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COMMENT

RIGHTS AND RESPONSIBILITIES OF THE EMPLOYED INVENTOR

JOHN C. STEDMAN†

Recent legal developments relating to the employed inventor can be summed up in three words: Nothing has happened. It is not suggested that this situation is of no significance. Like the dog that did not bark in a Sherlock Holmes story, it may be very significant.

There was a time when if you made a better mousetrap the world would beat a path to your door—at least that is how the copybook had it. Invention was an intensely personal matter, an individual triumph. In contrast to the happenings in the biological world, when an idea was born, there may have been some speculation as to who the mother was (necessity?), but there was no doubt as to the father. This is reflected in our patent law¹ which requires that we name the real father in the birth certificate and assumes our ability to do so. And whatever pain and expense attended the creation and upbringing of this brain-child, it more than paid you back upon reaching maturity.

Today, finding the real father has become more complex: A dozen other co-employees in the research laboratory, past employees who left memoranda in the files describing their work on mousetraps, the advertising department, the sales department, the patent department, the employer who makes out your salary check, the Federal Government which provides the wherewithal that keeps that check from bouncing, and even the IBM 3600, or whatever number it is, that swallows and regurgitates all sorts of spoon-fed data, all are part of the picture. As for the inventor, the putative father of the idea, he may be pretty far down the totem pole. Maybe his image is not even carved on it. And when it comes to cashing in on the invention, reaping its rewards, he may be as far removed as was his great-great-grandfather from whom some unprincipled tycoon stole his marvelous invention of the wheel and made a million dollars on it.

The picture has been overdrawn, of course. It was never this stark, either in the old days or in modern times. Many employed inventors in the past received weekly wages for their efforts, leaving the speculative reward that might or might not be derived from their inventions to their

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1. 35 U.S.C. § 111 (1952).

employers. Inventors today, whether employed or independent, in many cases receive appropriate recognition and material reward for their contributions. The fact remains, however, that we do operate under a system that looks in two directions. On the one hand, it recognizes the intensely personal nature of the inventive act and the importance of providing encouragement and stimulus to *the* inventor. On the other hand, we develop a structure operating to a considerable extent through the patent system wherein both the stimulus to invent and the reward that flows therefrom connect only remotely and indirectly at best with the employee. Sometimes the connection is severed completely.

These possibilities, and to a considerable extent realities, have been with us for a long time. The problem today is three-pronged. First, a single inventor increasingly becomes only a part, sometimes a small part, in the overall invention and innovation process, and increasingly it becomes impractical for him to exploit the invention.² Second, the interposition between the inventor and the reward of the employer as beneficial owner of the invention has become more and more common as the "inventive process" becomes more and more the collective project of the research laboratory instead of the identifiable work of one or two individuals.³ The inventive activity is increasingly supported and subsidized by corporations or government rather than by the inventor himself, and the cost of making and exploiting the invention continues to mount. Third, we have increasingly accorded to technological development a "public interest" status that impels us to maximize our efforts to invent and to realize upon the results of these efforts.⁴ And so, it behooves us to re-examine our legal institutions—institutions that have changed little despite the changes in the status of the employed inventor. Are these legal institutions contributing what they should to accomplish these presumably salutary results? Can they be made to contribute more?

THE LAW GOVERNING THE PRIVATELY EMPLOYED INVENTOR

We may begin by concentrating on the "allocation" between employer and employee of the rights in employee-originated inventions and pass over the various other rights and duties that are not of central concern to our discussion which exist in the employer-employee relationship, such as the employer's duty to give proper credit to employees for their con-

2. U.S. DEPT. OF COMMERCE, PANEL ON INVENTION AND INNOVATION, *TECHNOLOGICAL INNOVATION: ITS ENVIRONMENT AND MANAGEMENT* 8-11 (1967).

3. U.S. PATENT OFFICE, *DISTRIBUTION OF PATENTS ISSUED TO CORPORATIONS, 1939-55* (Study of S. Res. 167 of the Subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, 84th Cong. 2nd Sess. (1956)).

4. *ECONOMIC REPORT OF THE PRESIDENT TO THE CONGRESS OF THE UNITED STATES* (1964); V. BUSH, *SCIENCE, THE ENDLESS FRONTIER* (1945).

tributions and the employee's duty to cooperate in applying for patents.

The basic law controlling the allocation of rights between the employed-inventor and his employer stems from two sources: the common law, including shop-right doctrine and the law of contracts.⁵ Although complex and controversial issues can arise in both areas, the underlying laws and their principles are fairly simple.

Under "shop-right" and related law the rights to an invention divide in three ways, depending upon the status of the employee and the circumstances surrounding his inventive activity.⁶ If the employee makes the invention independently of his job, on his own time, with his own facilities and equipment, and without help from his employer or assistance from co-employees, the invention belongs to him just as though he had been operating independently. At the other extreme, if he is "hired to invent," for example to conduct the research that led to the invention, the invention belongs to the employer just as the Chevrolet assembled by a General Motors employee belongs to General Motors. In between these extremes is the "shop-right." It relates to inventions made by an employee *not* hired to invent, but nevertheless made by him on company time or involving use of company facilities, equipment, information and ideas, assistance from other employees—in other words, inventions to which the employer has contributed substantially in one respect or another. In these circumstances, the law dictates that the invention shall belong to the employee but that the employer shall have a free, non-exclusive, non-assignable (except with the transfer of the business itself) license to use the invention in his business.

The legal bases for this doctrine vary.⁷ Some courts profess to find a relational status based upon trust and confidence, the master-servant relationship, and related doctrines. Some courts bottom their conclusions upon implied contract, while others apply a *quantum meruit* doctrine, or a doctrine of estoppel, or concepts of equity and fair dealing. Regardless of the theory, however, it appears that they all come out pretty much the same in the final analysis.

This scheme like much of our law appears to work reasonably well in the nice, neat, orderly cases. But it has its shortcomings. The employee who makes the inventions he was hired and paid to make should turn over these inventions to the employer; he should preserve in confidence valuable information that was disclosed to him in confidence; he should cooperate in helping his employer obtain patents on what he has done. To

5. J. COSTA, *LAW OF INVENTING IN EMPLOYMENT* (1953).

6. Annot., 61 A.L.R.2d 356 (1958).

7. MORRIS, *Patent Rights in an Employee's Invention: The American Shop Right Rule and the English View*, 75 L. QUAR. REV. 483 (1959).

so hold accords with our sense of fairness and corresponds with what the parties presumably intended or would have agreed upon had they thought about it. Conversely, inventions that were entirely the handiwork of the employee, to which the employer contributed nothing in released time, or in equipment, assistance or suggestion, should belong entirely to the employee and it does not shock us for the law to say so.

Most of the trouble comes in the gray areas, typically the "shop-right" area. Here, the courts purport to find intent where there was none, estoppel where the employee has done nothing to prejudice the interests of the employer, implied contracts as to matters that never entered the heads of the parties. In the name of equity and fairness, the courts render Solomonic judgments, wielding a butcher's cleaver with reckless abandon. Thus, the employer's shop-right in a given invention may be of tremendous value, of only limited value, or of no value at all, depending on the nature and scope of the employer's business in relation to the invention. He may receive a right of great value for a very slight contribution of something of little value despite a very substantial contribution. The employee may nullify a potentially valuable shop-right by simply not enforcing his patent, by not patenting at all, or by granting licenses to others on favorable terms. It is all very haphazard—at least to the extent that the parties are disposed to stand on their legal rights. To the extent that rights in the inventions or quasi-inventions take the form of trade secrets, the shop-right doctrine becomes unworkable.

It is true that some flexibility and discretion lies with the court in dealing with such elusive issues as intent, the nature and extent of employer contribution, the nature of the employment, and how extensive the shop-right should be.⁸ There is also some flexibility in the legal doctrine itself. Some courts award a shop-right only in areas related to the inventor's employment; others award it for the employer's entire business (a doctrine that of course gives great advantages to the large, diversified concern as compared to the small specialty company). But this flexibility is limited at best.

Basically the choice is often forced between three alternatives—no rights in the employer, entire rights in the employer, or a royalty-free non-exclusive license to the employer—in circumstances where no one of these alternatives accurately reflects either the intent of the parties or the equities of the situation. The Procrustean approach to problems does, of course, have the virtue of easy administrability, but it hardly reflects the ideals to which the law aspires in its finer moments.

8. Workman, *Rights of Employers and Employees in Inventions Made by the Latter*, 20 A.B.A.J. 538 (1934).

With these shortcomings, it is not surprising that employers have increasingly resorted to contract in allocating invention rights.⁹ Employee-invention contracts have become more and more common over the years. But while freedom of contract has been one of the basic principles underlying our economic, commercial and industrial system, application in the area under discussion poses three major problems.

First, "freedom of contract" concepts are bottomed upon genuine equality of bargaining power. But employees and employers are often not on an equal footing. It is true that research employees are likely to be more favorably positioned than many other types of employees—and employers argue strenuously that the opportunities for employment elsewhere give such individuals a strong bargaining position. However, it remains an open question to what extent the employees who are required by contract to convey rights in inventions they make have freedom to bargain over the terms of such contracts. The uniform provisions that characterize such employment contracts¹⁰ and the sweeping and often arbitrary terms favorable to the employer that they contain—terms that often give rise to expressions of dissatisfaction and resentment—suggest that the bargaining that may take place occurs mainly with respect to salary rather than to the allocation of rights—and even as to salary it may be only a select few who can do other than take what is offered them. One may question, consequently, whether the employees who are subjected to such contracts are quite as far removed as is sometimes supposed from the ordinary employees for whom, experience has shown, the traditional processes of individual bargaining and contracting have not proven satisfactory. For the ordinary employee, resort to union representation and collective bargaining has been the result. Neither of these devices is used to any significant degree in the area of employment for research.¹¹

A second factor that poses problems is the tendency of many employers to impose conditions that hamper the employee in obtaining subsequent employment elsewhere and provide the employer with undue advantages and arbitrary conditions vis-à-vis his competitors. Included are the so-called "trailer clauses" that require assignment by the employee of inventions completed after employment has terminated, impose restrictions upon his use or disclosure of confidential information received in the course of employment, and restrict his post-employment activities

9. O'Meara, *Employee Patent and Secrecy Agreements*, N.I.C.B. STUDY IN PERSONNEL POLICY No. 199 (1965).

10. *Id.*

11. F. NEUMEYER, *THE EMPLOYED INVENTOR IN THE UNITED STATES* (unpublished manuscript).

to the extent that they may be competitively detrimental to the employer.¹² The legitimate fears on the part of the employer that underlie such provisions are understandable. Some protection is needed against the employee who makes an undisclosed invention in the course of his employment and then quits his job in order to keep the benefits to himself. Protection is also needed against the use or disclosure of valuable information which the employee receives in confidence by virtue of his employment. Even so, it is easy to go too far in this respect, with the result that the employee's opportunity to earn a livelihood is impaired, his stimulus to invent is dampened, and legitimate competition is impeded.¹³

The third troublesome factor suggested by both of the preceding ones is the possible adverse effect of employee contracts upon the technological development that has become such an important public objective. While adverse effects may flow from the non-contract common law doctrine, these dangers become especially pressing in the contract area to the extent that contractual provisions either lessen the incentive of the employee to put forth his greatest effort or divert his efforts from explorations that might serve the greatest public good. Of course, one may discount these concerns on the premise that the employer's self-interest may militate against any such discouragement or diversion, but we cannot depend upon this. The interests of the employer do not always coincide with those of the inventor and of society. Significant discoveries may die a-borning because of the employer's lack of interest. Post-employment restrictions may produce a blockage. And in any event the zest for putting forth an all-out effort is quite likely to be greater if one's reward or compensation is keyed to his achievements.

The policy considerations just mentioned do not go entirely unrecognized by the courts. The courts do sometimes call a halt to enforcement of the more extreme conditions to which employees may be subjected by refusing, in the name of equity, to enforce them.¹⁴ Restrictions upon working for competitors or otherwise turning what one has learned against one's employer have been declared unenforceable in the interests of enabling the employee to make a living and pursue the calling for which he is trained. Excessive trailer clauses have been condemned on the ground that they violate antitrust policy. But the efforts to harness the enthusiasm of the employer have been modest at best. Many courts show a high degree of tolerance to such restrictions as a result of their strong belief in "freedom of contract." Furthermore the "in terrorem" and inhibiting effects of such contracts may be substantial. Although there appears to be no

12. O'Meara, *supra* note 9, at 66-72.

13. *Id.*

14. *Dalzell v. Dueber Watch Case Mfg. Co.*, 149 U.S. 315 (1893).

data on the subject, it is a fair assumption that for every employee who challenges such contracts there may be many who quietly, if somewhat unhappily, acquiesce in their terms. Finally, even when the courts do strike down excessive restrictions, they are strongly inclined merely to reform the contract and permit its enforcement up to the point where unreasonableness sets in.¹⁵ In consequence, the employer has little to lose in making excessive demands upon his employee. Even if a court does find against him, he is free to assert whatever rights he legitimately could have asserted in the first place.

There is a third form of allocation—or more accurately, compensation—referred to as the “*ex gratia* award” and its shirt-tail cousin, the suggestion system, used by many concerns to compensate employees who respond beyond the call of duty.¹⁶ Such award systems, while generally accepted and supported in theory, do not really appear to be in wide use. Even among those concerns that do have them, they appear to operate well within the bounds of modesty. There may well be some real possibilities in this area, but apparently these possibilities still lie largely in the future, not in demonstrated performance.

This concludes the discussion of the rules and regulations that apply to the private employer-employee relations. A few additional areas may be mentioned but are of no great moment. For example, some collective bargaining agreements exist, but most follow the common law allocation pattern.¹⁷ In one area, the aircraft industry, there exist some rather generous arrangements for sharing patent royalties, but the effect of these arrangements may be less substantial than one might expect because of the dampening effect the aircraft patent pool has upon patents.¹⁸

At the statutory level, in contrast to Europe which will be discussed shortly, there appears to be no legislation—local, state or federal—dealing with this entire area. A few statutes affect the situation indirectly and rather remotely. The patent laws, for instance (with some recent relaxation), require that patent applications be signed by *the* inventor.¹⁹ A few statutes make it a crime to disclose or otherwise appropriate trade secrets and other confidential material.²⁰ Some bills have been proposed in Congress, such as the Brown bill,²¹ but they have made no apparent

15. *Guth v. Minnesota Mining & Mfg. Co.*, 72 F.2d 385 (7th Cir. 1934).

16. Neumeyer, *supra* note 11; O'Meara, *supra* note 9, at 52-61.

17. See note 11 *supra*.

18. See note 11 *supra*. See also Dykman, *Patent Licensing Within the Manufacturers Aircraft Association*, 46 J. PAT. OFF. SOC'Y 646 (1964).

19. 35 U.S.C. §§ 111, 115 (1952); U.S. PATENT OFFICE RULES OF PRACTICE. Cf. 35 U.S.C. §§ 117, 118 (1952).

20. O'Meara, *supra* note 9, at 5.

21. H.R. Rep. No. 5918, 89th Cong., 1st Sess. (1965).

progress. The federal government has various regulations, but they have little bearing upon the privately employed inventor.

How shall these laws and policies be evaluated? In their basic thrust, they seem largely to reflect the prevailing concepts and economic-social philosophies of the 19th century. A "master-servant" concept, long since largely supplanted by modern labor relations doctrine, seems to underlie our common-law "employed inventor" doctrine, with its shop-rights, its implied contracts, its obligations of servant loyalty and its insistence upon a relationship of trust and confidence vis-à-vis the employer. A laissez-faire "freedom of contract" concept, also long-since drastically modified in our labor relations law, underlies the broad acceptance of "contract" as the way to resolve the conflicting interests of employer and employee in this area. The *ex gratia* award, bottomed upon employer discretion rather than legal right, also has its roots in antiquity; however, it may flower and flourish in modern society. As a corollary, we find little disposition to invoke our rather complex "labor relations" concepts, with their emphasis upon union representation, collective bargaining, protection against unfair labor practices, and so on. Nor do we find the governmental intrusion into such relationships such as exists elsewhere in the employer-employee field.

The system does have its virtues. It is in tune (whether consciously or inadvertently) with many of the realities of the modern day process of invention and innovation. Individual inventors, although crucially important, are not the sole element in the invention and innovation process today and in some situations may play a less and less significant role as the research organization and its equipment and data, the developmental facilities, and the marketing processes become more and more important.²² In today's highly coordinated and socialized industrial organizations, formulation of guide-lines and emphasis upon uniform treatment may be increasingly important to avoid misunderstandings, disagreements, the risks of favoritism, and charges of arbitrariness or unreasonableness. In circumstances where entrepreneurial development by the employee is simply not feasible, one hardly can fault a system that recognizes this fact and allocates most of the rights to one who is in a position to exploit them. Finally, an employer whose expenditures and facilities have made possible the creation and development of inventions that might otherwise not have come about should have some protection against having these inventions turned against him as well as the affirmative right to use them. It is to this goal that the common law doctrines and contracts are largely directed.

22. See note 2 *supra*.

When one turns to public policy considerations, the prevailing doctrines again leave something to be desired. The generous treatment accorded to the employer, especially in the application of contract law, suggests that the employee may sometimes be the victim of inequitable terms and unduly harsh conditions. The power of the employer to control the post-employment opportunities of the employee and impede his ability to carry on and exploit his inventive activity, lessen the utilization of talents and ideas of the employee that we are concerned to promote. To the extent that the law tolerates conditions that reduce the incentives of researchers to do their level best, or divert them from more significant activities into trivial fields, it impedes rather than promotes the progress of science and useful arts to which we are constitutionally, politically, economically, sociologically, financially and emotionally dedicated.

COMPARISON OF GOVERNMENTAL AND PRIVATE
EMPLOYEE-INVENTOR POLICIES

We may now examine, somewhat more briefly, the policies of government and other public or quasi-public institutions vis-à-vis their employee-inventors. The policies here are, relatively speaking, somewhat less complex and debatable. The practices are less pervasive, since the great bulk of research and development still actually occurs at the private sector level and, despite the fact that the government foots much of the bill, is subject to private sector rules insofar as employees are concerned.

Looking first at the federal government, Executive Order 10096,²³ now almost twenty years in operation, expresses a general policy that is only slightly more generous to the employee than that which prevails in private employment. Governmental patterns in dealing with employee rights historically largely have followed those of industry, both in the application of common law doctrine and in developing contractual and regulatory policies. Thus, from an early day an "employed to invent" concept and a rule leaving independently-made inventions to the employee has prevailed. The "shopright" doctrine was extended to government employees in the *Dubilier* case decided in 1933.²⁴

Even so, variations in policy have existed in the past from department to department—a fact that should surprise no one who is familiar with the operations of our government. Some agencies, such as the Defense Department, were concerned mainly with the protection of their rights to use the inventions and were content to leave the commercial rights to the employee. Others, such as Agriculture, followed a policy of

23. Exec. Order No. 10096, 15 C.F.R. § 389.

24. *United States v. Dubilier Condenser Corp.*, 289 U.S. 178 (1933).

claiming all the rights in inventions made by employees in order to assure their availability for public usage. Some of these latter agencies, however, tended to leave foreign rights with the inventor, since the possibility of this causing any serious impediments seemed remote in the early days.²⁵

Concern over the lack of uniformity in government policy, and over the use of government-supported research for private monopoly advantages, led to the promulgation in 1950 of Executive Order 10096. Although the Department of Justice, in an extensive study that antedated the Executive Order, made a strong pitch for broad assertion of rights by the government,²⁶ the Order finally settled upon followed basically the common law doctrine, slightly liberalized in the employee's favor. The government showed little interest in foreign rights, especially after a contemporaneous program for governmental foreign patenting failed to materialize.²⁷

Notwithstanding the across-the-board reach of Executive Order 10096, there was still plenty of opportunity for diversity in administration of the Order, in the interpretation of its language, in its application to specific fact situations, and in simply not enforcing to the hilt the government's rights. Since mainly those decisions adverse to the employee were subject to review by the Government Patents Board set up by the Order, there existed no practical restraints upon the unnecessarily generous agency. As a result, many agencies continued to follow pretty much the same policies that had previously been followed. On balance, though, it seems probable that the Order has contributed some uniformity to government practice.

The only subsequent overall government development of significance was the October 23, 1963, presidential proclamation relating to patent rights.²⁸ It was directed primarily to government contractors rather than employees, however, and consequently has had little effect on the latter.

Three other features of the government program should be mentioned before leaving the subject. The first is its "awards" program. Individual agencies have had such programs for a long time, but in 1954 a general

25. STAFF OF SENATE COMM. ON THE JUDICIARY, SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS, 86TH CONG., 2D SESS. PATENT PRACTICES OF THE DEPARTMENT OF THE TREASURY (Preliminary report on S. Res. 240 (1960)). Cf. H. FORMAN, PATENTS: GOVERNMENT OWNERSHIP AND ADMINISTRATION 57-58 (1957).

26. 1947 ATT'Y GEN. REP. Vol. I, INVESTIGATION OF GOVERNMENT PATENT PRACTICES AND POLICIES.

27. Exec. Order No. 9865, 12 C.F.R. § 3907. See H. FORMAN, *supra* note 25, at 233-37, 244-55.

28. Memorandum for the Heads of Executive Departments and Agencies, 28 Fed. Reg. 10943 (1963).

“awards” statute was passed.²⁹ Awards under this program have been voluminous, extending to more than 100,000 persons and totaling over three million dollars a year. The number of awards that go for genuine inventive contributions, however, appears to be small.³⁰ The program is modest, at best, when one views it against the backdrop of the entire government operation. Set along side private industry’s activities in this field, it appears impressive.

The other two features in the government program are of a fringe nature and call for only brief mention here. One is the provision of section 1498 of Title 28, U.S. Code, which precludes a government employee from suing the government for patent compensation, under certain conditions, thus in effect creating an across-the-board shop-right in the government. The other is the “no-fee” statute,³¹ recently repealed, waiving patent fees for government employees, subject to the government receiving a license—a license that it may well have had anyway as a result of the section 1498 provision just referred to. A fringe benefit attending the “no-fee” statute has been the government’s willingness to provide legal services to the employee in getting his patent—a benefit of much greater value than the waiver of the fees.

Viewing the government’s policies overall, they appear somewhat more generous to the employee-inventor than do many of the industry policies. The regulations are somewhat less restrictive than the common law rules and substantially less so than most contractual arrangements. Many government agencies have less incentive, and consequently less disposition, to pursue enforcement of their rights than is true of the private profit-oriented corporation to whom possession of invention rights means dollars in the till. The competitive injuries that may attend disclosure or adverse usage of confidential data, the risk of the employee turning against his employer in a competitive sense, and the possibility of the employee asserting post-employment claims to inventions he made during employment—dangers that may be very real to the private employer—appear remote or non-existent in the governmental environment. Consequently, the restrictions on disclosure (except where national security is involved), the ban on competitive employment, and the imposition of trailer clauses that often hamper the private employee, are absent at the governmental level. The concession of foreign rights is another manifestation of this difference in interests. Perhaps the most significant contribution is the “awards” program. Though traditionally

29. Government Employees Incentive Awards Act of 1954, Pub. L. No. 83-763, ch. 1208, 68 Stat. 1105.

30. F. NEUMEYER, *supra* note 11, at chapter on Government Employer Policy.

31. 35 U.S.C. § 266.

modest, potentially it may hold considerable promise as a device for stimulating greater inventive effort. Whether, and to what extent, these advantages balance out against various disadvantages that may attend government employment is a matter beyond the scope of this paper.

The other major public institution calling for discussion is the institution of higher education—the universities and colleges. With some notable exceptions, most universities have tended in the past to wash their hands of any responsibility for inventions made by university personnel.³² This is becoming less and less true today for several reasons. One, they have heard the success stories, usually exaggerated, of those institutions that have undertaken to administer commercially valuable inventions. Two, they have overcome their fears regarding the administrative headaches as a result of the know-how and facilities now available for handling these matters. Three, the increasing blend of basic and applied research at the university level has increased the likelihood of commercially valuable results. Four, the insistence by the federal government that institutions receiving federal grants see to it that the government's rights in any forthcoming inventions are protected, has compelled the universities to concern themselves with these matters.

Policies have varied. Some universities continue to follow a hands-off policy. Conversely, some adopt a policy of public dedication, as opposed to patenting. Some ride herd on their personnel to the extent, and only to the extent, necessary to assure performance of commitments to the federal government. Some develop working arrangements with Research Corporation, which undertakes to administer inventions developed by university personnel.³³ Some require assignment of rights to the university or a connected institution. Others provide for assignment on a voluntary basis, typically setting up a connected organization to handle the business of administering the invention.

Where the university does undertake the administration of inventions, either directly or through associated institutions or Research Corporation, two characteristics seem to prevail. One, the public interest receives considerable attention, usually by requiring non-exclusive licensing wherever possible and by insisting upon responsible exploitation by the licensee. Two, the organization shares royalties on a fairly generous basis (typically, 15 per cent of net income) with the inventor.³⁴ Here, again, as in the case of government employment and in contrast to much

32. See A. PALMER, PATENTS AND NONPROFIT RESEARCH (Study of S. Res. 55 of the Subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, 85th Cong., 1st Sess. (1957)).

33. *Id.* at 36-38.

34. F. NEUMEYER, *supra* note 11

private employment, the employee is not burdened with restrictions on disclosure and on subsequent employment, or with "trailer clauses" relating to inventions completed after employment ceases. In this university picture, we also find two additional forms of stimulus of some actual significance and even greater potential significance: giving the employee a share in whatever returns accrue from the invention and leaving to the inventor the patent rights in inventions he makes, enabling him to exploit these rights in whatever ways he sees fit.

There exist other public and quasi-public institutions, such as state and local governmental bodies, foundations of various sorts, and non-profit research organizations. With the exception of the last-named, it does not appear that employee inventions and patents play any significant part among these entities. As for the so-called "non-profits," they come in so many sorts, shades and sizes as to defy generalization.

Taking the public areas generally, two policies going in opposite directions seem to exist. On the one hand, there appears a tendency, whether conscious or inadvertent, to provide special incentives and stimuli for employees. These take the form of special awards and recognitions, of permitting employees to share in profits accruing from inventions, of leaving rights to employees for private exploitation, and to some extent of a relatively generous application of common law doctrine—reflecting in part absence of the competitive threats and dangers that plague the private concerns.

On the other hand, there appears to be some tendency, in some areas, to move more and more closely to the positions traditionally taken by private industry. This latter approach is understandable. There is the already cut out industry pattern to follow. There is logic and appeal in the concept that he who supports the inventor should own and control the inventions the inventor makes. Nevertheless, this substantial parroting of industry policies and practices, to the extent that it exists, seems questionable and unfortunate.

It is questionable because these institutions are by nature public policy oriented—as they should be since they are publicly supported—and practices that may be appropriate in the promotion of private interests are not necessarily appropriate in the promotion of public interests. Adam Smith and Charles Wilson notwithstanding, what is good for General Motors is not necessarily good for the country—and what is good for the country is not necessarily, inevitably and unequivocally good for General Motors. More specifically, the thrusts of desirable public-oriented research may be less in the direction of sometimes rather narrow and short-range competitive and marketing advantages and more in the direction of

long-range developments and social-economic contributions that our society as a whole can profit from but is unwilling to support through traditional commercial processes. The incentives, stimuli and directions given to employee activity within this milieu should be framed with these considerations in mind. Existing practices may contribute to utility, efficiency and economy. In this respect, they are all to the good. But this, alone, is not enough.

Furthermore, the alternatives in allocation are different in their effect. In the case of the private employee, the issue is whether a given share of the private profit and opportunity for private exploitation shall go to the employer or the employee. In the case of the public employee, the issue is whether such share or opportunity should go to the employee, presumably for private exploitation, or to the employer to be used for the public benefit. It is not suggested that the public interest is always best served by the government taking all rights in the invention. Such a policy may put a damper on both effective invention and effective innovation and diffusion, and thus disserve rather than serve the public interest. But in any event, it is the public interest in all its ramifications and subtleties, and not the private interest, that should be the guide in framing the policies to be followed. Neither a blind adherence to the *Dubilier* doctrine nor an unimaginative adoption of private contract approaches achieves this.

The present approach is unfortunate. Public institutions—both universities and the government—should be experimenting, researching, testing, trying out various ways and means of accomplishing desired objectives. Crucially important questions concerning the extent, direction, costs and benefits of invention and innovation—and how best to achieve our objectives—beg for answers. To what extent is the inventive effort and its stimulation desirable? To what extent are innovative efforts and results desirable? To what extent should inventive and innovative activity be diverted into certain channels instead of others? What are the relative benefits and costs, both direct and indirect, of given inventive and innovative activity? Assuming answers to these difficult questions can be found, how can the settled-upon objectives best be achieved? Should the practices we now follow be maintained, or should something different be tried depending upon the field, the subject matter, the inventor, and so on?

These are crucially important questions and the answers have not yet been found. We cannot expect industry, preoccupied as it is with other matters, to provide the answers. But we can ask the government, and even more so the universities, to give attention to them. Concededly, some experimentation is going on in these areas, for example the awards programs of the government, and the royalty-sharing and relinquishment

of patent rights by some universities. But both institutions should be doing more. Most of all, they should be approaching these departures from orthodoxy with wide-open and searching eyes, in a spirit of inquiry, and with dedication to finding out what will work best and serve best to promote the interests of all segments of our society. Unfortunately, it is a characteristic of most educational institutions to limit their research and experimentation to those matters formally designated for such research and experiment and to pursue distressingly traditional, unimaginative and pedestrian procedures in other respects, whether it be in dealing with their customers (the students), designing and constructing their buildings, administering their affairs, or working out their employer-employee relationships, research and inventive employees included. The door is wide open for experimentation at both the governmental and academic levels.

COMPARISON OF UNITED STATES AND EUROPEAN POLICIES AND PRACTICES

The final area for discussion is the European, as contrasted to the United States, law.³⁵ The most interesting of these laws, because they depart the furthest from our own, are those found in the Scandinavian countries and in Germany. The discussion will be limited to these. These countries, in sharp contrast to the United States, have enacted laws designed to protect the interests of employed inventors, in the same sense that we in this country have enacted minimum wage laws, collective bargaining laws, and the like.

The Swedish law, enacted in 1949 and applicable to both private and governmental employees, defines four categories of inventions and inventors: (1) inventions by persons employed to invent, (2) inventions developed from ideas suggested by the employee's superior (both of these are known as "service" inventions), (3) inventions by one not employed to invent but falling within his area of activity, and (4) inventions having no connection with one's employment. The employee must report all inventions made by him, including those made independently of his work and any upon which he obtains patents within six months after employment. The employer is entitled to all the rights in inventions falling within categories (1) and (2). He receives shop-rights under those in category (3). Inventions falling within category (4) belong entirely to the employee. The employer must assert his rights within four months of notification by the employee and must pay "reasonable compensation"

35. F. NEUMEYER, *THE LAW OF EMPLOYED INVENTORS IN EUROPE* (Study of S. Res. 267 of the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, 87th Cong., 2nd Sess. (1963)).

therefor. Compensation is determined on the basis of (a) the economic scope and value of the invention, (b) the nature of the employee's employment, (c) his salary level, and (d) the expenses incurred by him. Although relationships are subject to considerable modification by mutual agreement, the right to reasonable compensation cannot be contracted away. Two boards, a so-called Official Board and an Industrial Arbitration Board, exist with limited powers (which I will forego describing here) to deal with disputes under this law.³⁶

Under Danish law, enacted in 1955 and also applicable to both private and governmental employees, "service inventions" (inventions made in the course of employment and relating to one's work, or "ordered" by the employer even though not related to the employer's activity) become the property of the employer. He must pay a reasonable compensation, however, unless otherwise provided by contract or unless the inventor's salary is deemed to compensate him adequately. In determining compensation, consideration is given to the importance of the invention to the employer, the condition of employment and the extent to which employment circumstances contributed to the invention. The regular court system is used for the settlement of disputes.³⁷

Norwegian law contains two unique provisions: (1) provision for "company" patents where the actual inventor cannot be ascertained and (2) a ban on requiring assignment of inventions made more than one year after employment terminates.³⁸

German law, the most complex, covers not only regular patents but also *gebrauchsmustern* and suggestions as well. Inventions are grouped broadly into (a) "free" inventions, not related to the employee's work and belonging entirely to the employee, and (b) "service" inventions which do relate to his employment. "Service" inventions are further divided into three groups: those falling within the "employed to invent" category, those based upon special knowledge and information possessed by the company and those resulting from the employee's own activities and ideas but based upon his general knowledge of the company. Irrespective of the category, the employee is obligated to offer his invention to the employer, subject to the payment of compensation. The category becomes important in determining this compensation. What constitutes proper compensation depends upon a large number of complex and interrelated factors. Without attempting to describe these in detail, the factors that enter into the calculations include the following: whether the employer is acquiring the entire rights or only limited rights, the economic usefulness of the

36. F. NEUMEYER, *supra* note 35, at 4-27.

37. *Id.* at 27-35.

38. See note 35 *supra*.

invention to the employer, the employee's duties and position, *i.e.*, whether his invention was the result of activities over and above his ordinary duties, and the employer's contribution in furnishing resources and equipment, experience, information, suggestions, assistance and guidance, and so on. On the basis of such factual data, one determines the "value" of the invention and the "share factor" contributed by the employer and on the basis of these makes a numerical calculation of the compensation to be paid. It is beyond the scope of this discussion to go into the complexities of the rules for determining such "value" and the "share factor," although obviously these determinations are crucial in calculating the ultimate award. Strict time limits are imposed upon the employer's offer of compensation and the employee's rejection thereof if he deems it unsatisfactory. Controversies may be resolved either through an arbitration board located in the patent office or through court procedures.³⁹

Various other countries, both in Europe and elsewhere, have special provisions relating to compensation of employee-inventors.⁴⁰ Although numerous cases have been decided under these and comparable laws—many of which are discussed in the aforementioned Neumeyer treatise—we have little information on how these various laws have worked in practice.

These programs, as is clear from the foregoing summaries, reflect basically the following pattern. They provide a statutory basis for allocation of rights between employer and employee. They give rather extensive rights to the employer to claim part or all of the interest in the employee's invention. They accord to the employee a legal right to compensation if the employer does assert his claim to the invention. They set up tribunals for settling disputes between the employer and employee, thus assuring the latter his day in court.

Without extensive evaluation of these programs, the following is suggested with respect to them: first, it is not at all clear to what extent employees, private or governmental, actually fare any better under these supposedly "protective" laws than they do under the United States system.⁴¹ In the countries discussed as well as in others, the purpose for which the employee is hired, the salary he receives and so on, are taken into consideration in determining compensation and in many cases can lead to the conclusion that the employee is entitled to no additional compensation. Second, the whole thrust of the European law is in the direction of additional monetary award, albeit on a percentage basis, rather

39. F. NEUMEYER, *supra* note 35, at 36-66.

40. See note 35 *supra*.

41. The alleged scientific and technical "brain drain" from other countries to the United States suggests that employment in this country still has its attractions.

than any share in the invention itself. Indeed, European law appears to go even further than United States law (although not as far as many contractual commitments go) with respect to the obligation of an employee to turn his invention over to his employer.

On the other hand, these laws take a significant step that we have thus far refrained from taking in this country. They recognize that the employee-inventor relationship with his employer and the allocation of rights as between them is a matter of sufficient public concern to warrant positive legislation. This concern is based, presumably, upon both the public interest in maintaining satisfactory working arrangements as a matter of labor relations and the public interest in maximizing inventive and innovative effort in the area of technological development. Whether these European countries have legislated wisely is, perhaps, less important than the fact that they have seen fit to legislate. One may expect these statutes and the experience under them to come under continued close scrutiny with an eye to seeing whether they are working well and to providing correctives if they are not. Human society—at least our society—seems more inclined toward critical examination of institutions and more disposed to reform these institutions where they result from positive legislation than where they just grow up by themselves.⁴²

CONCLUSIONS

The prevailing policies and practices vis-à-vis employed inventors have been examined and some suggestions made as to the possible virtues and defects of these practices. We do not really know whether the policies and practices are good or bad—or, if they contain traces of both as they probably do, under what circumstances and to what extent they are the one or the other. This is unfortunate. As a society that sets great store by technological development, and which relies extensively on the employer-employee relationship to provide this development, greater efforts should be made to get at the answers.

The first question, of course, is: What do we want? Without debating the validity of these assumptions, the following appear to be desirable: to achieve a continued high rate of technological development,

42. I forego comparison of the United States experience and performance and that of the European countries in question. Broad inquiries would seem appropriate into such matters as (1) the relative efficiency of inventive activity, (2) the effectiveness of the stimuli and incentives that are provided, (3) the extent, direction and shape of innovative efforts, (4) the balance between private industry and government, (5) the balance between basic and applied research, and between science and engineering, (6) the long-range versus the short-range usefulness of the inventions and innovations, and so on. Such comparisons involve innumerable factors of which the employer-employee relationship is only one, albeit, an important one, and would get us into matters far beyond the topic presently under discussion.

necessitating both invention and innovation; to direct this development into the most useful channels, using the term "useful" very broadly; to preserve, insofar as possible, the identity, dignity and freedom of the individuals, as individuals, who contribute to these developments, and to accomplish these goals within the framework of a satisfactory economic, political and social structure, whatever that may be.

Are we achieving these objectives with our present approaches? The answer presumptively—but only presumptively—is yes. One of our articles of faith has been that the free enterprise system, and the give-and-take of a bargaining process centered largely in the law of contracts, will provide us with these desirable results more effectively than will alternative systems. Pragmatists that we are, we embrace our prevailing economic practices, not for themselves as such, but because we believe they do the best job for society. Perhaps they do. But the issue is too important to leave to assumptions, especially when we recognize that many of our modern-day economic structures, forces and values are quite different from what they were when these theories that we live by were formulated. In any event, traditional economic analysis and theory has never adequately come to grips with the phenomenon we are talking about here, namely, the enlargement and improvement of the economic pie through invention and innovation as distinguished from merely dividing up the limited pie we already have.⁴³

The conclusion arrived at is obvious: we must find out more—a lot more—about what is happening in this field, what things are working well and what things are not, what are the alternatives and their potentialities. What is not quite so obvious is, first, what alternatives we should be looking at and for and, second, how to go about obtaining the information. Alternative possibilities must be explored searchingly and objectively, even though they may be ultimately rejected as inferior to our present ways of achieving our objectives. A harder look should be taken at: modified private-enterprise approaches, including collective bargaining; various means of providing special incentives through voluntary arrangements such as the expansion of awards programs; possible compulsory award programs such as exist in Europe; the possibilities of governmental action and support of various sorts, directed not only to its own employees, but to private employees and independents as well, and including awards, grants, special recognitions, opportunities for training and education, assistance in inventing, help in developing and marketing

43. Significant recent exceptions include J. GALBRAITH, *THE AFFLUENT SOCIETY* (1958); R. NELSON, M. PECK & E. KALACHEK, *TECHNOLOGY, ECONOMIC GROWTH AND PUBLIC POLICY* (1967); J. SCHMOOKLER, *INVENTION AND ECONOMIC GROWTH* (1966); R. SOLO, *ECONOMIC ORGANIZATIONS AND SOCIAL SYSTEMS* (1967).

inventions, incentives for private employers to help in attaining the objectives and ways to encourage actual entrepreneurship on the part of the inventor so that he gets the satisfaction of not only giving birth to his brain-child but of participating in its upbringing.

Such explorations could, and should, proceed on many fronts. There are many places to begin, and very few starts have been made. Individual studies and efforts can, of course, be undertaken.⁴⁴ But the job is too big and too important to be left to isolated individual efforts. The employers themselves, whether private or public institutions, should be looking at the field intensively, both to find out what is happening and to experiment with new approaches. The labor unions ought to be studying the subject. Congressional committees, with their intense interest in technology, research and related matters, should be taking a much harder look at the situation than they presently are. Employee interests have occasionally received attention in the halls of Congress—for instance, in the introduction of such bills as the Brown and Saltonstall bills,⁴⁵ in past hearings on “awards” proposals,⁴⁶ to some extent in the examination of government research and development policies,⁴⁷ and in the Hart committee inquiries into the role of invention and innovation in shaping our corporate structures.⁴⁸ But much more extensive and intensive scrutiny is called for.

Most of all, our public institutions—the federal government itself and the universities especially—should be researching and exploring the field, trying to find out the kinds of things referred to above, and testing various alternatives such as have been listed to see what policies or combinations of policies hold the greatest promise. Some of this is already being done with their awards programs, profit-sharing programs, and relinquishment of rights to inventors. But they should be doing more, and doing it with a much more conscious sense of experimentation and exploration. They have extensive ready-made research material at hand, their own research employees and, in the case of the government, the employees of government contractors as well.

This is the job that needs to be done. It is too important to by-pass and too immediate to postpone. Perhaps, when we are all through we may

44. We have the legal collections by Costa and Forman and the broader studies by Rossman, as well as excellent articles such as the one by Finnegan and Pogue. Neumeyer of Sweden is working in this area at the present time, and I have been working with him.

45. H.R. Rep. No. 5918, 89th Cong., 1st Sess. (1965); S. Rep. No. 789, 89th Cong., 1st Sess. (1965).

46. *Hearings on S. 2157 and H.R. 2383 Before the Subcomm. on Patents, Trademarks and Copyrights of the Senate Comm. on the Judiciary*, 84th Cong., 2d Sess. (1956).

47. Maltby, *A Government Patent Policy for Employee Inventions*, 21 *FED. B.J.* 127 (1961).

48. *Hearings on S. Res. 70 before the Subcomm. on Anti-trust and Monopoly of the Comm. on the Judiciary*, 89th Cong., 1st Sess. (1965).

conclude again, as we have in the past, that the unseen hand of Adam Smith is still by far the best one to have on the tiller as we steer our perilous course through the modern-day economic shoals. But even so, with the research team going further and further down the road, and the legal wagon to which it is hitched still standing where it was 50 years ago, it behooves us to check and see whether the harness can stand the strain lest the britchin' breaks.

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