimes Fail

Most existing attribution schemes have significant flaws, and the flaws matter. In this section, I attempt to generalize about when false attributions are problematic and to suggest that the failures of existing norms-based or contract-based attribution systems are neither isolated nor inconsequential. In the first part, I describe, from the perspectives of employees, employers, and third parties, why attribution problems exist and attempt to generalize about what causes the problems. In the second part, I theorize about why the problems are examples of market failure and consider other arguments for legal regulation.

A. Why Attribution Failures Occur and Why Failures Matter

From the perspective of employees who contribute to group projects, attribution problems occur in a number of circumstances for several reasons but they can all be boiled down to two. First, the most common complaint is that attribution is wrongly made between people of dramatically unequal social or economic power. The abuses of power are difficult to check in the privacy of interpersonal work relationships when others cannot monitor who did what on a project. The supervisor often has the power to make or break a young person's career through promotion, firing or giving a positive or negative review; the young worker often does not have the power to challenge her. Graduate students often feel themselves too dependent on the good will of the senior professor to challenge his or her claim of credit for work that should properly be attributed to the student. Particularly in the case of graduate students or junior faculty, it is simply not an option to go work elsewhere when a false claim of credit is made. The norms of the work relationships may frown on job changes, and the labor market for graduate students or junior faculty often make a job switch impossible after only a short period of employment.¹⁴¹

A second and related complaint about attribution is arbitrariness. Among the circumstances in which it is possible that attribution will be wrongly made, employees have difficulty knowing in advance how attribution will be done. Two journalists whom I interviewed for this project told a similar story of when they were young reporters free-lancing for newspapers in different cities. Each researched and wrote newspaper stories that wound up getting a fair amount of attention in the newspaper. One journalist said that the

¹⁴¹ Sandip H. Patel, Note, *Graduate Students' Ownership and Attribution Rights in Intellectual Property*, 71 IND. L.J. 481 (1996).

editor who assigned her the project said that the story was too important to be published under the byline of a free-lance writer whom no one had ever heard of, so he put his byline on it instead. The journalist said she felt there was no one in the newsroom to whom she could complain about the incident because either people would not believe her, or higher-ups would agree that the credibility the story (and hence the newspaper) would gain from being published under an established byline was more important than her career. She also feared alienating the writer/editor on whom she depended for more assignments and for her hope of career advancement within the paper. The other journalist said that he was in a similar situation except that the senior writer who assigned the project said: “you need this byline to make your reputation, and I don’t. Let’s put your name on it.” The disparity in treatment of the two journalists illustrates the problem of arbitrariness in who is credited and who is not, depending on the good will, whim, or conscience of senior workers.

One might say that the market will correct for both the abuse of power and the arbitrariness of attribution. That is, powerful people who opportunistically but inaccurately claim credit will get a bad reputation and have difficulty attracting talented young collaborators. The problem is that it is often difficult for junior people to know which people to avoid and, once they have stumbled into a relationship where inaccurate claims are made, to correct the record. An example from Hollywood illustrates the difficulty of correcting the record. The WGA arbitration process determined that Susannah Grant wrote the script for *Erin Brockovich*, and that the contributions of the rewrite by Richard LaGravenese were simply mild restructuring and some new dialogue which did not amount to a fifty-percent revision necessary for screen credit. Nevertheless, Julia Roberts (whose every word is widely reported in the press) said when she received an Oscar and in many other contexts that LaGravenese had written or co-authored the script. This prompted Grant to lament: “It’s incredibly painful and galling for people to say that the best work you ever did was written by somebody else. . . . [O]ther than carrying scripts around in my handbag and saying to every person I meet, ‘Here are the three drafts I wrote, and I’d like you to spend seven hours reading them,’ there’s nothing I can do.” Of course, Grant did get the sole screen credit and was nominated for an Oscar, so she fared much better than most whose work is not correctly attributed. But even she claims her reputation suffered. One of the reasons that workers in Hollywood like the public aspect of screen credit is that it creates certainty – once you’re listed on screen, it is difficult (though not impossible as the Susannah Grant episode illustrates) for credit to be taken away on a whim.

One final note about these employee concerns about attribution: the harm may be more than just hurt feelings or lost earnings, although those can be nontrivial. Employees aware of the risk of misattribution, especially if they believe it cannot be prevented or remedied, experience anxiety. Moreover, the fear of an inaccurate reference can prompt people to avoid making desirable job switches. Misattribution is a particularly severe restriction on labor market mobility, and in today's economy that mobility is particularly valued as an engine of economic growth. An emerging literature suggests that today's employees face greater risks than at any time in the last half century, and they know it.¹⁴² Periods of unemployment last, on average, fifty percent longer now than in the 1970s, and a smaller percentage of unemployed people receive unemployment insurance now as compared to the 1940s. Employees are being asked to be entrepreneurial in many aspects of their lives, including in being willing to switch jobs, retrain, and fund their own health care and retirement through investment savings accounts, so they need to believe that they will have the ability to compete in the labor market. Of course, anxiety about attribution is only a small part of what makes the modern labor market risky. Nevertheless, employees are more motivated when they believe they will get credit for good work and not be falsely blamed for bad work. In this respect, accurate attribution is to employee effort as the stability of legal regimes or security of property rights are to investment: all are important to encouraging effort and entrepreneurship.

From the perspective of employers, false attributions present different problems. Prospective employees have incentives to lie on their resumes about all kinds of things: whether or where they got academic degrees, the nature and extent of prior work experience, and why they left past jobs. Employers complain that while some resume fraud can be detected with some time or expense (you can confirm whether someone graduated from a university, though often not what their grades were), it is difficult to detect deception about past work experience because prior employers often decline to give detailed job references describing what the employee did and why they left. Trademark law exists because of the possibility of passing off one type of good as something else. But there is no trademark law that applies to employees. Many firms decline to give job references (perhaps fearing defamation suits for negative references), and even when references are given there is no guarantee of reliability, as no jurisdiction provides for liability for a falsely positive reference absent intentional fraud likely to cause serious harm. There is in

¹⁴² Recent literature on employees and increased risk is clearly and briefly summarized for a lay audience by James Surowiecki in *Lifers*, THE NEW YORKER, January 16, 2006, at 29. See also JACOB HACKER, GREAT RISK SHIFT (2006).

most jurisdictions no cause of action against a former employer for misrepresenting or failing to disclose the known defects of a former employee and no cause of action against an employee for lying on a resume.¹⁴³

Employers also experience attribution problems with respect to evaluating current employees. Supervisors can take credit from or pass blame to subordinates without easy detection from upper management. The difficulty with attribution is not merely a problem of bad faith but one of institutional design. Participants in some group projects often do not know exactly what their contributions are. Ex ante, they don't know what the project will entail, how long it will take, who will contribute how much in terms of time, useful ideas or skills along the way, or even whether the project will succeed enough to make it worth thinking about who did what. Ex post, people have a hard time reconstructing what their contribution was, and psychological literature shows a tendency of people to exaggerate (in their own mind) their successful interventions and to forget their failures. Some of the literature even suggests that it is entirely rational for participants to exhibit this form of overconfidence in their abilities and skill.¹⁴⁴ The ex post problem thus will matter both when a project succeeds past the creators' expectations and fails in unanticipated ways. When the project succeeds, collaborators will come out of the woodwork to claim credit, and when it fails, collaborators will disappear just as quickly to

¹⁴³ John Ashby, Note, *Employment References: Should Employers Have an Affirmative Duty to Report Employee Misconduct to Inquiring Prospective Employers?* 46 ARIZ. L. REV. 117 (2004); Susan Oliver, *Opening the Channels of Communication Among Employers: Can Employers Discard Their "No Comment" and Neutral Job Reference Policies?* 33 VAL. U. L. REV. 687 (1999). One of the very few cases suggesting liability for a falsely positive reference, *Randi W v. Muroc Unified School Dist.*, 929 P.2d 582 (Cal. 1997), limited the claim to circumstances in which the former employer knew of and intentionally failed to disclose the employee's propensity to cause serious bodily harm while affirmatively recommending the employee for employment.

¹⁴⁴ See, e.g., Eric Van den Steen, *Skill or Luck? Biases of Rational Agents* MIT Sloan School Working Paper 4255-02 (June 2002), and sources cited therein; Brice Corgnet, *Team Formation and Biased Self-Attribution* Working Paper available on SSRN (October 2005); D.T. Miller & M. Ross, *Self-Serving Biases in the Attribution of Causality: Fact or Fiction?* 82 PSYCH. BULL. 213 (1975); G.W. Bradley, *Self-Serving Biases in the Attribution Process: A Reexamination of the Fact or Fiction Question*, 35 J. PERS. & SOC. PSYCH. 56 (1978); M. Zuckerman, *Attribution and of Success and Failure Revisited or, The Motivational Bias is Alive and Well in Attribution Theory* 47 J. PERSONALITY 245 91979); J.D. Brown, *Evaluations of Self and Others: Self-Enhancement Biases in Social Judgments*, 4 SOCIAL COGNITION 353 (1986); S. Gervais & I. Goldstein, *The Effects of Biased Self-Perception in Teams* [Fuqua Working Paper 2004].

avoid blame.¹⁴⁵ Objective measures of accomplishment can sometimes be verified, but subjective measures are notoriously difficult without direct observation, and even with direct observation it is often difficult to assess the use of tacit knowledge.¹⁴⁶ Employers thus face significant obstacles to getting accurate information about employees.

Third parties also have interests in accurate attribution and are harmed when false claims are made. A plumbing contractor who hires an inept plumber hurts not only his reputation but his clients. Attribution issues in science undermine the integrity of research. In theory, scientists share credit with collaborators, cite data from competing labs, acknowledge contributions from students, and make their work available to others. In practice, scientists often feel pressure to claim individual credit that may not be individually deserved in order to secure access to grant funding, to gain promotion or tenure, to secure prestigious publications that will aid in the wide dissemination of their research, or to recruit high-quality graduate and post-doctoral students for the laboratory.¹⁴⁷

B. Why Legal Regulation of Attribution is Desirable

¹⁴⁵ Rochelle Cooper Dreyfuss, *Collaborative Research: Conflicts on Authorship, Ownership, and Accountability*, 53 VAND. L. REV. 1162 (2000), notes many of these problems. One of the most well-known cases addressing the ex post problem of reconstructing the degree of contributions to a work after the fact was the dispute over authorship of the Broadway musical, *Rent*. The dramaturg who had collaborated with the playwright sued to establish her status as a joint author after the playwright died unexpectedly just after the last dress rehearsal and the playwright's family denied that she had been a joint author. *Thomson v. Larson*, 147 F.3d 195 (2d Cir. 1998). The dramaturg later explained: "I am often asked why I had no contract. The short answer is that I didn't know Jonathan Larson was going to die. I trusted his decency and I still do. We discussed our relationship and his obligations and beyond that I made no efforts to draw attention to my contributions." Quoted in Roberta Rosenthal Kwall, "*Author-Stories*": *Narrative's Implications for Moral Rights and Copyright's Joint Authorship Doctrine*, 75 S. CAL. L. REV. 1, 54 (2001). See also *Aalmuhammed v. Lee*, 202 F.3d 1227, 1235 (9th Cir. 2000) (joint authorship should err on the side of limiting the number of people who qualify as joint authors, lest "research assistants, editors, and former spouses, lovers and friends" appear suddenly to claim a share of the credit and profits for a successful work).

¹⁴⁶ See sources cited *supra* note 9.

¹⁴⁷ Jon Cohen & Gary Taubes, *The Culture of Credit: Scientific Ideals Call for Collaboration and Sharing*, 268 SCIENCE 1706 (1995); Katherine W. McCain, *Communication, Competition, and Secrecy: The Production and Dissemination of Research-Related Information in Genetics*, 16 SCI. TECH. & HUMAN VALUES 491 (1991).

The nature of a resource should define the rights to it. The commodity value of credit is informational. Credit loses its value, at least to some consumers and to the producer, if it is transferred because accurate information is lost. An argument might be made that the right to attribution must be nontransferable in any circumstance in which the value of accurate attribution is greater than the value of misattribution. I do not argue that all forms of attribution must be inalienable: there should remain a role for informal collaboration, speech writers, anonymous authors, and uncredited research assistants, muses, and amanuenses. I also recognize that in many cases it is difficult or impossible to define in advance of creation how credit will be allocated, and once creation has occurred it is equally difficult to reconstruct retrospectively who did what. Nevertheless, as we know from the variety of attribution schemes that exist, it is both possible and desirable to achieve some degree of certainty about who did what. When norms-based regimes fail, law is a desirable supplement.

As has been shown, credit is valuable and, consequently, collaborators often are tempted opportunistically to claim credit where it is not due. The temptation cannot be fully controlled simply by voluntary agreement for reasons encapsulated in two ordinary examples. (1) A supervisor promises to credit an employee for her work but later decides to fire her for resisting his sexual overtures and states in a job reference that she never did any work. The supervisor has two incentives to lie: to enhance his own reputation for work and to cover up his sexual harassment and retaliation against a subordinate. (2) A corporation pays annual bonuses based on productivity. A supervisor or co-worker claims a larger bonus for himself by taking credit for others' work. To the extent that credit is economically valuable and the accuracy of claims is difficult to substantiate, it is likely that false assertions will be made. The more valuable and untestable the claims about human capital, the greater the risk of opportunism.

The need for legal regulation exists because some credit ought to be inalienable, and yet the market fails reliably to produce information about who deserves credit and who should be rewarded in such cases. Problems of information asymmetry plague the proper allocation of credit. Outsiders to a workplace may not have access to information about who did work. When an employee goes into the labor market to find a new job, the prospective employer may not be able to tell whether the accomplishments the employee claims on his or her resume are exaggerated. The economic theory of the "lemon market" suggests that when there is an information asymmetry, as when only the seller knows whether a used car is a lemon, the market does not

function efficiently because buyers discount the price they are willing to pay to account for the possibility that the car is a lemon, but at the lower price sellers of good cars are unwilling to sell and so more lemons will be offered for sale, which scares off potential buyers even more. The problem is that sellers of used cars know whether the car is good, but buyers do not, and if buyers cannot trust sellers, then fewer cars will be sold than there would be if buyers could figure out whether a car is a lemon. The market for prospective employees is similar: the worker has better information than the prospective employer about the worker's capabilities, and the prospective employer cannot trust the prospective worker.¹⁴⁸

A mechanism to address the information problem is a signal that only the good sellers can afford to make. For example, sellers of good cars can offer warranties, but sellers of lemons cannot afford to do so. An enforceable warranty operates as a reliable signal of quality and thus facilitates efficient bargains. Accurate attributions of credit could operate as a signal to enable prospective employers know whether a particular worker has the human capital necessary to do the job. If credit attributions are not reliable, it is as if warranties on used cars are not reliably legally enforceable: the signal does not fix the lemon market problem. Without reliable signals of quality, prospective employers cannot distinguish between high-quality and low-quality employees and will hire fewer employees than they otherwise would.

The question is how to make credit attributions more a reliable signal. Given the unwillingness of many employers to provide detailed references, the challenge is to come up with other reliable evidence of employee contributions to collaborative projects. In theory the creator could produce drafts, laboratory notebooks, or other evidence to prove her work, but in practice it is often not possible to do so. As Susannah Grant explained, you can't always ask people to spend seven hours reading the multiple drafts of a collaborative project to figure out your contributions to it. Moreover, the norms of hierarchy and confidentiality often prevent an employee from showing past work product. An employee who quits or is fired usually is prohibited by the former employer from removing any documents or computer files when she leaves and thus will

¹⁴⁸ HAL. R. VARIAN, MICROECONOMIC ANALYSIS 468-470(3d ed. 1992) (explaining the lemon market example); ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, MICROECONOMIC THEORY 450-472(1995). Both texts include labor market examples about the difficulty of assessing employee ability as an example of information asymmetry where the market develops various signaling and screening devices, principally education, to deal with the market failure that would otherwise occur. Both texts suggest the possibility that further intervention in the market to address the information asymmetry may be efficient.

have no way to refute the former employer's false attributions of credit for work the former employee did. Trade secret law, work product privilege, or a contractual duty of confidentiality may prevent revelation of the information. In any event, it is a slow and therefore expensive way of signaling ability. For a high velocity labor market to operate efficiently, information about prospective employees must be quick and cheap to obtain. When the volume of resume checks goes up, as in the case in a labor market with high turnover, even small obstacles to gaining information can add up to significant costs associated with hiring.

In sum, existing attribution regimes suffer from generalizable problems. Many of them function well much of the time, but there are widespread reports of arbitrariness and exploitation about which we can generalize. Problems occur when one member of a collaborative work relationship uses the power she has through information asymmetries to behave opportunistically and claim credit which is not due. Such opportunistic behavior occurs when there is a huge financial incentive (as when an innovation succeeds beyond anyone's expectations) or some interpersonal incentive (such as sexual exploitation or personality conflict). These problems have no doubt existed since the beginning of time, but the economic harm they inflict has grown in proportion to the economic importance of attribution in the information economy. In work relationships where attribution is important, a sense of some collaborators that attribution will be made unfairly will cause problems going forward as collaborators will lose the incentive to contribute fully because they know (or fear) they will not reap all the rewards of their work. The hard question is whether there is a cure that legal regulation could offer that is less harmful than the disease. It is to that which I now turn.

IV. Towards a Theory of Fairness in Attribution

At this point in the project, I find myself with might be called a genre problem. The convention for an article that recognizes some important new interest is to do one of two things. Either the author proposes a bold new scheme of legal regulation to turn the important interest into a legal right, or the author concludes that the current regime is desirable – efficient, fair, or whatever – and that the current state of the law is just right. My inclination, unfortunately, is to do neither. So I will make a modest proposal, based largely on the concept of implied contract, which attempts to preserve much of the flexibility and local variation in norms-based systems while attempting to minimize opportunism and other market failures. A comprehensive and legally enforceable right of attribution, whether in the form of a new section of the Restatement of Torts or in the form of a state or federal statute (the “Attribution

Act of 2006”), is neither feasible nor probably desirable. Rather, I argue for enforcement of party-defined attribution rights as an element of existing employment contracts, and for loss of attribution rights to be recognized as a form of harm that should be actionable and compensable under other protective employment statutes or common law claims.

Even this modest proposal for greater legal regulation must consider the likely impact of law on the current situation. It has been argued that attribution should be left to these norms, enforced to the extent deemed desirable by the professional associations or other work communities that are “capable of considering the nuances of context, [rather] than the far more rigid legal system.”¹⁴⁹ There are many reasons to preserve a central role for norms based attribution regimes. After sketching out those, I will explain how my proposal can preserve many of them while remedying some of the most significant problems outlined in Part III.

One of the benefits of the existing norms-based and contract-based system is its flexibility. In a sector where credit is extremely valuable, as in Hollywood, an elaborate and expensive regime can exist, and in sectors where credit is less valuable, simpler and cheaper regimes exist. A flexible system can adapt to changes in circumstances brought by new technology that enables new ways of transmitting credit information, or new ways of identifying contributors enabled by new work arrangements. Credit can be given one way in one forum (as by putting a lawyer’s name on a pleading for Rule 11 purposes) and another way in another forum (as by acknowledging assistance within a firm even when a name is not on a brief). Participants in a given work culture are very good at learning the nuances of meaning in different forms of attribution.

Informality in attribution may also play a crucial social-psychological role in workplaces by allowing collaborators *not* to focus on the comparative importance of their respective contributions. Institutionalizing a formal process for crediting particular contributions to particular employees, particularly when they work collaboratively, poses the risk that the collaborators will focus excessively on thinking about the value of their work rather than on the work itself. Just as there are costs in failing to take attribution seriously enough to prevent false attributions, there are also costs in taking accuracy so seriously that parties to a collaborative work relationship focus unduly on identifying and seeking credit for their contributions. As explained above, even when everyone is acting in good faith, it is often difficult to attribute work because

¹⁴⁹ Band & Schruers, *supra* note 52 at 22.

before the creative process occurs it is difficult to negotiate in the abstract about work that is not yet done, and afterward participants in group projects consistently overestimate their contributions to a project when it succeeds and underestimate their share of blame when a project fails.

Examples of the possible harms of excessive attention to attributing performance of a group to contributions of individuals are not hard to find. The business pages of the newspapers are full of examples of how executives whose compensation is tied to share price manipulate share price through short-term strategies at the expense of healthy growth for a firm. Another example, still anecdotal but suggestive, comes from Japan. An employee who led the team that invented the “Holy Grail of lighting technology,” the blue light emitting diode (LED), sued his employer claiming a greater share of the billions of dollars of profit than the \$200 bonus he was paid.¹⁵⁰ The Tokyo High Court ordered the employer, Nichia, to pay the former employee nearly \$200 million under Article 35 of Japan’s patent law, which requires “appropriate remuneration” for patents assigned to employers. The verdict prompted a host of similar suits that eventually dramatically changed compensation practices for employee inventors. The legal change also prompted concern about a norm of selfless cooperation that some believe had previously characterized Japanese corporate R & D. What had previously been a collaborative work relationship, some feared, would become more rivalrous when employees realized that they stood to reap enormous compensation gains if they were identified as an “inventor” of the next valuable patent as opposed to simply one of the team.¹⁵¹ The fear is not unreasonable: Once people realize that attribution is a finite resource, as would be the case if there are set rules defining who can be attributed in a particular role and who cannot, and if the financial returns to attribution are significant, some people will focus on their status as much as on the work itself. Whether such a change in norms has occurred – and whether the norm of selfless cooperation ever existed – remains uncertain.

The jockeying for position as the designated inventor, screen writer, or project member will not occur at the beginning of a collaborative project. The

¹⁵⁰ Norimitsu Onishi, *Japan’s Inventors Want Credit and Money*, INTL HERALD TRIB., May 2, 2005 at 1. The LED inventor and Nichia eventually settled for eight million dollars. Todd Zaun, *Japanese Inventor Wins \$8 Million in Patent Case*, INTL HERALD TRIB., Jan. 12, 2005 at 16.

¹⁵¹ See *id.*; Marc S. Reisch, *Patent Pending: A Series of Japanese patent Disputes Raises Questions About Employee Patent Rights*, CHEM. & ENG. NEWS, Mar. 7, 2005 at 16-17; Yuji Mizuno, *LED Verdict Opens Can of Worms* NIKKEI WKLY J. Feb. 9, 2004

reason is that the work group often (though not always) will not know in advance whether there will be significant financial returns to attribution because they won't know whether the project will succeed. It is difficult to negotiate *ex ante* about divvying up credit for something that has not been created and may never be. So one would expect the serious effort to secure attribution will occur towards the end of a collaborative process when it becomes apparent that attribution might have significant payoff. There will always be something retrospective about attribution. Thus it may be particularly beneficial to have rules established before a project begins to govern attribution to blunt the effect of the psychological tendency of people to inflate their own positive contributions and minimize the negatives.

My survey of attribution norms throughout American society convinces me that the degree to which and circumstances in which attribution should be granted varies. Consequently, law should supplement but not supplant the process by which work communities create norms of attribution. To take just two examples, the fact that some news outlets have decided that reporters will work best if work is attributed to them, and thus employee expect fair attribution, should not render the business model of other news outlets illegal. Hollywood's labor market appears to be dependent on public attribution; the job market for speech writers is not. One way that law can honor expectations and prevent opportunism while allowing flexibility and local variation is through contract. Contract law enables the parties to a relationship to define their own obligations and then to seek enforcement when one threatens to defect.

Contract law also has a mechanism to constrain private agreement when there is a social interest in doing so by imposing terms that parties cannot negotiate away. The covenant of good faith and fair dealing is one; another is the public policy against the enforcement of certain contracts. One cannot sell oneself into slavery, sell one's labor at less than the minimum wage, or agree to a term of employment that would allow the employer to fire in retaliation for whistleblowing or exercising a statutory right.

I propose that a right of attribution be regarded as an implied term of every employment agreement. It might be analogous to the covenant of good faith and fair dealing as it is currently recognized in a few jurisdictions. Once the employee has achieved a certain level of contribution to a project, the right to attribution for it would be vested.

A right of attribution vis a vis the public would be waivable. Depending on the custom in the industry, a waiver could be easy for an

employer to secure (as in the case of speech writers or ghost writers), or hard (as in the case of graduate student research assistants). In any context in which attribution to the public is necessary to protect the labor market position of contributors, waiver would be permissible only if the employer proved to the court that a fair process was used and adequate compensation was offered to secure the waiver. In that respect, it would resemble attribution in European moral rights regimes.¹⁵²

I expect problems to arise when firms, once they realize that attribution rights are an implied term of employment agreements, attempt to negotiate around the term by asking employees to sign express agreements waiving attribution rights. This is not an unrealistic expectation: firms routinely ask employees to sign express agreements waiving any possible just cause protections and also waiving a right to sue in a judicial forum, as well as waiving rights to intellectual property, to engage in post-employment competition, and to use a wide range of knowledge or information that employees would otherwise be entitled to use. I would expect, therefore, that courts would confront claims of waiver of a right to attribution. In assessing those claims, the court would examine the evidence of the work culture according to the six criteria of transparency, participation, equality, efficiency, due process, and substantive fairness to see whether the default rule of attribution was validly waived.

A court will have to distinguish between work cultures where waiver of a public right of attribution is easily proven (or perhaps, as in the case of speech writers presumed) and those in which waivers should not readily be found. When a court is asked to determine whether an employer's failure to give credit to an employee for work she did breached the implied term regarding attribution, the court would first have to determine whether there is an attribution right. That determination would look primarily to the norms of the workplace, just as courts routinely examine the dealings of the parties and the customs of the industry to give content to contracts.

The one sense in which attribution rights may never be waived is in the sense that attribution becomes part of human capital and attribution must be fairly given when a creator is seeking other employment. *The Economist* can decline to give bylines but it cannot decline to acknowledge within its own employee assessment processes or to prospective employers that one of its correspondents wrote, edited, or researched the articles that she in fact did. This limit on the alienability of attribution is not a significant change from

¹⁵² Waiver of moral rights is discussed in sources cited *supra* in note 47.

common practice: a journalist whom I interviewed who wrote for *The New York Times* but did not receive a byline said that he got his next job after the *Times* by his editors acknowledging to editors at another paper which stories he had written. What I propose that is new is nothing other than explicit legal recognition for what is already a widely accepted norm of fair dealing and may be considered by some to be an implied term of an employment contract.

The final question is how to conceptualize the remedy for the harm caused by wrongful attribution. Here it matters that an attribution right is conceived in contract rather than property terms. Unlike a property right, a remedy for false attribution should not restrict access to or dissemination of the product or project to which she contributed.¹⁵³ Attribution rights should not be an additional way to constrain the public domain and, thus, remedies for failure to attribute should operate in a way to require limited compensatory or make-whole remedies to the claimant but not to enable the right-holder to restrict access to the project. This is easy to see in a case in which the right of public attribution is waived and only a right of human capital attribution exists (as in the case of the journalist with no byline seeking another job).

The harder case is where the right of public attribution is not waived. Let's say, for example, that a software firm breaches the obligation to attribute software in the manner done in open source. I propose that the software designer be able to sue for some measure of loss of reputation, but not prevent the software firm from distributing the mis- or unattributed software. A right of attribution is not a right to exclude others from using, copying, or selling the information. In this respect, it is not a property right in the intellectual property sense or in the right of publicity sense. Nor would it be like joint authorship in copyright, which is thought to entitle all joint authors to prevent any use of the work with which they disagree and to reap an equal share of the profits from the work.¹⁵⁴ Neither would it include a right to prevent alteration in the way that the moral right of integrity does. In short, a remedy for failure to attribute should not be an injunction against distribution of the work without attribution,

¹⁵³ See Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

¹⁵⁴ In this respect, my proposal bears some resemblance to that made by Roberta Rosenthal Kwall with respect to joint authorship; she argues that the law should recognize that the economic interests of joint authors can be unequal where their contributions are not equal and, indeed, that the presumption of equal ownership unfairly advantages dominant authors by encouraging courts to reject entirely the claims of non-dominant authors rather than to acknowledge their proportional share. Kwall, "Author-Stories", *supra* note 55 at 64.

nor even necessarily a share of the profits from the project itself. Rather, it would be a right to share the reputation benefits of authorship.

One way to think of the distinction is this. Intellectual property rights are the right to a stream of revenue associated with the sale or use of the information itself. Sales of a Disney movie or of the blue LED produce millions of dollars, and the owner of the copyright or patent gets those dollars. This is the right of exclusivity. Attribution rights are the rights to an entirely different revenue stream: the financial rewards associated with being the creative person behind the valuable idea. In other words, the right of exclusivity is entirely distinct from the right of attribution, and the remedies for infringement of the two rights are quite different. Thus, although Disney owns the movie and the Japanese firm owns the LED, the screenwriter or animator enjoys the financial or other benefits of being the person who did the work, and that revenue is entirely divisible from the revenue attributable to the intellectual property itself. It is important to recognize that whatever we may think about remedies for copyright or patent infringement, including a right to a portion of the revenue stream or even to block the revenue stream altogether by getting an injunction against sales of the product, we could have a completely different remedy structure for wrongful attribution.

An example of such a remedial structure in operation is Hollywood's screen credit system, which explicitly addresses the issue of remedies for violations of the credit rules. The Writers' Guild agreement prohibits claims of screen credit that are in derogation of credit determinations made through its processes. Nevertheless, the agreement also explicitly states that there shall be no claim against the Guild, arbiters, or producers for errors in credit. Nor, to my knowledge, has there been a case in which a remedy for an error in credit involved blocking the distribution of the film or TV show.

Conclusion

As applied to credit, Shakespeare was right in the famous passage in *Othello*, but he did not go far enough. Taking credit for someone else's work or wrongly besmirching another's reputation at work certainly does impoverish the person whose good name was filched. Besmirching is costly to reputation, market status, and opportunity; it's a labor market failure. *Contra* Shakespeare, false attributions enrich the thief often enough that thieves will always exist. Moreover, the theft often confuses others who want accurate information about one's good name, and there is no remedy under current U.S. law to compensate them for their loss. For that reason, the transfer of attribution from the actual

creator (whenever she can be identified) should be prohibited in certain contexts unless it is shown that third parties will not be harmed by it and there is adequate proof that the transfer was compensated and uncoerced.

In the absence of legal protection for the important interests in attribution, norms govern credit, and many industries have attempted to embody the norms into enforceable contracts, professional regulation, and even certain laws. Yet substantial flaws exist in the way society allocates credit. For these reasons, there should be a strong presumption against the alienability of attribution vis a vis the public in most work settings, and an inalienable right to attribution in human capital assessment.

More than forty years ago, in an article published in the *Yale Law Journal*, Charles Reich surveyed the radical changes in wealth and society spawned by New Deal and Great Society government spending and asked readers to re-imagine government largess (as he called it) as a new form of property.¹⁵⁵ He suggested that some functions that private property had hitherto performed in Anglo-American society were increasingly being performed by government spending programs and that to maintain the liberty that property law was thought to protect – “the troubled boundary between individual man and the state” – law should reconceptualize government benefits as a new property. I have no illusion that my modest proposal either deserves or will have anything like the impact of his, but my project is not dissimilar in spirit. In the modern world, in which intellectual property is a corporate asset and its control is almost completely divorced from individual creators, the law must re-imagine the role of the individual vis a vis the power to control information. The four functions that intellectual property ownership once performed – reward, discipline, branding, and humanizing – have increasingly been subsumed by attribution. It is time for law to recognize the extraordinary importance of attribution, and take some modest steps to address the circumstances where the norms governing attribution break down to ensure that these socially valuable functions are performed in a desirable manner.

One advantage of explicit recognition of attribution rights would be to reconcile the views of two opposing camps in the arena of employee-generated intellectual property. One group advocates strong employer ownership.¹⁵⁶ Another camp, of which I am usually counted a member, advocates strong

¹⁵⁵ Charles A. Reich, *The New Property*, 73 *YALE L.J.* 733, 733 (1964).

¹⁵⁶ See Merges, *supra* note 28; Kitch, *supra* note 28.

employee rights.¹⁵⁷ Advocates of employer ownership tend to emphasize the efficiencies that will be gained by corporate control of intellectual property and point out that most employees who generate it have been compensated for their creative services and thus are not victims of unfair treatment when they lose the right to control the disposition of the information products which they have created. Employee advocates, by contrast, tend to make equity arguments emphasizing that employees are expected to be entrepreneurial about their careers and yet are deprived by strong corporate intellectual property rights (and aggressive use of contracts restricting post-employment competition) from being entrepreneurial.

A partial resolution of this debate is the one I propose: to disaggregate the exclusivity rights associated with intellectual property from the attribution rights. Disaggregating the exclusivity right from the attribution right, giving exclusivity to the firm and attribution to the employee, would give both camps what they most value. Of course, in the case of individually-owned patents and copyrights, intellectual property would still be a basis for attribution. But with respect to corporate IP or other workplace knowledge, the firm would get one hundred percent (minus the wages paid) of the return on the investment in the creation of the knowledge. Attribution would, however, enhance the ability of the employee to be entrepreneurial in the labor market.

I have deliberately eschewed a radical proposal of comprehensive regulation in favor of a modest suggestion that a right to attribution, at least in some contexts, be presumptively nonwaivable and nontransferable and be treated as an implied term in every employment contract. A breach of that term by taking credit where it is not due should be actionable under state contract law, just as is a breach of an employment agreement requiring just cause for termination. Moreover, a loss of attribution rights might be understood as one form of harm (and thus one element of damage) of an otherwise illegal adverse employment action, such as when an employee is fired or otherwise discriminated against on the basis of race, religion, disability, or when an employee is fired in breach of contract.

¹⁵⁷ Katherine V.W. Stone, *Knowledge at Work: Disputes Over the Ownership of Human Capital in the Changing Workplace*, 34 CONN. L. REV. 721 (2002); Katherine V.W. Stone, *The New Psychological Contract: Implications of the Changing Workplace for Labor and Employment Law*, 48 UCLA L. REV. 519 (2001); Catherine L. Fisk, *Reflections on the New Psychological Contract and the Ownership of Human Capital*, 34 CONN. L. REV. 765 (2002).

One reason for taking a modest and incrementalist approach, besides those enumerated above, is to accommodate legal change to the complex and diverse sets of norms that currently govern attribution. Local variation is important and probably beneficial because it enables flexibility with respect to the right balance among the six characteristics of an ideal attribution system and the adaptation of the system to balance norms and law. The goal is to improve the systems and prevent opportunism while preserving anonymity where anonymity is beneficial, to allow accountability where it is needed, and always to facilitate group collaboration that is increasingly a part of the creative process.