

**IDEA: THE PTC JOURNAL OF
RESEARCH AND EDUCATION
VOLUME 17
1975**

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Notes on PTC Progress

A Proposal—Legal Periodical Abstracting and Computer Retrieval

The Law Center is embarking on a program with computer research staff at M.I.T., library experts at other law schools, and an information-processing company to explore areas of computer access to legal materials, apart from reported court decisions, for ready use by practicing bar and bench.

The generally poor retrieval systems available for research in legal periodicals, coupled with time and financial limitations upon the practicing lawyer, have resulted in minimal usage of these important sources of information in research, briefing, and decision-making. As a new law school, Franklin Pierce Law Center, with its PTC research arm, is in a particularly flexible and advantageous position to develop new library and information retrieval concepts that would not be feasible for institutions committed to particular library formats and programs.

Underlying the retrieval concept is the need to provide abstracts in legal journals, periodicals and other secondary materials—a custom now well established in the physical sciences and engineering. It is apparent, however, that the types of abstracts used in other fields do not fit the needs of the practicing lawyer dealing with practical problems of law and decision-making. For example, case and statute references are important to the legal profession for use in connection with secondary materials, just as they are essential in the use of primary materials (*i.e.*, court decisions). Perhaps “words and phrases,” as well as computer retrieval input containing more specific subject matter and legal doctrine references, should be considered in order to permit computer searching from different points of view and with simultaneous, parallel inquiry. Such techniques would avoid generating the unnecessarily large numbers of references which would be produced if all citations to a particular subject matter, not restricted by supplementary parallel limitation, were used as the retrieval base of inquiry.

The PTC is considering calling a limited working conference of persons in the multidisciplinary areas involved in this proposal. The conference will better define the specific needs of the legal profession in such abstracting and will generally explore the soundness of the project. In this endeavor, preliminary thinking

has been undertaken by Deans Rines and Viles (F.P.L.C.), Carolyn Baldwin and Prof. Louis von Gunten (F.P.L.C. library), Prof. Peyton Neal, Jr. (Washington and Lee University School of Law) and Prof. J. Meldman (Sloan School, M.I.T.).

As an experimental start, commencing with this issue of *IDEA*, we are providing specific abstract material which would appear to be of basic significance in such an overall program, including not only the conventional summary abstract, but also case, statute, word and phrase, and periodical listings at the end of the article. If we are correct in supposing that such information is of value to the practicing bar and bench, this would suggest that the present law journal footnote citations be discarded and that legal references be relegated to a terminal listing suitable for ready computer storage.

We invite comment and critique, as well as participation by interested readers, and close with a note that the responsibility for the necessary abstract materials can readily be shared on a uniform and standardized basis by law students and faculty editors of the scholastic law journals and editorial staffs of related secondary materials.

Research

Inventor Profile. James F. O'Bryon, M.I.T. liaison to the Inventor Profile program being conducted by the PTC and Academy of Applied Science (see *IDEA*, Vol. 16, no. 1, 1974), has reported that of the one thousand patentees selected at random for the years of 1968 and 1973, more than 25% have completed and returned the questionnaires. This is a very high percentage response for a survey of this nature. An important point in the study is that response to the questions do not come from corporate officers or patent counsel but directly from the inventor.

Preliminary information forwarded by Mr. O'Bryon to the PTC substantiates some present impressions on the U.S. patent system, but uncovers concepts not apparently heretofore recognized within the patent and technological communities. Of the thousand random patentees selected, more than one-quarter were foreigners. In descending order, inventors from West Germany, Japan and the United Kingdom had the greatest foreign representation. Neither the total representation nor the specific countries involved should evoke surprise, however, in light of current trends in the patent system. Mr. O'Bryon noted that most inventors were employees of companies engaged in research and development in areas related

to the patent. Circumstances leading to the invention, moreover, seem to point to the fact that the process was generally a deliberate, systematic pursuit aimed at solving a specific work-related problem. The "flash of genius" and "accidental discovery" seem to be factors only in a small number of inventions. Initial indications show that the vast majority of patentees are men—less than 1% women.

Computer correlation in this study will enable a comparison of inventive activities in different technological fields and in companies of different sizes. Additionally, the role of the independent inventor and the small innovative company will be authoritatively ascertained and contrasted with the large corporate and government inventive activities. Final results will be available this fall.

The survey has been extended to the United Kingdom with the assistance of A.L.T. Cotterell, British Institute of Patentees and Inventors. The British Institute distributed the questionnaires in its March, 1975 issue of *The Inventor*. The questionnaire is currently being translated into Swedish under the direction of Prof. Lars Holmqvist (Lund University) and will reach the patent community in the Scandinavian countries later this year.

Indicators in Patented Technology. The PTC and Law Center completed on schedule their NSF research project on the Study of Indicators of the Role of Science in Patented Technology. According to Thomas Mika of the NSF Science Indicators Unit, the government report and related materials will be published in July of this year and be made available to the public through either the National Science Board or the Government Printing Office. These results, with supplemental data, will also appear in IDEA.

Research Proposals Submitted

Three research proposals have been submitted recently by the Law Center and are presently being considered by the National Science Foundation.

1. Assessment of Historical and Present Effects Upon Incentive to Innovate in Non-Energy Industries (Vital to Promoting the Commercial Development and Use of Alternative Energy Sources) of Patent and Other Proprietary Rights Laws and Regulatory (Including Court) Policies Governing Energy Development and Use, Including Compulsory Licensing and Controlling or Denying Effective Patent Protection.

This proposal involves the evaluation of the impact of specific patent and other proprietary rights policies and attitudes in

various federal regulatory bodies over the past two decades. There would be studied currently compulsory licensing and other patent right restrictions governing energy development and use in terms of the actual degree of encouragement or discouragement of an encompassing set of currently non-energy industries whose innovative commitment and technologies will be essential to promote the rapid commercial development and use of alternative sources of solar and geothermal energy.

2. An Empirical Assessment of the Cost/Benefit Ratio in a Selected Sample of Regulatory Schemes Aimed at Improving the Quality of Consumer Goods and Services.

This study would be initially for collecting data on the relative effectiveness or the reasons for ineffectiveness of nine relatively distinct regulatory programs. The thrust of the proposal is not so much for the collecting of original empirical data as for the establishment of a program for the assembly of, synthesis of, and resolution of conflicts in data from available sources.

3. Assessment of Historical Effects of Different Regulatory Schemes and Types of Regulation upon the Creation of Technological Innovation and the Economic Development Thereof in a Selected Set of Industries Over the Past Two Decades.

An evaluation is proposed of the impact of various schemes of federal regulatory policies over the past two decades upon innovation by a specific and encompassing set of industries, the objective being to provide a ready presentation indicating regulation versus technological innovation. Such presentation may serve as a possible future decision-making guide for use by legislators, regulatory and industrial organizations.

Government Patent Policy: Time for Compromise

WILLIAM OTIS QUESENBERRY*

Introduction

Until the beginning of the Second World War, government research and development was primarily a modest in-house effort, the major part of which was still devoted to agriculture and the development of land resources. The requirements of modern warfare then led scientific inquiry into such fields as aviation, atomic energy, shipping, electronics, etc. The nation's rise to the challenge of the war emergency was the opening salvo of an unprecedented explosion of new technology which the United States has experienced in the past three decades.

Good or bad, inevitable or not, the federal government has continued its leadership which it started during the War and federal funds support about two-thirds of all research and development performed in this country today. In the current fiscal year, each working day will see some 80 million tax dollars go for

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research and development; about one-half that sum was a yearly research and development budget before World War II came along to disturb the tranquility of science and technology.

Laboratories and technical staffs of government agencies have mushroomed in the past thirty years. However, a significant phenomenon of the ever increasing governmental investment in research and development has been the turn by the government toward cooperative effort with private industry. The result has been the evolvement of a government-industry relationship which is now firmly founded upon a federal policy of contracting-out the vast majority of the research and development work considered essential to public purposes.

This means that the federal government now procures a different type of product from the private sector and the use of procurement policies of general application for research and development creates special problems. Research and development are in many ways essentially different from goods and services obtained by the government for other purposes. It is a relatively simple matter to provide for unequivocal transfer of all title and rights in off-the-shelf purchases of tangible products such as shoelaces, generators or vehicles. In the case of research and development, however, the "product" is more often than not intangible—an idea, a system, a design, a method, an invention. The traditional concept of simple sale and purchase is not always easy to apply to intellectual property such as an idea or discovery, and rights and title to these can therefore take such legal form as a patent.

Thus, the procurement of research and development results not only in the solutions of current governmental needs but also in discoveries or developments of a patentable nature useful not only to the government but which have actual or potential commercial value. Accordingly, rights to inventions rising out of government-sponsored research and development have a triple significance to the government in the form of "immunity," "pecuniary" and "exclusionary" values. Immunity value as a means of reducing or eliminating the costs to the United States of making or using inventions in connection with government production or procurement is obvious. Pecuniary value as property to be sold, licensed or exchanged for other patent rights has been ignored up to now. Exclusionary value is the source of the so-called "commercial rights" in inventions resulting from government-financed research and development and is the value which has created an unresolved problem of law, philosophy and emotion.

There has been continuing concern and disagreement regarding the control, disposition and use of patent rights in inventions resulting from research conducted or financed by the government. This (and the attempt at formulation of a policy for such inventions that will best serve the public interest) furthers the progress of science and brings about the most widespread enjoyment of its benefits; however, this argument has divided interested parties into separate and immovable camps of advocacy for the past three decades. These two camps are sustained by opposing schools of thought. One school, which is considered the traditional one at least by its proponents,¹ probably dates back as long as there has been federal sponsorship of research and development. It covers the bulk of patentable inventions generated with government funds.² This point of view holds that the government should acquire only those rights to inventions which it needs, namely, the free use of such inventions for governmental purposes.

At the opposite end of the spectrum is a school of thought which holds that the government should, as a general policy, acquire all rights, including patent rights, to inventions conceived under government-sponsored research. This concept probably had its origin in the Temporary National Economic Committee hearings of the late 1930's. The point of view first won official approval in the recommendations contained in a report of the Attorney General in 1947³ and has been making legislative and administrative in-roads ever since.

As the issues surrounding the allocation of invention rights became more pronounced, the Congress acted to provide statutory guidance, but strictly on an ad hoc approach. Since 1947, the Congress in establishing or authorizing programs of the various research agencies has written into each act widely differing provisions for both research and the inventions resulting therefrom.

¹ Machinery and Allied Products Institute, *Reconsidering Government Patent Policy: A Review and Analysis* (Washington, D.C.: MAPI, 1960), p. 2. "This attitude is called traditional because: (1) it would appear to be most in keeping with the free enterprise system of the United States and with the philosophy which motivated the authors of the Constitution to authorize a patent system; and (2) this policy is still the prevailing policy among most Federal agencies, including the Department of Defense, the notable exceptions being the AEC and NASA."

² Army, Navy and Air Force research programs account for sixty-seven percent of the patent applications filed on government-financed inventions. See Federal Council for Science and Technology, *Annual Report on Government Patent Policy: Combined December 1971 and December 1972*, Table 1, pp. 125, 137.

³ U.S., Department of Justice, *Investigation of Government Patent Practices and Policies: Report and Recommendations of The Attorney General to the President*, 3 vols., 1947.

These provisions have ranged from no policy statement at all (leaving it to the agency or the Executive to set policy by regulations) to the very specific and highly restrictive policy set in the Atomic Energy Act and other statutes covering specific areas of technology. In its first and only effort at resolving the allocation of rights issue on a government-wide basis, the Executive Branch supported a flexible policy to accommodate the missions of the various agencies.⁴ This administrative fiat may have softened the absolute stand of agencies practicing at the opposite poles of "license" and "title" theory, but did little to bring uniformity to government treatment of the rights question.

Thus, after three decades of rhetoric, disagreement and piecemeal guidance, the patent policy applied to the federal research program (which has reached an annual level of \$20 billion and is still growing) is a policy based both on legislative and executive action. The condition is one of disparity and diversity in which the United States government, the largest corporation in the world, has no single over-all and certain policy defining the relative rights of government and its research contractors with respect to contract originated inventions.

The dilemma is three-dimensional. Supporters of the two schools of thought are now firmly entrenched in their respective camps of advocacy. There have been few, if any, who have crossed over since the ideological lines were drawn some thirty years ago. Each new generation of enthusiasts merely takes up the gauntlet from weary precursors and flails away with well-worn arguments, pro and con. In the course of the battle, advocacy of a uniform license policy is usually coupled with admiration for the patent system, and the banner is staunchly carried by patent lawyers morally supported by American businessmen. Advocacy of a uniform title policy, often accompanied by hostility to the patent system, is aggressively pursued by an equally dedicated core of liberal politicians nourished by the convictions of economists and antitrust lawyers. The third dimension, under a banner of "flexibility not uniformity," merely endorses a kaleidoscope of mission and constituency influenced policies. It really has not solved the basic controversy. Given enough time, it stands to be permeated by the steady flow of restrictive legislation which slowly enlarges the beachhead for the title forces in the battle.

This writer, as a patent lawyer, tends by nature to see the patent

⁴ U.S., President, "Statement of Government Patent Policy," *Federal Register* 28, no. 200, 12 October 1963, 10943-6.

system as the means for returning the fruits of government-sponsored research and development to the taxpaying consumer who paid for it in the first place. However, yet another treatise extolling the virtues of either the license or title philosophies seems to be one thing the controversy has little need for today. There is little, if anything, new to be said. In addition, probably no new ways are left to express the old arguments. No converts from one philosophy to the other can be expected.

Viewed objectively, neither policy has shown a respectable track record for returning over two hundred billion taxpaid dollars worth of new technology to the public marketplace. Accordingly, it is the objective of this paper to look critically at both approaches to the distribution of rights to invention and reach for a workable single uniform policy. Such a policy may not satisfy either entrenched philosophical camp. However, it is hoped that this proposal will meet the needs of the government, the contractor, and most of all, the needs of the public as this writer views them. After thirty years and \$200 billion, it is time for compromise.

The Struggle for Uniform Policy

As the federal government has grown in size and scope, it has, in the main, adopted general uniformity in the policy and procedures with which it deals with both its employees and the public. Personnel policies, fiscal practices, procurement regulations, etc. are delineated in great detail, widely promulgated and policed by all three branches of government. Uniformity has obvious advantages both to governmental agencies and to those who must interact with them. At least in theory, the benefits of sound business principles are extended to all agencies. Also, inconsistencies in agency practices are reduced, whereby they can compete with each other on equal terms and avoid competition among themselves. This both strengthens the government's bargaining position in its transactions and minimizes the ability of others, be they employees, contractors, etc., to play one agency against another. At the same time those dealing with government, especially individuals and small business concerns, would seem entitled to know and understand beforehand the policy, regulation and practice which the government will rely upon and should not be subjected to a maze of individual reactions, interpretations and practices by its various agencies. These are the general objectives of uniformity of government policy and practice.

Federal patent policy is one area of government interaction

where there have been decades of debate and struggle for uniformity with little gain. In general, the missions of old-line executive agencies tend to fall into the two main groupings of procurement and public service, with the missions of post-war agencies chartered in new and exotic fields of atomic energy and space exploration somewhat in between. The first mentioned group, typified by the Department of Defense, is concerned primarily with the development of new and better items of material and equipment for their own use. On the other hand, public service agencies, typified by the Department of Agriculture, are concerned primarily with the development of new items and ideas that, placed in public use, would advance the national economy and welfare.

Differing missions have historically formed the rationale for differing philosophies as to patent rights. However, the purpose of research and development procurement as the major reason for different policies throughout government seems questionable as to its basis.⁵ There are two types of inventions generated under government sponsorship. The first is a device or process having only government (*e.g.*, military) application. The second is an invention having commercial utility. For the first type the only potential customers are the United States or foreign governments. In that case, it seems immaterial to the government whether it takes title or a license since in either case it receives the right to practice the invention or have it practiced for governmental purposes. The contractor (or employee inventor) also should have little preference since exclusivity in potential sales to the government is impossible. On the other hand, inventions capable of commercial application generally require further risk capital to bring them to the commercial marketplace and are always more alluring and profitable to an entrepreneur with exclusive rights. It seems, therefore, that more than the particular nature of agency mission, the nature of invention applicability comes closer to dictating the rationale for ownership in any agency and, in fact, in government research and development as a whole.

As far back as 1943, President Roosevelt, in inaugurating a study by the Department of Justice of the patent policies and practice of government agencies, noted the "need for a uniform Government-wide policy with respect to the ownership, use or control of inventions made by employees of the Federal Govern-

⁵ Dobkin, "Patent Policy in Government Research and Development Contracts," 53 *Virginia Law Review* 591 (1967).

ment, or by employees of Government contractors in the course of performing contracts financed by the United States.”⁶ In his final report four years later, the Attorney General concluded that the investigation by his Department fully demonstrated the soundness of that observation.⁷

For the next fifteen years the debate centered not so much on whether or not there should be uniformity, but on the question of what kind of standard patent policy the government should have. Those who support a uniform license policy, mindful of the advantages of the patent system itself, insist that the merits of a license policy and the merits of the patent system should not be considered as separate questions.

Similarly, those who advocate that the government uniformly takes title and dedicates its inventions do so in part because they view the patent system with critical eyes. They argue that patents can be barriers to progress and hence progress is best achieved if patented inventions become public property.⁸

Industry Attitudes

The nongovernmental interest groups in the debate over uniform government patent policy have been industry, nonprofit organizations, including universities, and the patent bar. These groups in their own proper self-interest have consistently urged that the government's contractor is entitled to the fruits of patentable inventions which he develops.⁹ Thus, the private sector has publicly favored a license policy and has sought its extension to all government research and development contracts.¹⁰

⁶ Note 3, *supra*, Vol. I at 8.

⁷ *Id.*

⁸ Watson, Bright, and Burns, “Federal Patent Policies in Contracts for Research and Development,” 4 *The Patent, Trademark, and Copyright Journal of Research and Education (Idea)* 295, 299 (Winter 1960).

⁹ It should be noted that some government contractors who are primarily engaged in manufacturing and do not pursue strong R&D programs find their self-interest in ready access to the inventions developed by others. On occasion, this type of contractor has spoken out against the general industry's stand on patent rights.

¹⁰ Machinery and Allied Products Institute, *Federal Patent Policy* (Washington, D.C.: MAPI, 1960), p. 35. MAPI, a frequent voice for industry on government patent policy, recommended:

“1. The Government as a matter of general policy, should limit itself to the acquisition of royalty-free, nonexclusive licenses to inventions first conceived or reduced to practice during the performance of Government research and development contracts.

Nongovernmental groups have been frustrated by piece-meal treatment of contract patent policy during the years in which debate over uniformity has continued. They have seen patent provisions in Atomic Energy Commission and National Aeronautics and Space Administration legislation and subsequent special technical programs begin to build a counterbalance to the dominant influence of the license policy of the Department of Defense. Dealing with different agencies has meant inconsistency in obtaining the favorable patent rights terms to which they have become accustomed. Industry, trade associations and the patent bar have continued to press for executive consistency¹¹ and legislative uniformity¹² in the direction of government-wide adherence to a policy which would leave title to inventions with the contractor.

Agency Attitudes

The Executive Branch of government has great interest in the final outcome of the debate over government patent policy. However, individual agency posture insofar as uniformity is concerned has been characteristically a "live and let live" attitude. The lack of uniformity of federal agency patent policies is long standing. On one end of the spectrum, the title policy of the Department of Agriculture can be traced back to the nineteenth century.¹³ At the other end, the license policy of the military departments likewise had its origin long ago.

How do the agencies publicly justify their varying policies? Since most statutory provisions on patent policy are somewhat ambiguous, and since some agencies do not even have a patent policy mandate from Congress, they generally have rationalized their approaches on the basis of their research and development missions. As a consequence, the belief has developed within the Executive Branch that particular missions should carry particular kinds of patent policies. These missions are usually distinguished according to whether their aim is to advance technology for the use of the government or for the public.¹⁴

2. This policy, which has been adopted by the Department of Defense, should be followed by all Federal agencies."

¹¹ Solo, "Patent Policy for Government-Sponsored Research and Development," 10 *IDEA* 144 (Summer 1966).

¹² Aerospace Industries Association, *Inventions and Patents in Government Contracting* (Washington, D.C.: AIA, July 1971), p. 8.

¹³ Note 8, *supra* at 296.

¹⁴ Lambright, "Government, Industry, and the Research Partnership: The Case of Patent Policy," 28 *Public Administration Review* 216 (March/April 1968).

Furthermore, to understand why one government has many patent policies, it is necessary to look beyond the agencies. It is necessary to look at the kinds of relationships agencies have with the congressional committees and interest groups most concerned with a given policy area. The relative weight given the claims of property and commerce in invention by an agency derives from its own views of the public interest, as those views are shaped by its relative bargaining power vis-à-vis the forces in its environment. The kinds of interactions and bargaining relationships which characterize one agency may be very different from those characterizing any other. Centrifugal forces working to maintain diversity being what they are, if individual agencies are left to their own pragmatic options, diversity of patent policy is an inevitable consequence.¹⁵

Of those agencies whose missions are oriented toward technology for governmental use, the Department of Defense, which accounts for approximately half of the government's research and development expenditures, is the most visible proponent of the license policy. Given the responsibility for national security and a military force second to none in a world environment of rapidly advancing technology, that agency has traditionally opted for the right to accommodate its patent policy to the real world influences on mission accomplishment. These include such factors as budget limitations, industry cooperation and congressional and public image. Under these influences the Department of Defense tends to see a license policy as the general servant of the public interest, at least insofar as its own efforts are concerned. With a "bare-bones" research and development budget to explore the myriad of pathways of technology, it must rely upon the laboratories of private industry as well as its own. There is a delicate balance of cost, cooperation and performance within the military/industrial complex. This relationship is considered critical to this Department's success in achieving national security. Like the baseball manager who does not break up a winning combination, the Department of Defense is unwilling to change its patent policy, risking greater expense and less performance unless it can be sure that the change is needed and is in the public interest.¹⁶ In support of its position, the Department of Defense is able to cite past efforts at government-sponsored industrial research in programs such as

¹⁵ *Id.* at 220.

¹⁶ Keeffe and Lewis, *Defense Department Patent Policy: Proposed Changes in ASPR Provisions* (Washington, D.C.: Department of the Navy, 1960), p. 12.

synthetic rubber and cancer chemotherapy where operating agencies were unable to do their jobs without existence of the patent incentive.¹⁷

Agencies embracing title policy or some modification thereof are inclined to be either new statutory agencies such as the Atomic Energy Commission and the National Aeronautics and Space Administration or old line agencies whose research is public-oriented such as the Department of Agriculture; the Department of Interior; the Department of Health, Education, and Welfare; and the Tennessee Valley Authority. Spokesmen for these agencies are prone to insist on the unique missions of their agencies, on the peculiarities of their research and development programs, and therefore on the appropriateness of the title policy for them.¹⁸ However, the attitude toward government-wide uniformity here has been the same as with the Department of Defense and other license-oriented agencies. Patent policy has been cut to fit individual agency needs and there has been no clamor from agencies adhering to a title philosophy to impose their practice on others.

To the contrary, there has been one executive agency which has consistently pushed for a uniform patent policy for the government. In its study of "Patent Policies and Practices of Government Departments and Agencies Relating to Inventions of Their Employees and Contractors" the Department of Justice took a stand on the issue and has stuck with it ever since. The 1947 report of the Attorney General to the President contained the following:¹⁹

IV. Inventions Made By Government Contractors

A. FINDINGS AND CONCLUSIONS OF ATTORNEY GENERAL

1. Where patentable inventions are made in the course of performing a Government-financed contract for research and de-

¹⁷ *Id.* at 27.

¹⁸ It is interesting to note, however, that as these agencies experience difficulties in contracting or in technology utilization, they are prone to meet their problems on an ad hoc basis through the application of the incentives of the patent system. Thus, few, if any, of the so-called "title agencies" unswervingly follow an absolute policy of government ownership and dedication to the public. For example:

HEW leaves title with contractors or grants exclusive licenses in selected instances.

Interior on occasion leaves patent rights with contractors in selected instances.

Agriculture has been a pioneer in the use of the exclusive license incentive to obtain commercial use of technology.

AEC has deviated from title policy in instances of "out-field" inventions which do not relate to nuclear fission technology.

NASA selectively takes advantage of its right to waive title to inventions.

¹⁹ Note 3, *supra* at 4-5.

velopment, the public interest requires that all rights to such inventions be assigned to the Government and not left to the private ownership of the contractor. Public control will assure free and equal availability of the inventions to American industry and science; will eliminate any competitive advantage to the contractor chosen to perform the research work; will avoid undue concentration of economic power in the hands of a few large corporations; will tend to increase and diversify available research facilities within the United States to the advantage of the Government and of the national economy; and will thus strengthen our American system of free, competitive enterprise.

2. To leave patent rights to the contractor may permit the suppression of an invention paid for by the public, or the imposition of an assessment for its use by the public to serve private advantage. It would constitute an unequal form of reward for comparable performance and would tend to unbalance Federal research by making more desirable those aspects likely to lead to commercially valuable patent rights. . . .

B. RECOMMENDATIONS OF ATTORNEY GENERAL

1. As a basic policy, all contracts for research and development work financed with Federal funds should contain a stipulation providing that the Government shall be entitled to all rights to inventions produced in the performance of the contract. . . .

The primary influence in the penchant of the Department of Justice for a government-wide title policy clearly seems to be the antitrust/free economy thinking which has permeated its attitude towards patents for the past three or more decades.

Congressional Attitudes

If a provincial approach to patent policy by individual executive agencies led to lack of uniformity, piece-meal attention (or inattention) to the subject by the legislature did nothing to remedy the situation. Even though the military agencies have traditionally accounted for more than half of government research and development expenditures, in the Armed Services Procurement Act of 1947,²⁰ the Congress expressed no policy concerning the allocation of rights to inventions or patents. Later in 1950, when it did speak to patent policy in the National Science Foundation Act of 1950,²¹ Congress went no further than to provide that each contract of the National Science Foundation should "contain provisions governing the disposition of inventions produced thereunder in a manner calculated to protect the public interest and the equities of the individual or organization with which the contract

²⁰ 62 Stat. 21 (1948), 10 U.S.C. § 2201 *et seq.* (1970).

²¹ 64 Stat. 149 (1950), 42 U.S.C. §§ 1861-1875 (1970).

or other arrangement is executed.”²² There was no requirement that the Foundation take title to any inventions, nor was there even a requirement that a royalty-free, nonexclusive license be reserved to the government. The authorization was broad and placed patent rights squarely within the discretion of the agency.

The first detailed statement of patent policy came as part of the Atomic Energy Act of 1954.²³ The Act required the Atomic Energy Commission to take title to any invention or discovery useful in the production or utilization of atomic energy when the discovery is made under any contract with the Commission, except that the Commission is authorized to waive its claim to title under such circumstances as the Commission deems appropriate.²⁴ As to all other inventions, the Commission is left free to adopt whatever patent policy it wishes, the law merely stating: “Nothing in this chapter shall affect the right of the Commission to require that patents granted on inventions, made or conceived during the course of federally financed research or operations, be assigned to the United States.”²⁵

The next legislative treatment of patent policy came with the National Aeronautics and Space Act of 1958.²⁶ Here Congress felt obliged to require the new space agency to take title to all inventions arising out of government-financed research unless the Administrator determines that interests of the United States will be served by waiving title.²⁷

By now the inconsistency of policy was highlighted and began to attract greater criticism from both the private sector and the Congress. Different agencies contracting for research with the same industrial firm or university were offering opposite deals with respect to the commercial rights to inventions made. Pressure began to mount for uniformity. The Senate Committee on the Judiciary’s Subcommittee on Patents, Trademarks, and Copyrights, chaired by Senator O’Mahoney of Wyoming, stepped into the breach and began an eight-year struggle for patent policy legislation.

The O’Mahoney Subcommittee staff commenced an investigation of government patent practices, publishing preliminary reports on various agencies as completed. Before the investigation

²² *Id.* at § 1871(a).

²³ 68 Stat. 919 (1954), 42 U.S.C. § 2011 *et seq.* (1970).

²⁴ *Id.* at § 2182.

²⁵ *Id.* at § 2189.

²⁶ 72 Stat. 426 (1958), 42 U.S.C. § 2451 *et seq.* (1970).

²⁷ *Id.* at § 2457.

was complete and with very limited hearings, Senator O'Mahoney used his last report as Subcommittee Chairman to point out the wide divergence of policy and called upon the Congress to assume responsibility for disposition of inventions. He attacked the practice followed by the Department of Defense as "wasteful" and "irresponsible" and proposed that, pending the enactment of general legislative standards, the Department of Defense should, by appropriate administrative regulations, conform its patent policy to that of the civilian research agencies in all of their common fields of scientific exploration.²⁸ The tenor of the report, plus the fact that Senator O'Mahoney on his own behalf introduced a bill which provided for ownership by the government of all patented inventions produced by government research, was a clear indication of what uniform practice meant to the majority of the Subcommittee as then constituted. The bill was not acted upon and Senator O'Mahoney did not return to Congress the following year. A year later, the Subcommittee's annual report under its new Chairman, Senator McClellan, pointed to the urgent need for Congress to legislate a government patent policy but proposed that the legislation should have as its objectives: (a) to achieve the highest degree of uniformity of patent policy, consistent with the differing missions of the various departments and agencies, and (b) to provide an equitable balancing of the interests of the government and the contractors.²⁹

In the meantime, the outcry which greeted the patent provisions of the Space Act, first from the patent bar, then from trade groups and the business community, was considerable.³⁰ An attitude favorable toward the license policy seemed to be developed in the 1959 hearings before the Subcommittee on Patents and Scientific Inventions of the House Committee on Science and Astronautics. However, efforts of supporters such as Congressmen Mitchell and Daddario to sharply modify the title policy given the National Aeronautics and Space Administration in 1958 never came to fruition. Patent recommendations of this Subcommittee were included in a bill which passed the House but was not acted upon by the Senate.

²⁸ S. Rep. No. 143, 87th Cong., 1st Sess. (1961). Individual views filed with the Report by Sen. Wiley as a "balancing reply" pointed out that the Report contained a high degree of opinion and judgment and was based on only two days of hearings at which only a small number of witnesses were asked to testify and did not include the Department of Defense.

²⁹ S. Rep. No. 1481, 87th Cong., 2d Sess. (1962).

³⁰ Wise, "Patent Problems in Government Sponsored Research," 45 J.P.O.S. 620 (1963).

Back in the Senate, the most adamant voice against retention of invention rights by government contractors was that of Senator Russell Long of Louisiana. Senator Long, who chaired a Subcommittee on Monopoly of the Senate Select Committee on Small Business, expounded the thesis that since the government pays for research, the government should own resulting inventions and that patent policy as practiced by the Department of Defense is indeed a "giveaway policy."³¹ In hearings held before his Subcommittee in 1959, he was able to establish a record with the appearance of hostility toward the concept of license policy.³² Obviously, Senator Long's definition of uniformity meant across-the-board taking of title to inventions.

After many years of study and debate the effort by the McClellan Subcommittee on Patents, Trademarks, and Copyrights to respond to the hue and cry for a uniform patent policy peaked during the 89th Congress in 1965. It had before it no less than five bills dealing with the subject. Bills S. 1899 by Senator Long and S. 2715 by Senators Hart and Burdick (Subcommittee members) favored a uniform title policy. Bills S. 789 by Senator Saltonstall and S. 2326 by Senator Dirksen were on the license side of the issue. Senator McClellan introduced S. 1809, a middle ground position permitting flexibility of agency action similar in many ways to the Executive policy promulgated in 1963 by President Kennedy. As the second session of Congress came down the home stretch, most government agencies, as well as trade and bar groups, backed the McClellan bill and after some eight years a bill directed to government-wide patent policy finally made it out of the Subcommittee on a three to two vote.³³ The bill passed the parent Committee on the Judiciary but too late to reach the floor of the Senate before the expiration of the 89th Congress.

The momentum was lost. Senator McClellan, who still heads the Subcommittee, has never again taken up the quest for the legislation of a uniform patent policy for all government agencies, nor does there appear to be any prospect in the foreseeable future for congressional action in this direction.

³¹ This characterization has remained the watchword down through the years of politicians, economists and latter-day consumer advocates who are staunch proponents of government ownership and dedication of inventions.

³² Note 8, *supra* at 297.

³³ Republicans Scott and Fong voted with McClellan for the bill. Democrats Hart and Burdick voted against the bill.

Executive Initiative

The authority and responsibility of the Congress to make basic patent policy decisions for the functioning of the federal government has been unquestioned. However, as the legislative process continued to flounder in the waves of antipodal and unbending philosophies, the ability of Congress to bring uniformity to the potpourri of agency treatment of patent rights became more and more doubtful.

In the early sixties, as agencies turned more often and with more funds to the private sector for research and development, the situation became more chaotic. Different government agencies were presenting entirely different patent clauses to the same contracting company or institution for similar types of research in the same field. Pressure began to build on government agencies to achieve, if not uniformity, then at least a greater consistency of patent policies and practices.³⁴ This pressure arose both from the private sector and the Congress. Contractors dealing with a number of agencies were not only confronted with confusion and uncertainty, but naturally sought to obtain terms as favorable in dealing with one agency as they were offered in dealing with one another. Furthermore, the political appeal of pronouncements against the "give-away" of valuable patent rights and the proffer of title-taking amendments to each special technology legislation taken up by the Congress promised a gradual strengthening of the hand of those who proposed a uniform title policy for all government-sponsored research and development. Congressional critics of the contradictions in policies and practices of federal agencies recognized the unpromising picture for solution in the political arena of the legislature and reflected their own policy views, or those of their constituents or philosophical supporters, in their press for achievement of greater consistency by the Executive Branch itself.

Kennedy Policy Statement—1963

In 1962, President Kennedy asked Dr. Wiesner, his Special Assistant for Science and Technology, to see whether he could do something to bring together the various views that had been expressed to him from the Congress, from industry, and from

³⁴ Note 11, *supra* at 144.

government agencies. Kennedy recognized that this had been a subject of considerable turmoil and instability for a number of years and apparently felt that responsible government should be able to weave a course that would accommodate the various public interests involved.³⁵

With the goals of determining a common rationale that would guide the agencies in the solution of the problem and of weaving a common thread through the various agency policies, the Office of Science and Technology (working closely with some twenty federal agencies) attempted to identify some general principles that would protect all aspects of the public interest. The result of this study and consultation was a Memorandum and Statement of Government Patent Policy from the President to the government agencies dated October 10, 1963.³⁶

The policy statement recognized four basic concepts as being applicable to a government-wide patent policy. First, greater consistency is needed throughout the government in the acquisition of patent rights even though a completely uniform practice is not feasible in view of differing missions and statutory responsibilities of the agencies engaged in research and development. Second, a single across-the-board title or license policy is not the answer to this difficult problem. Third, before the public can benefit from inventions derived from government-sponsored research and development, the inventions must be developed, exploited, placed before the public, and used. Fourth, determinations as to the disposition of rights should be made as early as practicable, preferably at the time of contracting.

The guidelines set forth in the policy statement purportedly took into consideration the need to stimulate inventors, the needs of the government, the equities of contractors, and the interest of the general public. Under the policy, agencies were required to acquire title to all inventions made in the course of government-sponsored research if the purpose of the research was to create products or processes intended for commercial use by the general public, or

³⁵ Beckler, "The Public Interest Under Federal Patent Policies," 10 IDEA 256 (1966). Beckler, Assistant to Dr. Wiesner and a principal author of the Kennedy memorandum on government patent policy, noted:

"I think the important thing here is to emphasize the word 'interests' rather than 'interest' because in many matters of this sort, there are a variety of interests, none of which can be wholly served. So the art of Government is to determine a course which will take into consideration the legitimate concerns of the various interests involved."

³⁶ See Note 4, *supra*.

was directly concerned with public health or welfare; the contract was in a field in which there has been little experience outside the work funded by the government, or in which the government has been the principal developer; or the service of the contractor was for the operation of a government-owned research or production facility, or for coordinating and directing the work of others.

Agencies were permitted to leave title with the contractor where the purpose of the contract was to build upon existing technology and the contractor had acquired technical competence in the field and had an established nongovernmental commercial position in that or a related field of technology.

If the contractor did not have an established nongovernmental commercial position, the determination of rights was to be deferred until after an invention had been identified. This determination was to be made after considering the guidelines that define when the government is to take title to inventions and was to take into account the contractor's plans for commercializing the invention.

Agencies were also permitted to define by regulation, "special situations" in which contractors who did not have an established commercial position in the field of the contract might be permitted to take title to an invention at the time of contracting. For example, the Department of Defense regulations permit an exception for educational institutions that have a policy of acquiring title to patents.

Not only could a contractor obtain title under contracts that related to his commercial field, but in exceptional circumstances he could acquire title to those in the category in which the Government "normally" acquired title, if at the time of contracting the head of the department or agency certified that it would best serve the public interest.

Finally, the contractor got a second chance at title to an invention made under a contract that required him to assign title to inventions, after the invention has been identified. The policy enabled an agency head to grant title to the contractor³⁷ if he found that the invention was not the primary object of the contract and that title was necessary for commercialization.

Essentially what had emerged from this effort by the Executive Branch was a rationalization of existing practices by reference to criteria which had been tailored specifically to justify the policies

³⁷ "Analysis: Government Patent Policy," 71 Patent, Trademark, and Copyright Journal C-1 (March 30, 1972).

of the different agencies.³⁸ It was described by some as appearing on its face to be a case of “all things to all people.”³⁹ However, it did provide a basis for bringing the extremes of agency practices a little closer together. No longer would the Department of Defense, for example, be satisfied with a nonexclusive royalty-free license in every one of its contractual research agreements. By the same token, the Department of Health, Education, and Welfare, for example, would have the flexibility in its traditional title philosophy to use the incentive of commercial rights to help carry out certain of its research programs.

While the government-wide policy promulgated by the Executive pleased neither philosophical camp, had many flaws and may even be unconstitutional,⁴⁰ it was at least the first attempt at taking the bull by the horns by any of the branches of government since federal agencies began contracting out research and development over one hundred years before. Nonuniformity practiced with consistency is not much of an accomplishment, but it is more than the Congress has been able to achieve over the years⁴¹ and is certainly better than nothing.

Nixon Revision—1971

The purposes of the 1963 Presidential statement on government patent policy had really been two-fold. The first explicit purpose was to achieve a sufficiently consistent federal patent policy. The second was to promote the commercial utilization of inventions produced through government research and development contracts. By the late sixties, interpretations of the guidelines had been ironed out by the agencies under the aegis of the Committee on Government Patent Policy of the Federal Council for Science and Technology, and agency regulations and practices had been restructured in consonance with the guidelines. “Consistency” of practice among differing policies allegedly accomplished, agencies turned their attention to the concern for utilization of

³⁸ Note 11, *supra* at 145.

³⁹ Forman, “President’s Statement of Government Patent Policy: A Springboard for Legislative Action,” 25 *Federal Bar Journal* 8 (Winter 1965).

⁴⁰ *Id.* at 18.

⁴¹ Senator McClellan in his quest for legislation on government patent policy adopted a middle-of-the-road position quite similar to the policy promulgated in the Kennedy Statement of 1963. His bill, S. 1809, was the only policy legislation which made it out of the Senate Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, only to die unacted upon with the close of the 89th Congress in 1966.

government-owned inventions not only for governmental purposes but for the public benefit on the commercial market.

The ever-growing portfolio of government-owned patents held by various agencies had a poor record of commercialization.⁴² Those few inventions being used were products and processes readily adaptable to civilian use and requiring no further development for the commercial market. The Kennedy policy, while encouraging utilization of invention through "dedication" and "licensing," was not explicit enough to support a turn by agencies from the practice of making inventions available on nonexclusive or implied licensing bases.⁴³ Also some agencies were frustrated in their efforts to gain public utilization for some inventions which they were required to take title to under the Kennedy guidelines.⁴⁴

Accordingly, after a further study of patent policies by the Federal Council for Science and Technology through its Committee on Government Patent Policy, a revised statement improving these shortcomings of the Kennedy policy statement was prepared and submitted to the White House in the waning days of the Johnson administration. The proposed restatement was eventually taken up by the new administration and issued as a new Presidential Memorandum and Statement of Government Patent Policy by President Nixon in August of 1971.⁴⁵ The Nixon revisions attributed the degree of commercial utilization of government-sponsored inventions, commercial competition, and participation of industry in government research and development to several important factors. These included the mission of the contracting agency; the purpose and nature of the contract; the commercial applicability and market potential of the invention; the extent to which the invention is developed by the contracting agency; the promotional activities of the contracting agency; the commercial

⁴² Holman, "The Utilization of Government-Owned Patented Inventions," 7 Patent, Trademark, and Copyright Journal of Research and Education (IDEA) 323 (Summer 1963), found less than 3% of the government portfolio being used commercially; Sanders, "What Should the Federal Government's Patent Policy Be?", 8 IDEA 168, 183 (Summer 1964), concludes the true utilization to be between 2½ and 5%.

⁴³ The National Aeronautics and Space Administration, an exception to the rule, interprets the language of its statute, National Aeronautics and Space Act of 1958, 42 U.S.C. § 2457(g) (1970), as providing the basis for granting exclusive licenses under its patents.

⁴⁴ U.S., Commission on Government Procurement, *Report of the Commission on Government Procurement* (Washington, D.C.: Government Printing Office, Dec. 1972), Vol. 4, p. 113.

⁴⁵ U.S., President, "Statement of Government Patent Policy," *Federal Register* 36, No. 166, 26 Aug. 1971, 16887.

orientation of the contractor; the extent of his privately financed research in the related technology; and the size, nature and research orientation of the pertinent industry.⁴⁶

The new guideline give heads of agencies additional authority to grant to contractors title to inventions, even though an invention is a primary object of the contract. If the agency determines that it is necessary to create an incentive for further development and marketing or that the government contribution is small when compared with that of the contractor, he may be permitted to retain title in order to foster commercialization of the invention.

The second major change places emphasis on licensing of government-owned inventions. The General Services Administration was charged in the policy statement with developing regulations to promote the availability and development of government-owned inventions. For the first time, authority for licensing specifically spelled out both exclusive and nonexclusive licensing as means for accomplishing this.

Government-Wide Licensing Regulations

The ground work for the authority given by the Presidential policy statement of 1971 for departments and agencies to grant exclusive licenses under government-owned patents began back in 1967. At the time, the Patent Management Subcommittee of the Committee on Government Patent Policy was assigned the task of studying methods for enhancing the utilization of government-owned inventions.⁴⁷ The initial report of the Subcommittee in July of 1967 analyzed the specific problem of getting government-owned inventions utilized, due to the need of some form of exclusivity to provide the necessary incentive for their effective development and marketing, and recommended that the Federal Council for Science and Technology endorse the practice of granting limited exclusive licenses in this situation. The proposed plan called for advertising appropriate inventions as available for licensing and if, after a fixed period of time, no one was willing to commercialize an invention on a nonexclusive basis, an application for a "limited exclusive license" would be considered. Such licenses would be severely restricted by requirements, conditions and limi-

⁴⁶ Note 44, *supra* at 113.

⁴⁷ A report of the efforts and proposals of this Subcommittee was printed in the *Annual Report on Government Patent Policy: Combined December 1969 and December 1970 of the Federal Council for Science and Technology* (Washington, D.C.: Government Printing Office, 1971), pp. 104-37.

tations as to term, transferability, licensing, commercial development, investment, revocation, etc.

Before acting on the report, the Federal Council asked for consideration as to the ability of agencies to grant such licenses without specific statutory authority. When asked for views on the legality of the plan, the Office of Legal Counsel within the Department of Justice gave its approval. In its opinion⁴⁸ nine limitations were enumerated and followed by this conclusion:

Utilization of a licensing scheme for certain Government-owned patents, containing the above limitation, would appear to be compatible with the interests of the United States, as owner of such patents for public benefit, by fostering early development and practical use of them by the private sector of the economy. Prior experience, in the judgment of the Patent Management Subcommittee, shows that the alternative to such beneficial utilization is, in effect, the burying of the patent because of the absence of parties willing to invest the necessary risk capital without more protection of that investment than a nonexclusive license.

In light of the foregoing, it would appear that the granting of exclusive licenses limited as described above would most probably be characterized by the courts not as alienation of Government property by virtue of an assignment, but as a proper licensing method for the utilization of valuable Government patent assets.

The practice of granting limited exclusive licenses was endorsed by the Federal Council in October 1967 but, as previously mentioned, Presidential authority for the proposed program was four more years in coming.

In the interim, comprehensive licensing regulations were drafted by the Patent Management Subcommittee prescribing the terms, conditions, and procedures for nonexclusive and exclusive licensing of rights in domestic patents and patent applications. Once the revised policy statement had issued, these draft regulations were circulated by the General Services Administration for comment by such interested circles as industry, professional associations and government agencies. The Subcommittee considered the many comments received and made many revisions to the regulations in the light of these comments. Further revisions were made by the Executive Subcommittee, the Committee on Government Patent Policy and the Federal Council for Science and Technology before they were finally published⁴⁹ as part of Chapter 101—Federal Property Management Regulations of U.S.C. Title 41—Public Contracts and Property Management.

⁴⁸ *Id.* at 122-23.

⁴⁹ *Federal Register* 38, No. 23, 5 Feb. 1973, 3328-31.

Government-Wide Procurement Regulations

It was obviously desirable that the governmental agencies implement the patent rights policy guidelines of the Kennedy and Nixon statements on a government-wide basis, with as much uniformity of implementation as possible. At the request of the General Services Administration, the Implementation Subcommittee of the Committee on Government Patent Policy undertook to draft an addition to the Federal Procurement Regulations which would prescribe policies, procedures, and appropriate contract clauses concerning the disposition of rights in inventions. This move promised for the first time to provide standard patent rights clauses for use in all contracts, subject to the Federal Property and Administrative Services Act of 1949. While the military departments, which conduct the lion's share of federal research and development contracting, are governed by the Armed Services Procurement Act of 1947, the coordination of the Federal Procurement Regulations and Armed Services Procurement Regulation treatment of rights to inventions, as set forth in the Presidential policy statements, enabled the achievement of essentially government-wide consistency in the matter.

The proposed regulations were circulated by the General Services Administration to industry, the patent bar and government agencies for comment. After extensive revisions based upon comments received, the regulations were issued by the Administrator of General Services on August 29, 1973, as an amendment to the Federal Procurement Regulations to be effective March 4, 1973.⁵⁰

The Fruits of Three Decades

Three decades have passed since President Franklin Roosevelt expressed the need for a uniform government-wide policy with respect to the ownership, use and control of inventions made in the course of performing contracts financed by the United States. We have seen years of effort in the legislative arena toward such a single policy for all government agencies. In the past decade, two Presidents have sidestepped uniformity in favor of policy stands aimed at greater consistency among agencies. It seems fitting, three decades later, to take stock of our progress.

⁵⁰ *Federal Register* 38, No. 170, 4 Sept. 1973, 23782-91.

A Bundle of Policies

The nation entered the postwar era not with a Federal patent policy, but with a bundle of individual agency policies. It took over a decade for the Congress to turn its attention to the problem. The next decade was spent under the bombardment of opposing partisans—those who felt that the public interest is best served by leaving commercial rights to government-sponsored inventions with contractors and those who felt, to the contrary, that public interest demands government ownership and dedication of such inventions. The net result was a standoff, with the Congress unwilling or unable to legislate a uniform government-wide policy. For almost another decade the issue has lain dormant insofar as the Congress is concerned. Meanwhile, the partisans favoring government ownership, relying on the political appeal of their position and the general indifference among the legislators, have continued to slowly expand their beachhead with title-taking amendments to many statutes as new technical agencies and programs come into existence.

A decade has now passed since the Executive Branch decided it was time for action to bring about greater consistency in agency practices, in order to further the governmental and public interests in promoting the utilization of federally financed inventions, and to avoid difficulties caused by differing approaches by agencies when dealing with the same class of organizations in comparable patent situations. What great strides have been made in reaching even this fall-back objective of the 1963 Kennedy policy statement? An analysis of the latest agency statistics on patent practice released by the Federal Council for Science and Technology⁵¹ would seem to reveal few, if any.

Department of Defense, National Aeronautics and Space Administration and Atomic Energy Commission funds account for ninety percent of all inventions arising from government-sponsored research and development contracts. Many universities, nonprofit research institutions and industrial firms do business with two or more of these agencies. Have the policies of these three drawn closer together since 1963?

Department of Defense policy has traditionally been the target of title proponents. Prior to the days of the "flexible, but consistent"

⁵¹ Federal Council for Science and Technology, Annual Report: 1971 and 1972, pp. 117-83.

solution of the Kennedy statement of policy, the Department of Defense used the general approach of a license clause in its contracts under which the contractor had first option to title in an invention. Under that practice, the government actually ended up with title to sixty-eight percent of Department of Defense contractor inventions disclosed in 1963. After 1963, that Department followed the Presidential policy guidelines and used title clauses where appropriate. Ten years later, in 1972, the government acquired title to sixty-seven percent of Department of Defense contractor inventions. Progress toward greater ownership of inventions by the government? None at all. It would seem that the Department of Defense probably now takes at time of contracting what contractors used to give back under the old practice.

The National Aeronautics and Space Administration and the Atomic Energy Commission started out as "title agencies" by statute. They still insert title clauses in their contracts ninety-nine and ninety-eight percent of the time, respectively. The National Aeronautics and Space Administration's "flexibility" of waiving title back to the contractor was used for five percent of its inventions in 1963, but only three percent in 1972. The Atomic Energy Commission has apparently not waived title to a contractor in the ten-year period.

The net result of the individual policy and practice of each of the three agencies has indeed remained consistent. However, as to greater consistency between different agencies, there seems to have been absolutely none.

Another comparison of interest can be made between the Department of Health, Education, and Welfare and the National Science Foundation. These agencies are engaged extensively in the conduct of research and development through grants to educational and nonprofit institutions. In 1972 the Department of Health, Education, and Welfare awarded 12,861 grants and included a title clause in eighty-nine percent of these. In the other eleven percent, the rights were left with the grantee, because of exceptional circumstances which the agency felt justified their exclusion of the clause giving title to the government. That Department also awarded 3,410 contracts to institutions and industry for applied research. All but one of these contained a clause giving title to inventions to the government. One contract left title with the contractor based on the exceptional circumstances approach.⁵²

⁵² Its practice both as to grants and contracts would seem to support traditional reference to the Department of Health, Education and Welfare as a "title agency."

On the other hand, all but one of the 5,680 grants by the National Science Foundation contained clauses under which invention rights allocations are deferred until inventions are identified.

Other interesting observations might be made distinguishing the practice of the various agencies. Undoubtedly, each agency conscientiously interprets and applies the guidelines of the Presidential Statement of Government Patent Policy in a dedicated and effective furtherance of its particular agency mission. The point made here is that there is little justification for breastbeating on the part of the Executive Branch. It never tackled the tough problem of a single uniform policy for government which the Legislative Branch failed to resolve. Instead it took the position that uniformity is not the best approach but greater consistency of agency practices is. Data collected during this past decade of operations under the Presidential policy seems to indicate that things are about where they were in 1963. Each agency seems to proceed in conforming patent policy to its mission and its interpretation of the best interests of the public.

The same old bundle of policies is still with us. Any substantive consistency between agency practices is not apparent from the record. The case for flexibility rather than uniformity has not been proven—certainly not to the satisfaction of the partisans in the ideological struggle between government versus contractor ownership of public-financed inventions.

Neo-opposition

Though we see little if any progress in reformulation and harmonization in government patent policy after three decades, credit is due the Executive Branch for some progress in inter-agency communication and cooperation as to its administration. As the result of the 1963 Presidential policy statement, executive agency representatives have been organized to attack patent policy problems of mutual interest and benefit. This inter-agency effort has produced such results as the government-wide procurement and licensing regulations mentioned *supra*.

With the promulgation of these regulations in 1973, the door seemed opened to orderly implementation of the Executive con-

Yet the record indicates that during the past nine years the Department of Health, Education, and Welfare has acquired title for the government in only 64% of the inventions disclosed. Compare this with the Department of Defense (a "license agency") acquiring title to 67% of its contractor inventions disclosed during the same period of time.

cepts concerning the allocation of patent rights to inventions and the movement of valuable technology to the commercial marketplace. However, this was not to be. In the period since the Congress had given up the attempt to legislate a government-wide patent policy, a new partisan had entered the debate. The self-styled consumer advocate joined the ranks of the liberal politician, economist and antitrust lawyer and became a latter-day attacker of the concepts of the patent system. Old watch-words like "give-away," "monopoly," "profiteering," etc., were made to order for the campaign mounted by consumer advocates in the press and the hearing rooms of Congress against any alternative to public ownership of government-sponsored technology. Not content with the "let's wait and see what happens" attitude the Congress had apparently taken toward two Presidential statements of patent policy, they seized upon the promulgated regulations of the General Services Administration as the opportunity to move the three-decade controversy into the courts.

The first blow for the cause was struck when Ralph Nader's Public Citizen, Inc., joining eleven Congressmen as plaintiffs, filed suit⁵³ seeking an order declaring unlawful and setting aside the promulgated licensing regulations. Plaintiff's subsequent motion for summary judgment was granted without comment on the argument of either party.

Argument in the case centered around the question of whether the grant of a limited exclusive license under a government patent is a *disposal* of property belonging to the United States, not authorized by Congress, and thus in violation of the Constitution.⁵⁴ Public Citizen, Inc. argued that the power "to dispose" should include the power to release or abandon an interest in property. Plaintiff further contended that government interest in a patent is indeed affected in that an exclusive license leaves the government with nothing to transfer to another party. It looked to the opinion of Attorney General Harlan F. Stone⁵⁵ in 1924 who, in concurring with the granting of a nonexclusive revocable license by the Navy, stated that:

. . . Congress is the only authority to be invoked, where there is, in fact, an alienation or what amounts to a transfer or surrender of

⁵³ Public Citizen, Inc., et al., et al. v. Arthur F. Sampson, 379 F. Supp. 662 (1974).

⁵⁴ U.S. Constitution, Article IV, Section 3, Clause 2, gives to Congress the power "to dispose of . . . property belonging to the United States. . . ."

⁵⁵ 34 Op. Att'y Gen. 320 (1924).

Government property, by which the title, control or possession of the Government is lost, reduced or abridged.

The right of the exclusive licensee to sue infringers was also cited by plaintiff as creating the situation where the Government can no longer exclude all others for it has given another the right to utilize its patent.

The government contended the grant of an exclusive license, severely limited as in the regulations, is not disposition but permissible utilization of United States property. This argument failed to stem the Court's order and judgment voiding the licensing regulations and prohibiting agencies from issuing licenses thereunder. Where its case fell short and what success the government can expect on appeal is speculation since the District Court decision is without comment.

On the heels of this first judicial victory in the long campaign to label the application of the patent system to government-owned technology as the "great give-away" of public property, the Nader forces moved again. A second thrust was made at defeating any government policy or practice which might permit patent rights to government-sponsored inventions to remain in the hands of its contractors. On February 15, 1974, Public Citizen, Inc., joining seven Congressmen as plaintiffs, filed suit⁵⁶ challenging the proposed amendment of the Federal Procurement Regulations dealing with the allocation of rights to inventions made under contract. This move against these implementing regulations seems clearly the first step in neutralizing both the concepts of the Kennedy and Nixon policy statements and the long-standing patent practices of the Department of Defense.

Plaintiffs argued that rights to patents and inventions developed pursuant to federally financed research and development contracts are government property; the granting of exclusive rights is a disposition within the meaning of Article IV, Section 3, Clause 2, of the Constitution; and Congress has not authorized the General Services Administration to grant exclusive licenses. In support of their position they were able to cite the widely circulated "Cramton Memorandum," an internal Department of Justice document written in October of 1972, warning of possible constitutional defects in the disputed regulations.⁵⁷

⁵⁶ See Note 53, *supra*.

⁵⁷ U.S. Department of Justice, Memorandum To: Mr. Bruce B. Wilson, Deputy Ass't Att'y Gen., Antitrust Div., From: Roger C. Cramton, Ass't Att'y Gen., Office of Legal Counsel, Subj: Constitutionality of Proposed Regulations Granting Con-

In addition to an attack on Plaintiffs' lack of standing to sue, the government's defense challenged both the existence of property and disposal. Relying on *Brenner v. Ebbert*⁵⁸ for the proposition that a patent application is not property, the government reasoned that *a fortiori*, a right to a future invention, which may or may not be patentable is not property. The government further argued that, even if inchoate rights in future inventions could be deemed property, the regulations do not authorize a disposition. The United States, like any private party, possesses the right to determine on what conditions it will deal and this includes the right to agree on the allocation of rights in possible future inventions. Therefore, the defense continued, since such interests can validly be made the subject of agreements, there is no inherent right of ownership in the United States and regulations do not constitute a disposal of its property.

Unfortunately, in its decision on July 2, 1974, the District Court dismissed the complaint on the ground that all plaintiffs lack standing to sue. The viability of the regulations and in the long run of the President's Statement of Government Patent Policy and Department of Defense patent practice remains under a cloud. The case has been appealed by the plaintiffs.

The outcome of these two suits by Public Citizen, Inc., et al.

tractors Greater or Principal Rights in Patents Arising Out of Government Research and Development Contracts (10 Oct. 1972).

" . . . VII. *Legal Conclusions*

It is our conclusion that the Government's contingent interests in patents arising out of research and development contracts are property rights subject to Article IV, Section 3 of the Constitution. Where these Government interests encompass the right to obtain title to a patent, any contract granting the contractor title or largely unlimited exclusive rights would be a 'disposition' of Government property within the meaning of the constitutional provision. We are not aware of any congressional enactment authorizing such a 'disposition.' In our view, Government contracting statutes do not provide an adequate basis for establishing an implied authority in the Executive to dispose of property as added consideration for a Government contract. Thus, in light of the above, we conclude that the proposed regulations, in the form in which they now stand, would permit action by the Executive Branch which in certain instances are constitutionally suspect. . . ."

The memorandum was said by then Att'y Gen. Richardson on Aug. 23, 1973, to represent "the official position of the Department of Justice." It was later disavowed in a letter to the Secretary of Health, Education, and Welfare on June 14, 1974, by the then Acting Att'y Gen. Silberman who said, ". . . after reviewing the aforesaid memorandum and letter, we have concluded that the memorandum does not accurately reflect what we believe to be the state of the law. . . ."

⁵⁸ 398 F.2d 762 (D.C. Cir. 1968), *cert. denied*, 393 U.S. 926 (1968).

could indeed have a far-reaching impact on government patent policy. If the practice of permitting contractors to retain commercial rights to inventions or of granting exclusive licenses is held unconstitutional, the patent policy and practice of executive agencies could be across-the-board title taking and essentially dedicating technology until the Congress enacts policy legislation. From the record of three decades of political struggle over government patent policy, there appears a strong likelihood that Congress either may fail to agree on a uniform policy or, if it does, it will succumb to the political appeal of the arguments for "free access of technology" and legislate a government-wide title policy.

Options Revisited

The policy of consistency as an alternative for one of uniformity has had its chance. Eleven years have passed since its inauguration in 1963 by President Kennedy who deserves credit for at least some attempt at government-wide treatment of the distribution of patent rights as the Congress floundered. However logical and well intended the concepts of the Kennedy plan may have been, its results, when viewed with an objective eye, simply do not add up to a solution of the problem. Behind the facade of common guidelines and language, the kaleidoscope of individual agency patent practices still exists.

There is really no more satisfaction with government patent policy than there was a decade ago. The liberal Congressmen still show up each time a new technical agency or program emerges and demand free access to government-financed inventions. In support, the antitrusters still warn of patent monopolies and the consumer advocates have joined in with the allegation of usurpation of congressional powers. Patent lawyers still lead the bar groups and industry associations as they perseveringly resolve and bear witness against any attempt, executive or legislative, to claim title to contractor-generated inventions.

Not only has the Kennedy/Nixon policy of containment not worked, but it faces collapse in pending cases in which philosophy will may be a more persuasive factor than law. If it does tumble under the judicial gavel, it could carry down with it traditional practices of agencies such as the Department of Defense, the National Science Foundation and the Department of Commerce.

Like it or not, we may be back to the original options—uniform title policy versus uniform license policy. Respective protagonists

continue to sing the praises of each. Philosophies, slogans and allegations are abundant, convincing facts are not. In the course of three decades neither camp has made a case for its cause. Arguments for either policy will not stand up if reviewed without bias, emotion, indifference or just plain lack of knowledge.

The Title Myth

The major reasons usually cited in support of adoption of a uniform title policy for government agencies for federally financed research have been summarized⁵⁹ as follows:

- (1) The Government bears the cost for developing the invention and therefore the Government should own title to the patent which results.
- (2) The Government should have title to any such patents in order to insure widespread access to new knowledge (meaning a new invention) which has been produced by an expenditure of public funds.
- (3) The Government should have title to all such patents in order to prevent undue concentration of economic power in a few large business firms.

The industrial employer engaged in competition of manufacturing and selling products hires research employees, providing them with job security, benefits, facilities, know-how, assistants, etc., so that he may be provided constantly with inventions upon which to base protected new products for the marketplace. On the other hand, the government is not a competitive supplier of goods. Its research and development dollars are spent to obtain technology as to better ways to achieve government program objectives. The government grants its research contracts on the basis of experience, knowledge, and know-how (often proprietary) developed by private industry. It simply takes advantage of a situation which exists and it puts up some of its own money to reduce ideas and know-how into a state useful to the government. That is what the government bargains for and what the government pays for when it enters into a research contract.

⁵⁹ U.S., Congress, Senate, Select Committee on Small Business, *Government Patent Policies in Meteorology and Weather Modification*, Hearings before a subcommittee of the Senate Select Committee on Small Business on The Effect of Federal Patent Policies on Competition, Monopoly, Economic Growth and Small Business, 87th Cong., 2d sess., 1962, p. 190; *see also*, U.S., Congress, House, Committee on Science and Astronautics, *Patent Policies Relating to Aeronautical and Space Research*, Hearings before a special subcommittee on H.R. 1934 and H.R. 6030, 87th Cong., 2d sess., 1962, pp. 132-3.

No contract requires that an invention be made. Invention is no more than a by-product of research—a largely unpredictable and fortuitous event, not contemplated nor bargained for at the time of contracting. There is no extra pay for the contractor if an invention is made, nor default if an invention is not made. The contractor is not rewarded for either the quality or quantity of inventions contributed under the contract. The government receives its quid pro quo when the research work under the contract is performed and the technical knowledge gained is available for government use.

If by chance an inventive by-product of the research eventually appears on the commercial marketplace by reason of expenditure of private risk capital for development, production and marketing, the public gets an added advantage of availability of the product. Return on risk capital and possible profit is not a second payment by the tax-paying consumer for the research and technical information originally contracted for by the government.

Do government-owned patent rights ensure greater dissemination or utilization of technical knowledge? There is nothing in past experience which would support such an assertion. To contend so seems to be either a denial or a misunderstanding of the concepts of our patent system, which is allegedly designed to encourage (1) the making of inventions, (2) the disclosure of inventions and (3) the commercial utilization of inventions.

As to disclosure, all technology, inventive or not, which is generated under government-sponsored research and development is required to be documented and reported. This technical information (unless restricted for national security purposes) is in turn available to the public and in many instances actually communicated to the public through various channels and media. It is free to act as a liberating force in the economy serving to stimulate change and progress. Thus government procedure in itself tends to accomplish the disclosure objective of the patent system.

As to the spark of genius, there are economists and other disbelievers in the patent system who steadfastly contend that inventions have been and will continue to be made with or without a patent system. Maybe this is so. At least we would not argue the point where government-financed inventions are made. However, authorities from the business world estimate that for each dollar spent for inventive activity, ten dollars is required for development of a working model and one hundred dollars to create productive facilities, inventory, and distribution channels necessary to create a

commercially acceptable product.⁶⁰ Herein lies the real intent and function of our patent system—to protect the investment risk of bringing to the marketplace untried inventions, which would otherwise not come to fruition, to add to the general well-being through the creation of new industries and job opportunities, the collection of additional tax revenues and the increased standard of living of society.

The creation of inventive technology and its widespread access serve little public benefit if only used by governmental agencies. Proponents of the title policy are quick to cite examples of government inventions which have been commercialized on a nonexclusive basis. Invariably, such well-known products and processes as granular fertilizer, aerosol dispenser, dehydrated potato flakes and frozen orange juice concentrate are the examples used. Characteristically, these inventions prove to be the few which are fully developed and highly promoted for the commercial market by government agencies. These are atypical to the government's portfolio of inventions which in the main would require further risk capital to develop and market in commerce. When government-owned inventions, taken as a whole, show a record of commercial utilization of less than three percent,⁶¹ the case for government ownership and public dedication seems weak indeed.

Lastly, the fear of undue concentration of economic power in a few large firms, should government not retain title to contract-originated inventions, makes for good political and antitrust speeches, but it has never proven to be more than conjecture on the part of its proponents. With government ownership, the large firm with its available finances, credit, experience as well as its superior technical, advertising and distribution facilities and its freedom to adopt all government inventions might easily crowd out its smaller competitor. In many instances, small business would obviously be handicapped more by a title policy in government than would big business.

Furthermore, for years now, the antitrust pressures with respect to patents have been so intense that every patent owner lives in a fish bowl. The antitrust laws provide such adequate protection against misuse that the slightest deviation from strict compliance with the spirit and letter of the law subjects the patent owner to the

⁶⁰ Holst, "Government Patent Policy—Its Impact on Contractor Cooperation With the Government and Widespread Use of Government Sponsored Technology," 9 IDEA 285 (Summer 1965).

⁶¹ See Note 42, *supra*.

danger of having all of his patents confiscated and destroyed.⁶² The truth of the matter is that the practice of firms holding patents on inventions generated by government contract tends to indicate the opposite of any intent at concentration. A Harbridge House study of the effect of patent policy on business competition found that less than one percent of the owners of government-sponsored inventions refused to license their patents to others.

On the other hand, ownership of patents by the government does not necessarily assure a dilution of the economic power of the large business firms, even if such concentration might exist. Much of the government's research and development work is conducted by large firms, selected because of their wealth of experience and background in the particular field. Use of an invention is, in many instances, possible only with the know-how and proprietary background rights in possession of the contractor who produced the invention for the government. The problem is that the producer is not willing to give this up to a competitor who might otherwise be free to use the invention if the patent is owned by the government and competition in the field stands little chance of being increased.

Whenever this argument of the risk of economic concentration unless a title policy is adopted has been reviewed in depth and reported upon, the conclusion consistently has been one of rejection.⁶³

The License Myth

The major reasons usually cited in support of adoption of a uniform license policy on patents originating under government-financed research have been summarized as follows:⁶⁴

⁶² Gorn, "Toward a Sound National Policy for Disposition of Patent Rights Under Government Contracts," 21 Federal Bar Journal 118 (Winter 1961).

⁶³ Note 8, *supra* at 381.

"Conclusions

. . . That undue concentration would result from the license policy is a possibility so negligible that it may be disregarded. . . ."

Government Patent Policy Study—Final Report, Vol. 1, by Harbridge House, Inc. (Washington, D.C.: Government Printing Office, 1968), p. ix.

"Summary and Analyses of Findings

. . . Based on all observations of the sample inventions we have found little evidence of adverse effects on business competition by permitting contractors to retain title of Government-sponsored inventions. . . ."

⁶⁴ See, Note 59, *supra*.

(1) Private title to patents resulting from such research is basic to our free enterprise system, and in keeping with our traditional patent system.

(2) Private title to such resulting patents is necessary as an incentive to encourage private industry to accept Government research and development contracts to help keep the cost of Government research lower than it otherwise would be, as well as to insure that the best research talent is assigned to the project.

(3) Private ownership of such patent rights is necessary to permit commercial development of a new invention; if a patent is owned by the Government and presumably available to all on the same basis, no firm is likely to risk spending the necessary amount to develop the invention commercially because a competitor could move in as soon as the new invention was marketable and get all the advantages without incurring any of the development costs.

To argue free enterprise and the tradition of the patent system resounds more in philosophy and emotion than it does in law and economics. The federal government now supports almost two-thirds of the research and development performed in this nation. Since it is not a producer of goods, it has the obligation to see that the resulting technology is infused into the national economy to the greatest extent possible. Whenever possible this should be accomplished by free and competitive enterprise by the private sector. If it takes the incentive of the traditional patent system to accomplish public benefit of this technology in the marketplace, that incentive should be brought into force regardless of whether title to inventions involved rests with government or its contractors.

The incentive argument made in behalf of a uniform license policy makes sense in theory. The need by the Department of Defense for a high-altitude fuel pump could result in a research and development program which might interest a company or corporate division which normally competes for the household products market. However, without patent rights, could an old line pump manufacturer afford to get involved in using its years of background, know-how, etc., to develop a pump which might interfere with its product line? Likewise, the same household products company might be very reluctant to take a contract from the Department of Agriculture, for example, to develop a consumer product which might overlap the company's commercial objectives.

The logic is certainly there. However, much like the conjectures put forth by title proponents, this rationale for license policy has not been supported by the record. Patent lawyers indefatigably journey to the halls of Congress with this warning while the captains of industry stay at home vying for more and more government research and development business. Agency experience

indicates there has been no lack of qualified and competent research contractors, large and small, vigorously competing for more and more research and development assignments notwithstanding the supposedly low profits involved. No evidence has been presented of increased cost or less assiduous work performed due to patent rights provisions in contracts.

Have industry managers continued to seek research and development contracts regardless of patent rights involved because of patriotism or concern for public image or fear of bureaucratic or stockholder wrath? Or could they be attracted by the money, ideas, skills and training flowing with government sponsorship that satisfy corporate objectives and enhance competitive position? In any event it is going to take more than the word of the patent bar to rekindle support in Congress for this argument.

Incentive for commercial utilization is undoubtedly the best argument for leaving title to government-sponsored inventions with the contractor. As previously pointed out, the act of invention is but a small part of the story behind a marketable product. Few inventions will not require further development to produce a commercially competitive model. There are none, however, that will not require further investment for manufacturing and marketing. It is a rare case, indeed, where the prudent businessman would invest risk capital to create a demand item if he had to compete with others who would not have to reflect these costs in the market price of an imitation product. Certainly the poor record of commercial utilization of government-owned patents available to all takers gives credence to the old adage "that which is available to everyone is of little value to anyone."

Unfortunately, this is another instance where the argument when used to sell a uniform license policy breaks down in the face of the record. Those in the private sector who have retained commercial rights to government-financed inventions have not held up their end of the argument. The name of the game is putting inventions to commercial use so that the consumer can benefit from the public investment in the initial research. If government ownership and nonexclusive licensing (tantamount to public dedication) has failed as an effective conduit for bringing technology into commercial being, contractor ownership has done little better.

Each time someone attempts to look into use made of contractor-retained inventions, the same disappointing picture appears. In 1961, the Senate Subcommittee on Patents, Trademarks,

and Copyrights studied the matter and reported⁶⁵ "of the 3,700 patents obtained by the 75 contractors on these inventions during the period 1949-59, less than 10 percent are in commercial use." In 1963, under a study made for the Patent, Trademark, and Copyright Research Institute of The George Washington University, it was reported⁶⁶ "of the total of 143 patents 19, or 13 percent, were reported commercially used currently or at one time." In 1968, Harbridge House in its study reported⁶⁷ "contractors and licensees reported only 251, or 12.4 percent, of all inventions in the survey response in use."

More recently, this writer's agency has made two sampling surveys which also showed poor results by contractors in achieving commercial utilization of retained inventions. The first was in response to a 1971 request for information made by the University Patent Policy Ad Hoc Subcommittee of the Federal Council for Science and Technology Committee on Government Patent Policy. Results showed that during a five-year period (1965-69) some fifty-eight patent applications were filed by educational and non-profit institutions on inventions made during performance of research under agency-sponsorship. Information furnished by these institutions in 1971 indicated that none of these inventions had been brought to the point of practical application. The second survey reviewed the use made of forty-two agency-sponsored inventions three years after patenting by industrial contractors. None of these inventions were reported by the contractors as being used.

In the end what do we have? The defense contractor, for example, is selecting those contract-generated inventions in which it wishes to retain title (commercial rights) for itself. The expense of preparation and prosecution of patent applications for the protection of the inventions is borne by the government as an allowable overhead cost because of the government's protection as a nonexclusive licensee. Resulting patents are eventually added to the corporate portfolio with apparently little chance of contractor investment to bring the invention involved to the marketplace. The patent rights are usually made available to others on a nonexclusive basis which fails to attract commercial utilization just as nonexclusive rights to government-owned patents do.

As previously noted, the case for government ownership and dedication is built upon philosophy and allegation and not upon

⁶⁵ Note 28, *supra* at 6.

⁶⁶ Sanders, Note 42, *supra* at 173.

⁶⁷ Harbridge House, Note 63, *supra* at 1-6.

convincing facts. To be totally objective about government patent policy, is it too cynical, in view of the record, to question why the private sector persistently argues for retention of title to contract-originated inventions and what purpose it serves?

A review of the traditional public position of patent and industry associations tends to show that their arguments, be they legal, equitable, moral or even public interest considerations, pyramid to a common apex. This apex is the right to the ultimate use of the invention on the commercial market. In the past ten years, in Department of Defense research and development contracting alone, this right has been acquired for almost 13,000 inventions. Contractors have elected to protect and contract funds have paid for this number of patents on contract inventions. Assuming a conservative figure of \$1,000 per patent, the taxpayer has invested at least an additional \$13 million in protecting inventions few of which, according to the surveys, ever reach the commercial marketplace.

Since there is no evidence of financial bonanza in the form of either sales or royalties, there must be other advantages which figure into industry's desire for patent rights which are more subtle than its publicly acclaimed need for marketing incentive. Most business judgments are based upon cost/benefit factors and it seems reasonable to assume that patent protection is approached on the same basis. With the cost of patenting chargeable to the contract, possible benefits a patent on government-financed technology might provide for the contractor must control the corporate attitude.

Government research and development is generally placed with firms which have experience and expertise in the particular area of technology under investigation. Normally, such a firm produces commercial products related directly or indirectly to the technology. As a result, inventions made are within the firm's product line or on the fringes thereof. Apparently, an invention is rarely of such significance as to persuade the firm to change its product line or to modify its existing product model to accommodate the new technology. Why then should the firm bother to patent the invention?

First, the firm is not alone in the competition for commercial sales of its product line. Free access to the invention by a competitor might move a competing product to a closer challenging position at the marketplace. Thus, even though a contractor might not wish to produce the invention himself, the ability to prevent

production by a competitor or more likely to influence the competitor's selling price through royalty charges, protects the flanks of the contractor's product line. Nor is the future always predictable. Especially with regard to peripheral or component technology, there is always the possibility that the contractor might want to get into the market at a later time; or use the patent right to get a better deal from or license his supplier; or use the patent for trading and cross-licensing purposes.

Many firms, especially those who have no antitrust uneasiness, find comfort in a sizeable patent portfolio as a symbol of corporate prestige, reputation and strength to the trade, the consumer and the investor. Patents also serve as a form of recognition to employee-inventors and are looked upon as incentive in recruitment, retention and productivity of a technical staff.

Thus with these benefits in the offing and the government bearing the costs involved, it is not surprising that corporate management and patent directors use patents to government-sponsored technology as protective moats around corporate interests. Attitudes of "what have we got to lose" and "better safe than sorry" well might be the answer as to why contractors who seldom market contract inventions still fight so vigorously for title to them.

As with the policy of title-taking and with the policy of flexibility, the concept of license policy under government-sponsored research and development contracting has had its chance for many years and had not had a case for it made by its advocates.

Needs and Objectives

Government policies are instruments. They are means to ends. If a patent policy for government research and development contracting is to be workable and effective it must accomplish the ends or objectives which those affected by it seek. The parties involved in this instance are the government, the contractors, and the public who pays the bill. It should not be too difficult to come to agreement on fair and reasonable needs and objectives of each.

Government

All government bodies are charged with particular missions and responsibilities. Those that provide for the national defense or improvement of the public welfare seek better devices, systems and services directly needed to carry out their governmental function.

This is accomplished with the improvement and advancement of technology brought about largely through contracts for research and development with the private sector. Efficient and economic procurement of this service requires the encouragement of maximum participation of the private sector in government-sponsored research programs and the availability of the most capable organizations in the relevant fields of interest. The government/industry relationship must in turn provide for whole-hearted and enthusiastic support of the contractor. It must insure a willingness to devote best talents, pertinent background, existing technology (whether proprietary or not), facilities, and all other resources to the work of the government. There must be no holding back in any regard—no isolation of personnel, technology or skill which shuts off any ability of any type which would contribute helpfully to the direct and vital interests of the government's quest for the improved technology.⁶⁸

A second objective of agencies engaged in research programs is to encourage widespread use of the improved technology beyond just governmental use but to still higher ends of national policy including promoting scientific progress, the advancement of knowledge generally, and above all, economic growth.

Other agencies and bodies, both executive and legislative, have as a part of their missions a watchdog responsibility to oversee the public impact of government operations. Their objective with regard to the functioning of government patent policy and practices is to guard against undesirable legal and economic side effects not in the public interest.

Contractor

When a competent contractor participates in federal research and development ventures, his desire, insofar as the government's patent policy is concerned, is for equal and fair recognition by all contracting agencies of the equities he brings to the project. He seeks predictability as to protection of those equities at the time of contracting and not after the fact. With assurances as to patent rights when the contract is signed, he may then more freely apply his best technical expertise and privately developed proprietary information without fear of losing all rights as the result of his participation in government research.

Basically then, the contractor's objective is the option to commer-

⁶⁸ Note 60, *supra* at 111.

cially exploit inventions which might arise during the performance of research under the contract. These inventions, in his opinion, involve a contribution over and above the mere technical research services paid for by the contract price. They represent his past investment in expertise and know-how, etc. which must be protected and recovered.

Furthermore, he faces many built-in deterrents to commercialization of an invention: the usual high cost of development; the risk of failure, either because the public will not accept the new product or because the process will not be commercially satisfactory; the risk that the process or product may soon become obsolete; the risk of imitation; etc. To enable him to protect risk capital and to recover past investment, free from unfair competition from other commercial practitioners of the invention who have not made the same or similar capital investment, the contractor needs to be guaranteed the exclusivity afforded by the patent system.

Public

Agencies such as the Department of Defense tend to view public interest in patent policy in terms of "more bang for the buck." Improved national defense for the least cost has got to be first concern of this mission-oriented agency. Other public objectives quite naturally are secondary.

However, since government is the servant of the people, those public needs to be served by government patent policy become the government's objectives by definition. For example, an effective policy must preclude undesirable economic consequences such as concentration of economic power in industry, oppressive monopolies, absence of competition in the marketplace, and the like. These are legitimate public interests which are policed by laws and regulations covering all government policies and commercial practices. Since the record shows little chance of abuse of these interests as the result of patent policy, the prime public objective which the government's patent policy should accommodate is the public benefit received for the scientific research which the public has paid for.

At the present time, the public is being taxed at an annual rate of \$20 billion for government-sponsored research and development. The major portion of this is directed toward national defense and space accomplishments. However, the knowledge generated involves all branches of technology. If it were channelled to commer-

cialization, in all probability the national economy would be enhanced, new business enterprises would be organized and the operations of existing business enterprises expanded, with resulting increase in employment, improvement in the standard of living, improvement in choice and benefits to the consumer and increase in tax revenues. As the real purchaser of research, the taxpaying consumer is entitled to the additional commercial benefits from his tax dollar.

A patent policy which deprives the public of prompt and efficient commercial utilization of new technology developed under government-sponsored research and development fails to give the public full return on its investment. This is a public objective which the patent policy of the federal government should not allow to be eclipsed by the objectives of the program agencies, the contractors or the competition watchdogs.

A Plan To Meet Needs and Objectives

Policy

"Miles' Law" says that where one stands on any issue depends on where one sits. So it has been with proposals for government patent policy. Proponents of both title and license policies continue to define the public interest in terms of their own objectives. As the debate goes on and on, the need of the public for the return of technology to the marketplace remains as far from satisfaction as it ever was. If the problem is ever to be resolved, it would seem that what is needed is a patent policy that satisfies the needs and objectives of government programs, industry equities and consumer use. If it does this and at the same time brings uniformity to the government's treatment of its research contractors everyone stands to gain.

Accordingly, it is proposed to formulate a government-wide policy which would use a uniform contract clause for a single disposition of patent rights in all instances. Under the plan, title to all subject inventions generated under government-sponsored research and development contracts would vest in the government. In furtherance of the public interest at the commercial marketplace, the contractor would have an automatic option for authorization by the government to commercially develop and market an invention made under contract.⁶⁹ Such commercial authori-

⁶⁹ In 1971, as a member of a task force under the Commission on Government

zation would be revokable by action of the government upon failure of the contractor to meet such conditions as hereinafter provided.

Procedure

Under this proposal, a uniform patent rights clause would be used in all research and development contracts by all agencies for all types of technology with all types of contractors. This clause would form the basis for the following outline of procedure:

1. *Disclosure and Declaration.* Each invention conceived or first actually reduced under a government contract would be disclosed to the government and accompanied by a declaration by the contractor of its interest in commercializing the invention.

a. *Interest.* A declaration of interest in commercialization by the contractor would include an agreement to prepare and file an application covering the subject invention in the U.S. Patent Office⁷⁰ within a specified period of time.⁷¹ Such declaration and

Procurement, this writer recommended what was basically this plan and procedure as the alternative to wasting time trying to choose between the age-old solutions of license or title policy. For the most part, industry representation on the task force clung to the license policy normally used in defense contracting as the appropriate proposal to be made to the Commission. The stand-off resulted in the task force report reading as follows:

"A. With the exception set forth in 5(A)(3) below, contractors shall be guaranteed at the time of contracting a first option to the exclusive commercial rights in all inventions made in performance of government-funded contracts. (The term 'exclusive commercial rights' should be understood to include either title to the invention or an exclusive license thereto with the exception that as the term relates to foreign patents or patent applications it means title)."

Thus, instead of making a bold and constructive move to resolve the long-standing dilemma, this proposal begged the issue and passed the buck to the Commission.

The Commission in turn took the easy way out in its final report. It concluded that any substantial changes in law and policy in this area should await further assessment of the actual experience under the revised Presidential Statement of Government Patent Policy. If evaluation of experience under the revised Presidential policy should indicate a need for further policy revisions, the Commission urged that there then be consideration of an alternate approach allowing contractors to obtain commercial rights but subjecting these rights to a strengthened "march-in" procedure.

⁷⁰ Expense of preparation, prosecution and fees connected with the patenting of the invention should be shared by the government and the contractor. Since the movement of government-owned technology to the commercial market is in the public interest, the government should contribute to the cost of its protection to that end. Also if the contractor feels that authorization to commercialize the government's invention is of value, it should be willing to share equally in the cost

subsequent filing would assure the continuation of commercial authorization by the government for a period of two years from the date of disclosure, for the purpose of further determining the degree of patent protection obtainable and market potential and for developing a plan for commercial utilization.

b. *No Interest.* A declaration of no interest in commercialization by the contractor would terminate the commitment for commercial authorization.⁷²

2. *Plan for Commercial Utilization.* Two years after disclosure of an invention and declaration of interest, the contractor would present in writing a plan acceptable to the agency for commercial utilization of the invention⁷³ within a period not to exceed three years. In special circumstances where a three-year timetable was shown as not feasible, the agency could extend the period for commercialization as appropriate.

a. *Plan Content.* The contractor's plan for commercial utilization should cover its general scheme for development, promotion and marketing including estimated resource commitments and time schedules. The plan should provide greater impetus to consumer accessibility than mere availability for licensing and the contractor not capable or not planning to manufacture and market the invention on its own would be expected to assume accountability for commercialization and would specify the cooperating industrial concern(s) to be involved.⁷⁴

of patenting. Furthermore, this should help avoid any tendency toward superficial evaluation of the commercial potential of the invention by the contractor. Legal title to the application and patent covering the invention would be in the government.

⁷¹ A reasonable period of time for filing would be the provision of the Armed Services Procurement Regulation, § 7-302.23 requiring that the contractor shall within six (6) months after election (or such longer period, not to exceed one (1) year after election, as may be authorized by the contracting officer) file or cause to be filed a patent application in due form. This would assure reasonable promptness to avoid loss of rights and delay in ultimate commercial application.

⁷² An invention declared to be of no interest to the contractor would be evaluated by the sponsoring agency to determine desirability of patenting to protect government use and future commercial authorization. An invention not patented by the government would be dedicated to the public.

⁷³ Guidelines would be developed to assist agencies in evaluating plans for utilization.

⁷⁴ Universities, non-profit institutions and other contractors not engaged in manufacturing should be allowed to profit from their equities in inventions the same as industrial producers. However, commercial utilization is the prime concern behind authorization by the government to exploit its technology and experience has shown that willingness to license, standing alone, has a poor record for accomplishing commercialization.

b. *Progress Reports.* During the period covered by the plan for bringing the invention into commercial utilization, the contractor would provide the agency with periodic reports setting forth the progress made relative to the approved plan.⁷⁵ A subsequent declaration by the contractor of disinterest or abandonment of the plan to commercialize the invention (or evidence of such disinterest or abandonment) or unreasonable failure of progress would be cause for steps by the agency to revoke its authorization and to seek others to commercialize the invention on a nonexclusive or exclusive basis as required.

c. *Final Report.* At the end of the period agreed upon for commercialization, the contractor would report to the agency whether or not utilization as covered in the plan has been achieved. If utilization has not been achieved, the agency would take steps to revoke the commercial authorization unless satisfactory evidence is presented that the time for commercial utilization should be extended further.

4. *Continuing Rights.* Whenever commercialization is shown to have been achieved by the contractor or its licensee within the time agreed upon by the agency, the commercial authorization would be continued for another seven years subject to provisions set forth in paragraph 5 below.

5. *Provisions.*

a. The contractor, as the sole commercial authorizee, would be permitted to authorize others to market the invention on a nonexclusive or exclusive royalty-bearing basis.

b. If the contractor permits utilization to cease, the agency could require the contractor to authorize a responsible applicant to market the invention on a nonexclusive or exclusive basis and on terms that are reasonable under the circumstances.

c. Any invention—

(1) the development of which was intended for public use;
or

(2) which is required for public use by government regulations; or

(3) which is directly concerned with the public health, safety or welfare; or

(4) which is in a field of science or technology in which

⁷⁵ An annual report of simple format requiring a minimum of administrative effort on the part of both the contractor and the agency should be sufficient to insure good faith and reasonable progress in the contractor's efforts to return the technology to the public on the commercial marketplace.

there has been little significant experience outside of work funded by the Government or where the Government has been the principal developer in the field—

to which the contractor continues to retain exclusive commercial authorization must be made commercially available to adequately fulfill market demands and at a reasonable price under the circumstances. If the contractor fails to so commercialize the invention, the government could require the contractor to authorize a responsible applicant to market the invention on a nonexclusive or exclusive basis and on terms that are reasonable under the circumstances.

d. Failure on the part of the contractor to carry out any requirements in paragraphs b and c above, subject to appropriate review as set forth below, would be reason for the agency to terminate the exclusive commercial authorization.

e. If for any of the specified reasons the contractor's exclusive commercial authorization should be revoked, he would retain a nonexclusive royalty-free authorization under the invention, revokable only upon determination by the government that exclusive authorization to another party is needed for commercialization.

6. *Patent Rights Review Board.* An interagency review board⁷⁶ should be established to resolve matters concerning:

a. Dispute as to acceptability of a plan for commercial utilization of an invention.

b. Dispute as to acceptable progress under a plan for commercial utilization of an invention.

c. Dispute as to time allowed for commercial utilization of an invention.

d. Dispute as to actual achievement of commercial utilization of an invention.

e. Determination relating to commercial authorization to others where:

(1) Commercial utilization has lapsed;

(2) Market demands are not met;

(3) Market price is unreasonable; or

(4) Royalty rate is unreasonable.

⁷⁶ Preferably, this Board would not involve the establishment of a new government agency. An administrative staff comprising an Executive Secretary and appropriate clerical assistants attached for logistic and technical support to such an office as the new Office of Federal Procurement Policy of the General Services Administration should suffice. Board members could be designated by agencies involved in contract research and development programs and could review cases coming before the Board sitting in panels of three members.

f. Any action of revocation of the contractor's commercial authorization by an agency.

Advantages

The government-wide use of a single patent rights clause vesting legal title in the government with a guarantee at the time of contracting to the contractor who can profit commercially by active pursuit of the market should present a policy which most nearly attains the goals of uniformity, predictability, participation, utilization, competition and administrative ease.

First of all, every agency would treat every contractor and every technology alike with regard to the distribution of rights in inventions resulting from government-sponsored research and development.⁷⁷ This is as it should be. A "flexible" patent policy which is all things to all people has done little more than perpetuate the state of general chaos and dissatisfaction. The private sector is entitled to be able to deal with the many different representative agencies of the federal government under uniform conditions. The agencies, who seek capable research assistance from the private sector to carry out programs, should not be competing with one another in terms of patent policy. Executive direction and congressional overseeing of the functioning of government should not be subjected to a potpourri of agency policies.

This plan has the attraction of the present license policy of the Department of Defense for the serious entrepreneur to step forward and undertake government research and development work, apply his most effective resources and produce a quality product. It offers the contractor predictability at the time of contracting as to his commercialization of possible inventions with equal and fair consideration of his equities. The fate of his guaranteed option to protect his investment in expertise, know-how and commercializa-

⁷⁷ While this paper is addressed to the question of relative rights of the government and its contractors to inventions, this writer sees no compelling reason why the same patent policy should not be equally applicable to government employee-inventors. That the government employee should have less an opportunity to profit commercially from an invention than say a university, institute or other nonmanufacturing contractor seems neither equitable nor practical. If the employee-inventor, who certainly has the greatest technical expertise in the invention, has sufficient "get-up-and-go" to have the invention developed and marketed through an intermediary, why should the public not benefit from this technology also? The same advantages to all parties would apply and the government would then truly have a single uniform government patent policy for all of its sponsored research and development.

tion is affected only by action on his part to fail to properly pursue the market. Agency attitudes and requirements concerning details of commercialization are reviewable by an interagency board which is a safeguard for the contractor and a force toward uniformity of approach.

By providing an incentive to participation, the plan should maximize interest and competition in government research and development contracting. As to competition at the marketplace for the individual invention, it is a moot question if no one is willing to invest risk capital for commercial development and marketing. Control of commercialization remains in the hands of the government. The deal is use it or step aside and let someone else use it. With legal title in the government, the contractor's exclusivity can be revoked administratively upon failure to move the technology to the marketplace. On the other hand, to leave legal title in the hands of the contractor, could require legal action by the Department of Justice for the government to gain control in the event of a contractor's suppressing the technology by failure to commercialize.

The system initially places the commercial development of an invention in the hands of the party normally most likely and capable of accomplishing the task and provides the incentive for the risk capital required to bring it to the marketplace. The right of the government to authorize commercialization by others or require the contractor to do so upon failure to properly commercialize also provides greater assurance of utilization of government-financed invention. Thus the dominant public interest is served. This is the maximum opportunity to see tax-supported research and development returned promptly and effectively to public use in the commercial marketplace. With this, the taxpaying consumer has the opportunity and right to purchase a product he invested in or ignore it in favor of an alternative product. At the same time the public gains from all the benefits to the economy which flow from the additional commercial activity.

Insofar as technology relating to public health, safety, etc. is concerned, the control of market satisfaction and price by either the government or third-party interest should produce the effect of open competition. Other government-sponsored technology placed on the commercial market will have to compete in price and quality with alternative products. The appearance of government technology on the commercial market provides a healthy stimulus

to "leap frog" technology by the private sector as competitors vie for the public's business.

Finally, the contractor, the government and the taxpayer all stand to gain from a government patent policy that provides for ease of administration. The rules of the game are uniform and clear for the contractor. He knows what his rights will be as long as he holds up his end of the bargain. His accountability to the government for progress and accomplishment of commercialization is no more, and probably less, than the intra-organization control kept on any other product marketed. The federal agencies would be freed of the struggle over selection of appropriate patent rights clauses that goes on under the present "flexible policy." Fewer patent attorneys should be needed to protect government-owned inventions if contractors see an incentive to assume commercialization. All of this benefits the taxpayer who pays the bills in the end.

Government Licensing

This proposal, thus far, has concerned itself primarily with the control and use of inventions made under government-sponsored research and development contracts. The federal government has in its portfolio some 25,000 patents covering inventions made by government employees or contractors under present "title circumstances" or in which the employees or contractors concerned have waived the opportunity to claim title. This is a correlated condition which also deserves attention. Over the years, objection has been raised to the government taking title to inventions and then doing nothing with them.⁷⁸ The unpredicted phenomenon of government predominance in research and development since World War II has generated in the government's hands the largest portfolio of patent rights in the nation. Because the government has practiced a policy of ignoring the function of the patent system, this vast property holding is nullified with the result that publicly-financed technology is not returned to the public in the commercial marketplace.

It must be recognized that the plan outlined above, which inaugurates a "fish or cut bait" policy with regard to contractor utilization, might well tend to increase government title holdings.

⁷⁸ Forman, "Statement Before Subcommittee United States Senate," 47 J.P.O.S. 807 (Oct. 1965); Watson, "Management of Government-Owned Inventions," 21 Federal Bar Journal 123 (Winter 1961):

With the failure of Congress to act, it is imperative that the Executive Branch, as custodian of government patent property rights, go it alone if necessary and couple the plan with a viable administrative solution which will utilize these rights for public benefit. The logical approach is the comprehensive licensing program recently promulgated by the Administrator of General Services and now pending before the courts. Judgment based on the law of patent licensing and not ideology should support this as a valid use of government property and not an unconstitutional disposal of property.

Patent property is unique and in a sense *sui generis*. Patents are created solely by federal statute and their status, ownership and mode of transfer are controlled by legislative enactment.⁷⁹ Therefore, it is necessary to look to the federal patent statutes when dealing with patents to ascertain the property interest involved and to determine by whom and how this property can be transferred or alienated.

The property right represented by patent ownership is probably one of the most misstated and misunderstood principles in the law. The Act of July 4, 1836, ch. 357, § 4, 5 Stat. 119, confusingly defined the rights granted to a patentee as "the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention and discovery." This misguidance has been repeated in succeeding acts and many court opinions over the years.

Obviously, it is not the statutory patent grant, but common law which gives the right to make, use and vend an invention⁸⁰ and even a patentee may be unable to practice his invention (or transfer

"A patent is a public asset of great value when it is used as it is intended to be used and the fact that its holder may profit substantially because of his freedom from competition for a limited period is a happy circumstance which justifies the patentee's effort and encourages others to become active. The patent itself sells nothing and the public is always the ultimate judge as to whether or not the invention is worthwhile since it will not be accepted if not beneficial or if too highly priced.

When it is not put to the use intended, as when it is held by Government and the invention covered thereby is made available to all, the patent has but little greater value than any other printed disclosure of the invention."

⁷⁹ See *Crown Die & Tool Co. v. Nye Tool & Machine Works*, 261 U.S. 24 (1923); *Gayler v. Wilder*, 51 U.S. 477, 494 (1850).

⁸⁰ See *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405 (1908); *Crown Die & Tool Co. v. Nye Tool & Machine Works*, 261 U.S. 24 (1923); *L. L. Brown Paper Co. v. Hydroiloid, Inc.*, 32 F. Supp. 857 (D.C.N.Y. 1939).

that right) because of a patent granted on a prior dominating invention.⁸¹ Since the right to make, use and sell the patented article is not derived from the patent,⁸² the right cannot be transferred to a licensee.

As elementary as this concept is, the patent property right, "the right to exclude others from making, using or selling the invention,"⁸³ was not accurately defined in the patent statutes until the Act of July 19, 1952, ch. 950, 66 Stat. 792 (35 U.S.C. 154). Section 154 of Title 35 shows that the only property granted by a patent is the right to sue for infringement:

Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, for the term of seventeen years, subject to the payment of issue fees as provided for in this title, of the right to exclude others from making, using, or selling the invention throughout the United States, referring to the specification for the particulars thereof. . . . (Emphasis added.)

It is the intended treatment of this specific property right that must be kept in mind when distinguishing between a disposition and a utilization of the patent right. The difference between a license under a patent and an assignment or disposal of the patent right is that the former gives the recipient immunity from suit for infringement and the latter gives the recipient the right to sue for infringement.⁸⁴ Accordingly, it follows that if the government as licensor does not grant to the licensee the right to sue infringers, it retains the property right to itself and does not transfer or dispose of it.

It should be noted that the property right established by the patent grant is positive, not negative, and comes into existence by virtue of the Patent Act. The patent does not grant the right *not to exclude*. The government, or any other owner of technology, can follow a course of inaction. The right *to exclude* is the sole property right gained by the government when it patents its technology. That right is not lost, reduced or abridged, but if fact is assured of positive utilization by the government when used to provide its *quid pro quo* for necessary private risk capital in a cooperative effort with a licensee to bring the technology covered by a patent to the public in the commercial marketplace.

⁸¹ See *Temco Electric Motor Co. v. Apco Manufacturing Co.*, 275 U.S. 319 (1927).

⁸² See *Bell & Howell Co. v. Spoor*, 216 Ill. App. 221 (1919).

⁸³ *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436 (1940).

⁸⁴ See *Bloomer v. McQuewan*, 55 U.S. 539, 549 (1852); see also, Ellis, "Validity of Doctrine that a Full Exclusive License is in Fact an Assignment," 34 J.P.O.S. 643 (1954).

If the legal skirmish over exclusive licensing is eventually lost by the Executive Branch, it should fall back on the surplus property management channels to move its patent property to the commercial marketplace.

In the Federal Property and Administrative Services Act of 1949,⁸⁵ Congress authorized:

Any executive agency designated or authorized by the Administrator to dispose of surplus property may do so by sale, exchange, lease, permit, or transfer, for cash, credit, or other property, with or without warranty, and upon such other terms and conditions as the Administrator deems proper, and it may execute such documents for the transfer of title or other interest in property and take such other action as it deems necessary or proper to dispose of such property under the provisions of this subchapter.⁸⁶

Surplus property is any excess property⁸⁷ (including patents)⁸⁸ not required for the needs of all federal agencies.⁸⁹

Agencies have the common law right to use their inventions for agency needs. The government patent is defensive. Its property right, the right to exclude, is neither needed nor used by the agency and thus seems to fit the statutory definition of "surplus property."

So it would appear that patent property, like other forms of government-owned property, once declared to be surplus could be made available to commercial entrepreneurs on conditional leasing or transfer arrangements. The surplus property route is perhaps more cumbersome in its administrative execution and less conventional in treating patent rights than is licensing. Nevertheless, it seems entirely capable of accomplishing the same objectives.

As another alternative route to commercialization, an agency might act by means of its contracting authority to move its inventions to the commercial marketplace. From the Federal Procurement and Administrative Services Act and the Armed Services Procurement Act, the various agencies of the government have authority to enter into contracts for services relating to agency programs and responsibilities and in the public interest.

Contracting has grown to such proportions and to such sophistication that techniques to accomplish agency and public interest objectives are many and varied. Agencies enter contracts for feasi-

⁸⁵ Act of June 30, 1949, ch. 283, 63 Stat. 378.

⁸⁶ 40 U.S.C. § 484(c).

⁸⁷ 40 U.S.C. § 472(e). The term "excess property" means any property under the control of any federal agency which is not required for its needs and the discharge of its responsibilities, as determined by the head thereof.

⁸⁸ 40 U.S.C. § 488(c)(2).

⁸⁹ 40 U.S.C. § 472(g).

bility studies, public advertising, technology utilization, trade promotion, etc. Contracts customarily provide for appropriated funds as compensation for services rendered. However, there is no requirement that the expenditure of appropriated funds be a condition of the award of a government contract. In fact, agencies today enter joint or cooperative efforts by contract or grant where government-furnished equipment, technology, facilities, etc., as well as funds are combined with contractor contributions to work toward a common interest.

Currently, there is intense interest and effort at all levels of government in transferring government technology to the private sector. Creation of jobs, stimulation of the domestic economy, improved foreign trade, and greater return on research and development outlays are among the reasons for this drive. Mission oriented agencies such as the Department of Defense, the National Aeronautics and Space Administration and the Atomic Energy Commission which spend billions of tax dollars on research and development now consider technology transfer a legitimate responsibility and have on-going programs to this end.

Unfortunately, the fact remains that the great bulk of government-sponsored technology involves considerable financial outlay and risk in its commercial development and marketing. Presumably, an agency could extend its research and development program to include commercial as well as government utilization of new technology and finance the extension with still more tax dollars.

A far better approach would be for an agency to utilize the dormant property right represented by its patent portfolio as all or part of the government's *quid pro quo* in exchange for commercialization by an interested contractor. Inventions could be publicized with a request for proposals for developing and marketing on a nonexclusive basis. The government's contribution to the joint effort would be commercial authorization in the form of immunity from exclusion under the government's patent right. If no response was received to this appeal, the offer could then be made on an exclusive basis. All of the same provisions, conditions, checks, etc., which have been incorporated in the license regulations could be placed in contracting guidelines of the Federal Property Management Regulations and the Armed Services Procurement Regulation to accomplish the same objectives and government-wide uniformity which the licensing program set out to accomplish.

Conclusion

Since the close of World War II, the American public has been asked to invest more than two hundred billion tax dollars in federally-sponsored research and development (over eighty billion in the last five years alone). While the technology generated has undoubtedly been invaluable in the furtherance of government programs in behalf of the nation, there is little evidence of its movement to the commercial marketplace where the taxpayer/consumer and the civilian economy could be benefitted.

While the public continues to be denied its investment at the marketplace, the debate continues as to the best way to resolve the dilemma. The argument over the decades has centered on whether the government should follow a uniform title or license policy. Attributes and accusations relating to these antipodal solutions have been flung back and forth with little new being said for at least a decade. The truth of the matter is that neither approach accomplishes the total objective. Title policy offers no incentive to the private sector to participate in and innovate under government research and development nor does it attract the risk capital needed to move technology to commercialization. On the other hand, use of a license policy is constantly opposed as a giveaway program by those who advocate dedication to the public. Also disappointingly few contractor-retained inventions seem to move promptly to the marketplace for benefit to the consumer. On top of this, eleven years of Executive initiative in the form "flexibility" has left government patent policy still a kaleidoscope of individual agency practices and the situation as muddled as ever.

The nation is entitled to a single uniform patent policy to guide its governmental operations and one which will serve the needs and objectives of the private sector, the government and most of all the public. The uniform approach of vesting legal title to all subject inventions in the government with an automatic option to the contractor for government authorization to commercially develop and market such inventions should satisfy the interests of all parties concerned.

With the national temperament and support shifting more and more toward society oriented goals (*e.g.*, standard of living, health, environment, etc.), industry well may be risking the loss of the battle by getting hung-up on what is largely semantics. The open objective of government contractors has been commercial rights to inventions made under government-sponsored research and de-

velopment. By guarantee of commercial authorization at time of contracting, the contractor would be assured of this objective, if he is in fact a serious entrepreneur and would apply his risk capital to bring the invention into the stream of commerce. The plan would give him two years to make up his mind and another three years to commercialize. From that point he would have seven years to recoup his investment and hopefully make a profit. His objective suffers nothing from the government holding legal title with commercialization at his disposal.

At the same time, legal title places control in the government for a “no nonsense” effort to provide the public with its technology at the commercial marketplace. This should go far in reducing both political opposition and legal and administrative complexities. Also government agencies would have the wherewithal for maximizing research and development participation and results and the commercial utilization of new technology.

The American public has paid for government technology. It deserves the right to accept or reject this technology at the commercial marketplace and to a uniform patent policy which will accomplish this to the greatest degree. Opponents of the concepts of the patent system, be they liberal politicians, consumer advocates or antitrusters, must not succeed in isolating the public from this technology with unsubstantiated fears of economic concentration and market abuse.

Thirty years of patent policy debate is enough—let us get on with the job. It is time for compromise.

Government Patent Policy— Time for Compromise

WILLIAM O. QUESENBERRY

Summary

Post World War II industrialization has brought about an ever-increasing governmental investment within private industry. The results of research and development lead to processes and products which have potentially marketable use, but such use is often-times abrogated by governmental policy. The disparate patent policies applied to research programs are based both on legislative and executive action resulting in provisions with either no policy statement at all or one that is very specific and highly restrictive. Two schools of thought disagree as to title to invention derived from government funds: (1) that the government should acquire only those rights to invention which it needs for governmental purposes; or (2) that the government should acquire all rights to inventions conceived under government-sponsored research. Neither philosophy has made significant progress in providing for the return of federally supported technology to the marketplace; it is time for compromise.

Words and Phrases

Patent
Government Policy

U.S. Government
 Agencies
 AEC
 Department of Agriculture
 Department of Defense
 Department of Justice
 NASA
 Federal Council for Science and Technology
 Patent
 Procurement
 Research and Development

Citations

10 U.S.C. §§ 2201 *et seq.*
 40 U.S.C. §§ 472(e)(g), 484(c), 488(c)(2)
 42 U.S.C. §§ 1861-1875, 2011 *et seq.*, 2451 *et seq.*
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 63 Stat. 378
 64 Stat. 149
 68 Stat. 919
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L. L. Brown Paper Co. v. Hydroloid, Inc., 32 F. Supp. 857 (1939).

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Pressures in the Innovation Process: A Literature Review

JAMES F. O'Bryon*

... To be innovative is good, ... to teach others to be innovative is even better and much easier!

(Mark Twain)

The title for this literature review did not evolve until I had become acquainted with some of the resources available on the subject of innovation and had begun to reflect on what I had read. Much has been written on the subject of innovation from many vantage points. Authors differ widely in their assumptions, purposes and conclusions but their agreement is almost unanimous on the view that the path to successful innovation is a very complex and an often difficult and frustrating one.

Perhaps it is because of this nature of innovation that Alfred Marshall and Lord Keynes both excluded technical changes in their economic models. Even Paul Samuelson in his well-known text on economics treats technology as an exogeneous factor.¹

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¹ Samuelson, *Economics: An Introductory Analysis*, McGraw-Hill Book Co., Inc., New York, Sixth Edition, 1964, p. 231.

It would be beneficial at this early point of the paper to define two terms which will be used frequently throughout the remaining pages: invention and innovation.

Invention

Invention carries with it the concept of "ideas." Associated with it are such words as "inventor," "creativity" and "idea generation." Schon² states that it carries with it the idea of an amateur, untrained, and independent genius of the kind typified by men like Edison and Morse. Invention is often defined as "undirected science"³ or as a process providing the initial concept leading to eventual innovation.⁴ Marquis⁵ views invention (if present) as part of the process of innovation. Invention can be viewed as a variate of idea generation⁶ with no particular marketable end product in mind. Most writers agree that there is no shortage of ideas but rather a shortage of putting them into practical use.⁷ Levitt uses the word "ideation" to describe this overflow of simple creative ideas. Mueller⁸ equates invention to the conception of the idea. Invention is discovery—a perception for the first time of something whose existence was hitherto unknown.⁹ The concept of invention is often brought into the context of the flow of R&D. It is equated with basic research, applied research and in some cases includes all processes of product development with the exception of application and innovation.¹⁰

Innovation

Innovation seems to be even less understood and easily defined than invention. Some authors find it easier to define what it is

² Schon, "Champions for Radical Inventions," *Harvard Business Review*, Vol. 41, March-April, 1963, p. 77.

³ Sherwin and Isenson, "Project Hindsight," 156 *Science* 1572 (1967).

⁴ Globe, Levy and Schwartz, "Key Factors and Events in the Innovation Process," *Research Management*, Vol. 16, July 1973.

⁵ Marquis, "The Anatomy of Successful Innovations," *Innovation*, No. 7, 1969, p. 28.

⁶ Baker, Siegman and Rubenstein, "The Effects of Perceived Needs and Means on the Generation of Ideas for Industrial Research and Development Projects," *IEEE Transactions on Engineering Management*, Vol. EM-14, No. 4, December, 1967, p. 156.

⁷ Levitt, "Creativity Is Not Enough," *Harvard Business Review*, Vol. 41, May-June 1963, p. 73.

⁸ Mueller, *The Innovation Ethic*, American Management Association, Inc., New York, 1971.

⁹ Morgan, *Managing Change*, McGraw-Hill Book Co., Inc., New York, 1972.

¹⁰ Williams, *Technology, Investment and Growth*, Chapman and Hall, Ltd., London, 1967.

not.¹¹ It is not invention. It is not scientific discovery. Well, what is it?

Innovation is. . .

unplanned, uncontrollable and unpredictable;¹²

technology actually being used or applied for the first time;¹³

a subtle concept. . . a unit of technological change;¹⁴

a process by which an invention or an idea is translated into the economy for use.¹⁵

Then there are those who put adjectives in front of the word. Technological innovation, social innovation, applied innovation, market-centered innovation and others appear throughout the literature in abundance. This paper shall focus primarily on the flow of technological innovation, both process and product innovations.

Is There a Game Strategy?

The number of suggested models for the sequence that the innovative process follows approximates the number of writers on the subject. I am not suggesting that there is little agreement on what factors are involved but rather I am saying that there are many ways of looking at the same "animal."

I am reminded of the poem entitled "The Six Blind Men of Industan." Each man came away from the elephant with a different conclusion of what characteristic feature an elephant had. Their conclusions were quite diverse since each had grabbed a different part of the animal's anatomy (tail, leg, trunk, ear. . .). So it is that writers on the subject are approaching and discussing it from many perspectives.

Innovation is not the natural outcome of creative thinking.¹⁶ Typically, it involves a long chain of events, often unpredictable, which lead eventually to success or failure. Bright¹⁷ discusses the

¹¹ Drucker, *Management Tasks, Responsibilities, Practices*, Harper & Row, New York, 1973; and Note 4, *supra*.

¹² Aram, "Innovation Via the R&D Underground," *Research Management*, Vol. 16, Nov. 1973, p. 24.

¹³ Utterback, "Innovation in Industry and the Diffusion of Technology," 183 *Science* 621 (1974).

¹⁴ See Note 5, *supra*.

¹⁵ See Note 8, *supra*.

¹⁶ See Note 7, *supra*.

¹⁷ Bright, *Research Development and Technological Innovation*, Richard Irwin, Inc., Illinois, 1964, p. 121.

innovation process not so much from the perspective of sequential events but rather characteristics. He includes the following:

CURIOSITY — PERSISTENCE — DETERMINATION
STUBBORNNESS — DISCONTENT — ENTHUSIASM
BLIND BELIEF— and occasionally
SERENDIPITY.

Bright is also quick to caution that these characteristics are present for both successes *and failures*.

Utterback¹⁸ describes the process as occurring in three phases:

1. Generation of an idea—synthesis of diverse information;
2. Problem solving (or development)—setting goals; and
3. Implementation (or diffusion)—manufacturing, tooling, marketing.

Rossman¹⁹ takes the first phase of Utterback's model, the generation of an idea, and expands this phase into seven phases or "stages." These stages are as follows:

1. Observation of a need or difficulty;
2. Analysis of the need;
3. Survey of the available information;
4. Formulation of objective solutions;
5. Critical analysis of proposed solutions for advantages and disadvantages;
6. Birth of the new idea, and
7. Experimentation to test out the most promising solution.

We have seen already that this first phase is perhaps the easiest of all to accomplish in the innovation process. Quinn and Mueller²⁰ point out vividly that "from the gasp on, it's a process of reducing an idea to practice." The key problem in managing the process is getting research results effectively transferred into operations. We shall discuss the many barriers and obstacles which must be overcome later in this paper.

One of the most unique descriptions of the innovative process is presented by Catling.²¹ He makes the analogy of innovation as a process closely akin to that of particle dynamics. The process of

¹⁸ See Note 13, *supra*.

¹⁹ Note 17, *supra* at 121.

²⁰ Quinn and Mueller, "Transferring Research Results to Operations," Harvard Business Review, Vol. 41, Jan.-Feb. 1963, p. 49.

²¹ Catling, H., "Conditions for Innovation—with Particular Reference to Textiles," R&D Management, Vol. 2, No. 2, 1972, p. 75.

innovation is essentially a change in situation with respect to time. The *particle* is the process of innovation itself. The particle must achieve *displacement* (applications of innovation), *velocity* (extent of application), *acceleration* (rate of change of the extent of application) and *force/momentum* (environmental influences). The analogy also provides for parallels with the parameters of friction, inertia and the laws of motion.

Give Them What They Need!

Recognition of a need is one of the paramount factors in successful innovation. This is one condition which most analysts agree is a necessary but not necessarily sufficient condition. Project SAPPHO²² is among the most revealing studies ever performed to emphasize the importance of recognizing user need. Recognition of a user need also often generates new ideas.²³ Utterback suggests that there are a number of alternative ways of recognizing that need. These include projections based on historical data, performance comparisons with competing alternatives, demands made by other persons (perhaps customers) and planning. Other authors are in agreement that recognizing user need (market need) is one of the decisive events that must be part of the innovation process.²⁴ If it were possible to perform a "weighted pooling" of those studies performed to determine the role of market need in innovation success, the pooled value would fall somewhere between 60-85% depending upon the market and type of innovation being discussed.

The R&D/Marketing Huddle

Another *must* for increasing the probability of innovation success is an analysis of the market or potential market. Aram²⁵ suggests that "the majority of project failures are nontechnical . . . largely due to the lack of a continued, collaborative relationship between

²² Achilladelis, Jervis and Robertson, *Report on Project SAPPHO*, Science Policy Research Unit, University of Sussex, England, August 1971.

²³ Utterback, James M., "The Process of Innovation: A Study of the Origination and Development of Ideas for New Scientific Instruments," IEEE Transactions on Engineering Management, Vol. EM-18, No. 4, Nov. 1971, p. 126.

²⁴ Baker, Siegman and Larson, "The Relationship Certain Characteristics of Industrial Research Proposals and Their Subsequent Disposition," IEEE Transactions on Engineering Management, Vol. EM-18, No. 4, Nov. 1971, p. 118; see also Notes 2, 4 and 5, *supra*.

²⁵ Note 12, *supra* at 24.

R&D and marketing." "There is no substitute for market orientation as the ultimate source of profitable growth," states Mack Hanan.²⁶ He suggests this be accomplished by adjusting the company's organizational structure so that its major markets become the centers around which its divisions are built. Marquis²⁷ makes a good point in stating that there is a great difference between recognizing an *existing* demand and *potential* demand. Product innovation must be cognizant of this in preparing the time line for innovation. Gardner²⁸ emphasizes in an article about new ventures that the successful venture must maintain close contact and involvement with the marketplace (*i.e.* user). Later in his article he places as first on his list of needs the familiarization with marketplaces of the company.

There are several characteristic ways that a market can expand.²⁹

1. Natural expansion in demand;
2. Horizontal moves into related fields;
3. Vertical expansions (components);
4. New product ranges (related technology);
5. New product ranges (commercial aims of firm); and
6. New ventures.

Donald Schon³⁰ suggests that simple questions must be asked like: "who will buy it?" "how large will its market be?"; "how much of a share will it get?"; and "how long will it last?" He also interestingly points out that there is an iteration process which occurs between market analysis and the product conceived to serve that specific market. He suggests that the product changes through the process as well as the market originally conceived. Morgenthaler³¹ agrees with Schon, Marquis and others and emphasizes that the company should begin its search in the marketplace and locate its pressing problems whose solution is apt to be affected by the technology and expertise it has developed.

²⁶ Hanan, "Reorganize Your Company Around its Markets," *Harvard Business Review*, Vol. 56, Nov.-Dec. 1974, p. 63.

²⁷ See Note 5, *supra*.

²⁸ Gardner, "Innovation Through New Ventures: New Venture Concept," *R&D Management*, Vol. 3, No. 2, 1973.

²⁹ Secrist, "Expediting Research Results to Successful Production and Sales," *Research Management*, Vol. 4, No. 2, 1962, p. 121.

³⁰ Schon, "The Fear of Innovation," *International Science and Technology*, Nov. 1966, p. 74.

³¹ Morgenthaler, "Are You Sitting on Potential Profits?" *Innovation*, No. 20, Apr. 1971, p. 36.

Just a caution I have here in regard to market analysis: Smith³² devotes an article totally to the subject of pseudo-research in marketing. He cautions that the results from market research are often affected by things other than a genuine determination of market need. Organizational politics, service promotion and personal satisfaction can severely affect the outcome of market studies and could, in turn, add to the already high risks involved in innovation.

To this point, we have attempted to define some terms, examine the elements in the innovation process and look at how the innovation will fulfill its role. Now the real battle begins!!

Home-Team Offense

Successful innovation, as in any top-ranked athletic team, needs key people. The literature discusses several of these essential "stars."

Technological Entrepreneur

There are typically two types of entrepreneur according to Gibbons and Watkins:³³ the first is the product champion (which will be discussed below) and the second is the technical entrepreneur. The latter is defined as the person who leaves his company or research establishment and sets up his own business. This definition is not totally consistent with the ideas of other writers. Another author³⁴ defines the technical entrepreneur as an individual within the performing organization who champions a scientific or technical activity; he is sometimes called a "product champion." Rothwell and Robertson³⁵ emphasize that this person often represents the most complete form of individual technology transfer. It is necessary for the potential innovator to require some control over the innovative process to actually assure the introduction of change.³⁶ He must command sources of supply, the supporting services which his innovation may require and easy access to his potential market.

³² Smith, "Research and Pseudo-research in Marketing," *Harvard Business Review*, Vol. 52, Mar.-Apr. 1974, p. 76.

³³ Gibbons and Watkins, "Innovation and the Small Firm," *R&D Management*, Vol. 1, No. 1, 1970, p. 10.

³⁴ See Note 4, *supra*.

³⁵ Rothwell and Robertson, "The Role of Communications in Technological Innovation," *Research Policy*, Vol. 2, No. 3, 1973, p. 222.

³⁶ Berliner, "When Ivan Has a New Idea, What Makes Ivan Run?" *Innovation*, No. 3, July, 1969, p. 28.

Technological Gatekeeper

Project SAPHO³⁷ results made a very good point for the necessity of communications, especially external communications. Allen³⁸ places great importance on the criticality of having these communicators. He found a consistently positive correlation between the use of technological gatekeepers as a source of information and technical performance. Other writers also make reference to the necessity of having such people in the process.³⁹ He is an "interdisciplinary cross-pollinator;" he moves around—in the marketplace and at technical meetings. He establishes rapport with his counterparts in other companies.

Key people in the innovation process have also been called "change agents."⁴⁰ They are characterized as having the stamina to affect change in a stable organization through their position, managerial ability and respect, technical competence, willingness to take risks and a number of other possible attributes.

Without these "stars" innovation would severely be limited.

. . . And Indians Too

The innovative team is made up of more than the "stars," naturally. The problem is not "too many chiefs, not enough Indians." The problem might be just the reverse. Most men are risk-averse and would rather not push their ideas to "accountability." Globe, Levy and Schwartz⁴¹ suggest that peer-group forces serve a very useful purpose in moving the innovation to successful completion. They call them the "invisible college." This group of technical peers is within the institution and external to the organization. In-house colleagues collaborate on or otherwise facilitate the activity.

A cursory look at the literature suggests that there is a great disparity of opinion on the optimal size of innovative teams. But upon closer examination, the disparity is not quite as great when the time in the innovation cycle and the type of innovation are both considered. The size also varies according to what type of individu-

³⁷ See Note 22, *supra*.

³⁸ Allen, "Managing the Flow of Scientific and Technological Information," Doctoral Dissertation, M.I.T. Sloan School of Management, 1966.

³⁹ Rockett, "Introducing New Products from the Top," *Innovation*, No. 12, 1970, p. 29; see also Note 4, *supra*.

⁴⁰ Rogers, *Diffusion of Technology*, The Free Press, New York, 1962.

⁴¹ See Note 4, *supra*.

als make up the team. The group size will also vary according to the urgency of the project.

Top Management Players

No study of team members would be complete without reference to support of top management itself. The success of the Polaris program is a prime example of support of top management (as well as a few other factors thrown in). Top management might even end up as one of the product champions.⁴² In any case they must have considerable power and prestige. Rockett⁴³ states emphatically that "the first and most important step is a top level management commitment to new product development in the form of a man of vice-presidential stature appointed to handle this activity." It is not only necessary for top management to support innovation but also that they *understand* it.⁴⁴ In an article entitled "Transferring Research Results into Operations,"⁴⁵ the authors describe the techniques of a successful pharmaceutical company. Monthly meetings are conducted via field trips by the vice presidents and president to discuss with individual researchers and project heads objectives and specific technical programs of interest to those being visited. Burns and Stalker⁴⁶ point out that one constant element of all of the studies of twenty concerns was an *extraordinary importance* ascribed to the managing director. Top management support is also necessary because of the *long lead time* that innovation often requires before eventual success and payoff. Dean⁴⁷ states that "we must have top managers who maintain and work a long-range strategy and who recognize the real time and money dimensions of innovation." The point I am driving at is that top management support is a crucial factor in most innovation patterns which are successful.

To this point in my discussion, I have defined terms involved in the innovation process, some of the "players" as well as touching quickly on a few of the recognized essentials in the process of successful innovation. We could go into great detail describing

⁴² See Note 2, *supra*.

⁴³ Note 39, *supra* at 26.

⁴⁴ See Note 28, *supra*.

⁴⁵ See Note 20, *supra*.

⁴⁶ Burns and Stalker, *The Management of Innovation*, Quadrangle Books, Chicago, 1961.

⁴⁷ Dean, "The Temporal Mismatch—Innovation's Pace vs. Management's Time Horizon," *Research Management*, May 1974, p. 15.

many of the other aspects of innovation but I shall leave these for others to describe.

The Opposition

We shall focus on the many and varied forms of "opposition," "resistance" and "constraints" which surround and infiltrate the innovation process. I place quotation marks around these words since these forces often are not generated by anyone's design or strategy but rather emerge as a natural consequence.

(Expect it)

Bright⁴⁸ is convinced that recognition of inevitable resistance to technological innovation and the reasons for the opposition to the innovator can minimize both the delay in achieving his goal and the probability of failure. The resistance may be logical or illogical, obvious or unsuspected, wise or foolish. The point is that IT MUST BE EXPECTED AND BECOME PART OF THE INNOVATIVE STRATEGY rather than be treated as a surprise or unanticipated force.

(All Shapes and Sizes)

Resistance takes on many forms, intensities and patterns of behavior. The literature suggests that there are at least eleven types of resistance that can be encountered throughout the innovation process.

Social

Rogers⁴⁹ makes the statement that "nearly every program to hasten economic development produces a host of reactions that run throughout the social structure of the client system." Nearly every program of planned change results in a myriad of social consequences in the client system. It is generally inevitable. Innovation will disrupt the social system it enters. The Bessemer converter was a significant innovation in that its acceptance threatened to disrupt the technological and related social system of the established industry.⁵⁰ Technological innovation, according to Boettinger,⁵¹ is one of the greatest forces and affectors in our nation

⁴⁸ See Note 17, *supra*.

⁴⁹ Note 40, *supra* at 272.

⁵⁰ Schon, "The Diffusion of Innovation," *Innovation*, No. 6, Nov., 1969, p. 47.

⁵¹ Boettinger, "Big Gap in Economic Theory," *Harvard Business Review*, Vol. 45, July-Aug., 1967, p. 51.

and the world. He discusses innovation as a disturbance to the economic system. The system most often resists.

Psychological (Kainotophobia)

One of the most potent forces acting against innovation is that of the fear of change or "kainotophobia." These forces strive to maintain the status quo of the institution when it is "menaced by an entrepreneur's innovation."⁵²

The line of management is often geared to protect momentum and the style of the ongoing establishment. Aplin and Thompson,⁵³ in discussing organizational change, emphasize that people and social systems have a propensity to "cling to the familiar and to maintain the status quo. Inducing change involves a lengthy process of examination and education, plus the establishment of new behavior patterns." Hence, meaningful change in an organization brought about by innovative forces may take a long period of time due to this *inborn resistance to change*. Major change can be a shock to any company and person within that company. Hanan⁵⁴ suggests that it is often best to implement change by degrees, . . . *minimize shock reaction*. Coleman, Katz and Menzel⁵⁵ in their book on medical innovation do give some hope in terms of anticipated resistance due to innovation. "In fashion, innovation is the norm. In other words, change is expected. Medical innovation is also expected and more readily accepted than in many other scientific markets."

In a rather lengthy article in the *Harvard Business Review*,⁵⁶ the various barriers to innovation are discussed with particular reference to the "critical technology transfer points." To overcome resistance to change three things are suggested as essential: information, enthusiasm and authority. These elements still do not guarantee the reduction in resistance due to the "change threat."

Socioeconomic (Wallet Factor)

This resistance arises from some of the factors just discussed but with the additional "wallet-factor." Quinn and Mueller⁵⁷ discuss

⁵² Note 8, *supra* at 115.

⁵³ Aplin and Thompson, "Successful Organizational Change," *Business Horizons*, Vol. XVII, No. 4, Aug. 1974, p. 61.

⁵⁴ See Note 26, *supra*.

⁵⁵ Coleman, Katz and Menzel, *Medical Innovation*, Bobbs-Merrill Company, Inc., New York, 1966.

⁵⁶ Note 20, *supra* at 51.

⁵⁷ *Id.* at 52-53.

"vested interests and entrenched ideas" as a potential fly-in-the-ointment of innovative implementation. They cite the example of the reaction of the electron tube division when the R&D group kept approaching a workable transistor technology. This type of job threat is perceived as a personal economic threat resulting in resistance to change in product line or improvement. Often a parochial attitude will develop between competing departments as a manifestation of this socioeconomic threat. The NIH (Not Invented Here) syndrome comes into effect on the local level as a counter to the threat.

Interpersonal

Interpersonal resistance to innovation is a very broad heading for negative forces resulting from a combination of circumstances. Some of the resistance is a conscious effort and some is the result of circumstances.

The veterans and rookies. The turnover of key people,⁵⁸ although not always consciously designed as a barrier to innovation, can cause severe setbacks to any technological innovation reaching its goal within the specific time frame, technical specifications and budget. We had mentioned earlier that key people (*product champions, gatekeepers, change agents, entrepreneurs . . .*) are very crucial in guiding the specific innovation through the maze of development and marketing. Loss of such key people certainly would (inadvertently perhaps) result in resistance to the innovative process.

Energy lost to heat. Friction and disagreement among coworkers is also cited as a source of resistance to innovation. Kulicke⁵⁹ describes a situation from his personal experience where he had produced some new designs which he felt the industry was ready for and which he wished to have produced. But to his surprise and chagrin, he found his partners honestly resisting these further innovations. They argued that it would cost a lot of money and would involve a lot of trouble and difficulty to bring out. They even further argued that the inevitable result would be that ten other manufacturers would copy it within a year. This is not the kind of "creative tension" that the literature tells us to generate for maximum results!

Second string plays also. Involvement in isolated elements in the organization rather than widespread participation in the innova-

⁵⁸ See Note 20, *supra*.

⁵⁹ Lindgren, "Two Roads to Creativity," *Innovation*, No. 28, 1972, p. 23.

tion process can cause resistance as well.⁶⁰ "Many levels of the organization should be actively involved in change."

Communications barriers are also a potential negative force on the innovation process. Many papers have been written on this problem so I shall not go into any detail here except to say that the problem is complex and deserves attention if one wishes to enhance the success/failure ratio for innovation. The references in notes 22, 40, 53 and 61 deal with this problem more explicitly.

Us against us? It might seem like a paradox but often the *innovator himself* is a source of resistance to the overall process. Perhaps I should classify this as an *intrapersonal* resistance. The innovator may battle ideas that are his own. There is a brief quote from Thomas Edison made in 1899 which illustrates this situation. He is discussing the use of alternating current in buried electrical wires:

There is no plea that would justify the use of high tension and alternating currents, either in a scientific or commercial sense. They are employed solely to reduce investment in copper wire and real estate.

My personal desire would be to prohibit entirely the use of alternating currents. They are as unnecessary as they are dangerous. I can, therefore, see no justification for the introduction of a system which has no element of permanency and every element of danger to life and property.⁶²

The innovator might also resist innovation because of *past failures* or simply because he had the feeling that *self-initiated innovation was not expected of him*.⁶³ Schon discusses this at some length especially as it refers to government laboratories. The innovator might also resist if he is risk-averse for any number of reasons. "The innovator must take risks in order to earn windfall profits."⁶⁴

Organizational (Back at the clubhouse). Organizational or hierarchical resistances are very evident as a negative influence on the innovation process. The American Management Association⁶⁵ calls this hierarchical hangup, manifested by the inertia of those in the

⁶⁰ See Notes 3 and 53, *supra*.

⁶¹ Utterback, "The Process of Technological Innovation within the Firm," Academy of Management Journal, Vol. 14, Mar. 1971, p. 75.

⁶² "Effective Technical Innovation: Recent Findings," Academy of Management Journal, Vol. 14, Mar. 1971, p. 84.

⁶³ See Note 2, *supra*.

⁶⁴ Note 40, *supra* at 276.

⁶⁵ Note 8, *supra* at 114.

formal structure to sequester or smother the entrepreneur, "entrepreneurial inertia." They go on to say that the high resistance energy in the hierarchy to innovation comes from the "intellectual, emotional, political, and economic investment of the individuals who have institutionalized their place in the corporate system." The innovator is treated as a "peace disturber" and a member of the "young boys' network."

Red tape and the underground. Berlinger⁶⁶ remarks that "as American corporations continue to grow larger and larger, it's possible that they will encounter the same bureaucratic entanglements which bog down Soviet planners." Despite avowed governmental policies to stimulate innovation, bureaucracies often seem to retard it. The innovation process continues to "depend on people managing to get things done in spite of the system." This implies that perhaps the informal system rises out of necessity. Some writers have termed this the "underground." The rate of successful innovation from smaller R&D establishments points in the direction of greater resistance to change in larger hierarchical organizations. It can't be argued on this basis alone, however.

Screen is clogged. I should also mention at this juncture that "screening"⁶⁷ is one of the characteristics of larger organizations which forms a "buffer" against resources of innovation for which there is an expressed need. This screening is generally a formal channel. Based on one study of the Army Ordnance Corps and individual military laboratories and the sample taken (14 men from 7 screening offices) not one man could identify an idea that had been submitted through his office and later used in the military! That's not screening, that's squelching!

Often a large hierarchical structure becomes "ingrown." The conclusion of one study was that the primary limitations on a firm's effectiveness in innovation appear to be its ability and perhaps aggressiveness in recognizing needs and demands in its external environment.⁶⁸

Managerial (Risk Aversion)

Managerial resistance can also restrict the innovative process in any organization. There are a number of reasons. Besides probable aversion to change discussed earlier, most people tend to be

⁶⁶ Note 36, *supra* at 25.

⁶⁷ See Note 2, *supra*.

⁶⁸ See Note 62, *supra*.

risk-averse as well. Drucker⁶⁹ describes the strategy for innovation as based on the clear acceptance of the risk and failure—and of the perhaps more dangerous risk of near-success. Innovation is attitude and practices and, above all, top management attitude and practices.⁷⁰ A risk aversion in management will evidence itself in many forms which will result in the suboptimal operation of the innovation process to minimize risk. Attempts are made to select those projects whose benefits justify their anticipated costs by playing risks off against one another.⁷¹ This is the rational view of the management of innovation. Schon believes that this is a myth. This philosophy results in making innovation impossible. To assume any responsibility for implementation is to risk dangerous actions, and that can be painfully uncomfortable.⁷²

Minimize Total Damage

We must keep in mind that innovation is “embedded in the environment with political, social and cultural elements in addition to others.”⁷³ The management often has a broader perspective on the implications of new technological innovation on these elements and as a result will tend to exercise his power to minimize “total damage.” Many studies have been done to determine the failure rate of innovations including studies of enterprises along Route 128 which is a Boston perimeter highway, Palo Alto, Dallas and other prestigious places. Drucker⁷⁴ says that nine out of every ten brilliant ideas turn out to be nonsense. The mortality rate of innovations is, and should be, high with a batting average of one out of ten. This might scare some members of the management squad.

Budgetary (\$lack)

Budgetary resistance can also have an impact on the success of the overall process. A study was performed by V.A. Thompson on several large agencies back in 1968⁷⁵ to determine what factors

⁶⁹ Note 11, *supra* at 796.

⁷⁰ *Id.* at 797.

⁷¹ See Note 30, *supra*.

⁷² See Note 7, *supra*.

⁷³ See Note 61, *supra*.

⁷⁴ Note 11, *supra* at 792.

⁷⁵ Thompson, “How Scientific Management Thwarts Innovation,” *Trans-Action*, Vol. 5, June 1968, p. 52.

were involved in successful innovation. Below is a brief quote from their study:

They found what, in an innovation organization, is called slack-uncommitted resources of personnel, finance, material and motivation.

When there is slack the psychological risk of new ventures is reduced. The possible loss of uncommitted resources is less painful than the loss of resources that are already earmarked for specific use.

Resistance will be higher as slack resources diminish. Marquis⁷⁶ feels that many companies shrink from innovating out of fear that coming up with a sound technical change in their product or process means investing an enormous sum of money. He then goes on to show how approximately 65% of all innovations cost \$100,000 or less. Still, the notion of large expenditures pervades the air-spaces of the comptroller's and top management's offices in many places regardless of the results to the contrary (with the exception of big breakthrough or systems-type of innovations).

Time (The "Clock"-Eyed Plans)

Time itself is a built-in resistance to innovation. Catling⁷⁷ believes that innovation is essentially a change of situation over time. The innovation must gain inertia, overcoming entrepreneuria, and be durable over the long term. If we apply the concepts of "present value," "discount rate" and similar estimates of the value of investing in a long-term project, time is not often on the side of heavy investment in long-term innovation. There is a significant time lag from the decision to go ahead with a particular innovative project and its eventual diffusion into the marketplace and realized net benefit. Robert Dean⁷⁸ submits that "there is a temporal mismatch between the natural pace of innovation and the time horizon of most U.S. industrial corporations." Study of time pressures indicate that the statement of budgets and deadlines tend to increase the propensity to engage in related activities, thereby restricting the researcher's freedom to choose projects and change direction. Time pressures stifle the creation ideas not related to current work. However, if your current work is the innovation itself this might be a blessing in disguise.

⁷⁶ See Note 5, *supra*.

⁷⁷ See Note 21, *supra*.

⁷⁸ Note 47, *supra* at 12.

Killed by the calendar. If budgets are drawn up annually, rather than long-term financial commitment on innovation programs, each year there will be the possibility that funds will not be there to appropriate to the "non-essential projects." Time can sabotage the innovation process if the duration is too short to realize fruition.

Technological

The *technological maturity* of a product or market can be a hindrance to innovation. Kirchner⁷⁹ draws on the analogy of Alice in Wonderland looking through the looking-glass in his discussion of the mature market. People are hemmed in, he says, by the economics of a market that offers only marginal profits, hampered by entrenched patterns of national and local politics, stymied by the complex problems of using a new technology alongside rather than in place of existing ones.

In connection with the marketplace, resistance to innovation could even originate from the potential user. This could result from a perceived threat to his "modus operandi" or even a threat to his profit margin.

Legal (Here comes 'da Judge)

Legal considerations could also be a source of reluctance to innovate. Innovation funded and performed by the government is subject to the system of political controls set up by the government.⁸⁰ Mueller⁸¹ describes some of these potential resistances as resulting from ecological considerations, public relations and taxes. Other considerations which might affect support of innovation include the possibility of legal suit.⁸²

Traditional

The final resistance I shall mention stems from tradition or folklore. The "gut feeling" that men and women have about the worth, need and long-term benefit is a difficult to define but real source of potential resistance to innovation. It *could also be* a source

⁷⁹ Kirchner, "Technology Through the Looking-Glass," *Innovation*, No. 19, 1971, p. 32.

⁸⁰ *The Rate and Direction of Inventive Activity: Economic and Social Factors*, A Report of the National Bureau of Economic Research, Princeton University Press, N.J., 1962, p. 589.

⁸¹ Note 8, *supra* at 150.

⁸² See Note 2, *supra*.

of innovation *promotion* if their past experience and exposure to the overall process has evidenced a useful process.

Summary

The innovation process is a complex of forces emerging at various times and with wide-ranging intensity throughout its life-span. Innovation moves as a function of the net force exerted upon it.⁸³ Getting the process started requires more power than to maintain its speed. Mueller⁸⁴ suggests the analogy of the flywheel which requires six times as much power to start as to keep in motion. Much of the literature suggests that the necessary power to maintain momentum is quite a bit more than Mueller suggests.

A Complex of Interwoven Forces

I have attempted to isolate eleven of the sources of resistance to innovation and give a brief description of the origin and effect that each force would have on the innovation process. Project SAP-PHO⁸⁵ clearly describes the innovation process as a "complex activity with many interdependent factors." The factors I have described should not be considered as isolated forces but rather interwoven forces acting and reacting over time. Similarly, we cannot hope to attempt to completely eliminate any one or more of these sources of resistance to guarantee success. As Project SAP-PHO states in its conclusion, "the managers of football teams mostly know what their teams ought to do in order to win, but the factors which they are striving to control are not easy to manipulate and they certainly cannot guarantee success in any particular game."

The eleven sources of resistance to innovation—social, psychological, socioeconomic, interpersonal, organizational, managerial, budgetary, time, technological, legal and traditional—are by no means the entire force structure of innovation resistance. These areas, however, seem to gain the most attention among the writers on this critical subject.

Resistance Plays a Constructive Role (Sometimes)

I want to pause for a moment to consider whether resistance is really a "bad thing." Bright⁸⁶ makes the point that we should not

⁸³ See Note 21, *supra*.

⁸⁴ See Note 8, *supra*.

⁸⁵ Note 22, *supra* at 6.

⁸⁶ See Note 17, *supra*.

necessarily consider resistance as a negative factor. We should not assume that there is necessarily something wrong or economically unsound in opposing technological innovation at times. It may be a very wise managerial act to cling to the old and to delay the new.

We must get away from the "Johnny Appleseed" approach to the innovation process as Schon⁸⁷ suggests and begin treating it as a very complex, sometimes manageable, process which acts in "an integrated way toward a common objective—which is technological change."⁸⁸

Secrist⁸⁹ sums it up this way: "Pick, plan, push and then concentrate, communicate, motivate."

I conclude with a four-liner I read some time ago.

ALONG THIS TREE
FROM ROOT TO CROWN
IDEAS FLOW UP
AND VETOES DOWN.

⁸⁷ See Note 50, *supra*.

⁸⁸ See Note 61, *supra*.

⁸⁹ Note 29, *supra* at 129.

Pressure in the Innovation Process: A Literature Review

JAMES V. O'BRYON

Summary

Invention, an idea or discovery, may be defined as an undirected science with no particular marketable end product in mind, but which leads to innovation, as a unit of technological change, often in an unpredictable process by which such invention is translated into the economy for use. Not to be confused with invention, innovation is fraught by numerous pressures being brought to bear upon it—some pushing it forward toward implementation, while many others by design or accident impede the process. Although no one formula can guarantee successful innovation, anticipating these pressures and understanding the roles that they play can enhance the probability of achieving success.

Words and Phrases

Innovation
Invention
Management
Project SAPPHO
Technology
Social
Entrepreneurial

Citations

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The Law of Intellectual Property in Outer Space

HARRY M. SARAGOVITZ*

The success encountered in the launching and orbiting of manned space vehicles, whereby humans are not only able to exist but perform various complicated functions for relatively long periods of time, leads directly to the next step: that of performing various research or manufacturing operations for extended periods of time in orbiting space vehicles.

It is contemplated that a space vehicle owned by the U.S. government and equipped for research or manufacturing operations be leased to private firms. The U.S. government would have the responsibility of placing the vehicle in orbit with the required equipment on board, and delivering the necessary personnel (government and private) from earth to the space vehicle and from the space vehicle back to earth. It is also contemplated that a space shuttle vehicle carrying a detachable laboratory or manufacturing facility will be built and launched. The ownership of the orbiting vehicle could be that of a foreign state, and research or manufac-

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turing operations performed by nationals of that state. The U.S. government would perform the function of transporting the vehicle from earth to outer space, detaching the orbiting section with its crew, and returning the shuttle section to earth. At the proper time the shuttle would return to outer space for rendezvous and attachment with the orbiting section for the return of the combined shuttle and orbiting vehicle to earth. Or, the orbiting vehicle may remain in outer space and the shuttle vehicle used only for the ferrying of personnel and materiel from earth to outer space and return.

It follows that in carrying out research or manufacture in outer space, as it does on earth, inventions will be conceived and reduced to practice. Also, inventions covered by national patents may be used in such manufacturing operations. This raises a number of interesting questions, the answer to which are not readily available under the present development of the law of outer space. Because of the proposed operations mentioned above, answers are required for the following specific questions:

- a. To whom does an invention belong that was conceived in outer space?
- b. What is the significance of actual reduction to practice of an invention in outer space?
- c. Is the unauthorized "making" or "using" in outer space of an invention covered by a national patent an infringement of that patent such that recourse may be had against the infringer?
- d. Is there any recourse if a national patent on a process is used in outer space and the resultant product (unpatented) brought back to earth and sold within the state which granted the process patent?
- e. What recourse, if any, is available if a space vehicle or any portion thereof is manufactured in one state and embodies an invention covered by a national patent of another state, and the space vehicle is transported to such other state and remains temporarily in that state until launched?
- f. In the case where the state of registry of an orbiting vehicle is different from that of the state of registry of the shuttle vehicle, what factors determine ownership of an invention or liability for use of a patented invention aboard the orbiting vehicle?

Under international law no state has a right to enact laws or

establish rights which affect the rights of another state or its citizens outside the boundaries of the enacting or granting state. There are certain situations where a state may exercise control and jurisdiction over persons, objects and areas beyond the territorial limits of the state. One example is the control and jurisdiction exercised to some extent by a state over the personnel and objects within its embassies located on foreign soil. Another example is the law governing ships upon the high seas, the “law of the flag,” under which the state of registry of the vessel retains control and jurisdiction of both the ship and its crew and passengers upon the high seas.

From the foregoing examples of the extension of a state’s control and jurisdiction of territory, personnel and objects beyond the recognized boundaries of that state, let us examine more thoroughly the law pertaining to ships upon the high seas and in ports and waters belonging to a foreign state. A flag state has certain obligations under the High Seas Convention—an obligation to *control* rather than to police. The Convention On The High Seas¹ defines “high seas” as “all parts of the sea that are not included in the territorial sea or in the internal waters of a state.” Article 5 of the Convention provides:

Each State shall fix the conditions for the grant of its nationality for ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. There must exist a genuine link between the State and the ship; in particular, the State must effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.

Thus the “law of the flag” requires that the state under whose flag the ship is registered must exercise its jurisdiction and control in the administrative, technical and social matters over ships flying its flag. Some states, including the U.S., make special provision in their laws exempting the use in their territorial waters of patented inventions on board a foreign flag ship which may otherwise be considered infringing use.² More will be said about this later. The U.S. Supreme Court in the *Mohawk* case³ stated, “The purpose of a register is to declare the nationality of a vessel engaged in trade with foreign nations, and to enable her to assert that nationality wherever found.” International law recognizes the exclusive juris-

¹ Geneva, 29 April 1958.

² 35 U.S.C. 272.

³ 70 U.S. 566, 571 (1865).

diction of the state whose flag is flown as regards everything which occurs on board a ship on the high seas.

The "law of the flag" as it pertains to ships was a prelude to the international law and agreements between states governing the control, jurisdiction, rights and obligations of states in the travel of aircraft across territorial boundaries within what is called "air space" in distinction from "space" or "outer space." The rules governing the rights and obligations of states are specific for the reason that within the accepted definition of "air space," most nations or states may exercise control over what occurs in that space by conventional aircraft. Each state's territorial boundaries extend from the earth upwards to the upper boundary of "air space." From the upper boundary of "air space" and beyond is considered "outer space" and the laws and rules governing conventional aircraft in "air space" do not apply. A universal rule of international law is that airspace over the high seas is free. No difference is seen between flight through the airspace above the high seas and flight above the airspace (outer space).

According to the Space Treaty,⁴ "outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." In view of this, states are barred from extending to outer space and celestial bodies attributes of territorial sovereignty, jurisdiction, control and authority. Further, states "shall conduct all the activities in outer space, including the moon and other celestial bodies, with due regard to the corresponding interests of all other States. . . ."⁵ An additional provision contained in the Space Treaty provides that "the exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind."⁶ Does this mean that inventions made in outer space or upon the moon, or other celestial bodies, shall be subject to compulsory licensing, or belong to no one, but be in the public domain?

The rules and law governing the legal status of manmade objects launched into and maintained in outer space raises questions of jurisdiction extending beyond state territory. Examples of national jurisdiction extending beyond the territorial limits of a state have

⁴ 18 U.S.T. 2413, Art. II.

⁵ 18 U.S.T. 2416, Art. IX.

⁶ 18 U.S.T. 2412 Art. I.

been set forth above, such as ships upon the high seas and conventional aircraft flying beyond the borders of the state of origin. In a special report to the National Aeronautics and Space Administration (NASA) in October, 1960, by Lipson & Katzenbach, the American Bar Association asserted that space stations were likened to seadromes.

The stations are not *res communis*. If the station is constructed by a government or on its behalf, the platform comes under the jurisdiction of that state, as an extension of its territorial sovereignty. If, however, the station is built by private persons independently of any country, then such stations, like seadromes are analogous to privately discovered space stations unoccupied by any country and treated as territory unclaimed by any state.

At the present time there exists no compulsory international registration for space objects under space law. The Space Treaty⁷ mentions only national registration. Article VIII of the Treaty provides that "a State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body." Article XI of the Space Treaty requires that Parties to the Treaty ". . . inform the Secretary-General of the United Nations as well as the public and the international scientific community, to the greatest extent feasible and practicable, of the nature, conduct, locations and results of such activities."⁸ This article provides that the Secretary-General be prepared to disseminate such information "immediately and effectively."

The act of registration entails important legal consequences, since such an act assumes both jurisdiction and control of not only the space object, but also the passengers therein while in outer space. Although this does not apply the mantle of "nationality" to the space object as is done in the case of ships upon the seas, the combination of *jurisdiction* and *control* is sufficient in the opinion of this writer to apply the "law of the flag" to space objects registered by a state.

If an orbiting space vehicle is registered by a state which owns and controls the vehicle, should such vehicle assume the same status as a ship upon the high seas and should the "law of the flag" govern? If so, then any invention made aboard an orbiting space vehicle would be subject to the laws of the state which registered

⁷ 18 U.S.T. 2416.

⁸ 18 U.S.T. 2418.

the space vehicle. This analogy is based upon the fact that outer space, like the high seas, belongs to no state, and vehicles operating either upon the high seas, or in outer space are subject to the laws of the state of registry. Under this theory any invention made aboard an orbiting space vehicle registered, launched and controlled by the U.S. government would require that ownership of the invention be determined under the laws of the U.S. If the inventor is a government employee, then Executive Order 10096 would govern (as amended Jan. 23, 1950). If the inventor is an employee of a U.S. private firm which is conducting research and/or manufacturing operations, then any invention made by such employee would be determined under the laws of the U.S. or any contract between the U.S. Government and the contractor.

Is an invention reduced to practice in an orbiting space vehicle registered, launched and controlled by the U.S., considered to be actually reduced to practice in the U.S.? This question will arise if a U.S. patent application is filed upon such invention and such application is placed into interference proceedings with another U.S. patent or patent application. The concept of actual reduction to practice has no meaning in those states whose patent laws are not concerned with determining the first inventor. If one accepts the theory that the orbiting space vehicle follows the "law of the flag" then the invention will be considered to have been actually reduced to practice in the U.S. In the case of *Gardiner v. Howe*⁹ the court stated: "The patent laws of the United States afford no protection to inventions beyond or outside of the jurisdiction of the United States; but this jurisdiction extends to the decks of American vessels on the high seas, as much as it does to all the territory of the country. . . ." Only one case to date concerning the actual reduction to practice in outer space has been decided by the U.S. Court of Customs and Patent Appeals. In the case of *Rosen et al. v. NASA*,¹⁰ the court held that the orbital maneuvers of a vehicle in space constituted an actual reduction to practice in the U.S. However, since the claimed invention was to a combination of elements, some of which were located within the territory of the U.S., this case offers no answer to the question as to whether an invention (all elements of which were located in and successfully operated in an orbiting space vehicle registered by the U.S.) is considered to be actually reduced to practice in the U.S. If the "law of the flag" is not followed, then the invention cannot be considered to have been

⁹ Fed. Cases 1157, 1158 (1865).

¹⁰ 152 U.S.P.Q. 757 (1967).

actually reduced to practice in the U.S., and such inventor would be under a disability in an interference insofar as U.S. law is concerned. In the case of *Williams v. NASA*¹¹ the Court of Customs and Patent Appeals held that an invention to be used in outer space was sufficiently tested on earth under simulated conditions to be acceptable in lieu of an actual reduction to practice in outer space.

Infringement of National Patents in Outer Space

The question whether a national patent may be infringed in outer space becomes a real one if manufacturing operations take place either in a manned space vehicle or upon the surface of a celestial body such as the moon. If it becomes desirable to perform manufacturing operations such as the making of pharmaceuticals or semiconductor materials in outer space, because of the peculiar ambient conditions existing in outer space, then this question should be settled early in the game.

It is a requirement of all national patent laws that a patent owner can exercise his right of exclusion granted to him only if infringement of that right takes place within the territorial limits of the state granting such right. As set forth earlier, there are certain special conditions under which some national patents extend beyond the territorial boundaries of the granting state. To repeat, these exceptions apply to the state's foreign embassies, ships and aircraft flying the flag of that state, and possibly military installations of that state in a foreign territory. The U.S. Patent Law¹² requires that before recourse may be obtained against an infringer, the unauthorized making, using or selling of the patented invention must take place within the United States. An exception to this is where the patented invention is being infringed in any vessel, aircraft or vehicle of any country which affords similar privileges to the U.S. This shall not constitute an infringement if a ship, aircraft or vehicle enters the U.S. temporarily or accidentally and the invention is used exclusively for the needs of the vessel, aircraft or vehicle and is not for any other purpose.¹³

If one uses the analogy of a ship upon the high seas where the "law of the flag" governs, then would it not be logical that a space vehicle which is orbiting in outer space and in which manufactur-

¹¹ 175 U.S.P.Q. 5, 11 (1972).

¹² 35 U.S.C. 271.

¹³ 35 U.S.C. 272.

ing operations are taking place which infringe a patent granted by the state of registry, that recourse would be available to the owner of such patent for the infringement? Let us assume that the manufacture in outer space uses a patented process and the finished product is to be sold in the U.S. after it is completed and returned to the territorial limits of the U.S. Even if the utilization of the patented process aboard the space vehicle were not considered to be an infringement of a U.S. patent, the owner of the U.S. patent would be able to take advantage of the Tariff Act of 1930¹⁴ against the importation into the U.S. for use or sale of a product made by a process covered by the claims of an unexpired valid U.S. patent. Although this recourse is not provided under the patent laws of the U.S., it is available as a protection for owners of a patent whose rights are being circumvented by the importation of a product manufactured outside the U.S., which if manufactured therein would infringe the U.S. patent.

The state of registry, rather than the launching state or the state which owns the space vehicle, has power to dictate the activities that take place *within* the vehicle in outer space. Normally, the state of registry and the launching state are the same, but this may not always be the case. A space vehicle may be registered by one state, and the vehicle may be launched into space by a rocket or shuttle of another which would be the launching state. Under the Space Treaty (Article VII),¹⁵ the state of registry has full control but it is the launching state that has liability for damage.

A "launching state" means a state which launches or procures launching of a space vehicle, or a state from whose territory or facility a space vehicle is launched. The "damage" referred to in Article VII is to persons and property caused by the launching and maneuvers of the space vehicle. The Convention on International Liability for Damage Caused by Space Objects,¹⁶ Article I, defines "damage" as "loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations. . . ." It is the opinion of this writer that intangible property, such as intellectual property, was not meant to be covered by these provisions. By operation of the space vehicle, the launching state has control over the physical maneuvers of the vehicle but not of the operations taking place *within* the vehicle in

¹⁴ 19 U.S.C. 1337a.

¹⁵ 18 U.S.T. 2415, Art. VII.

¹⁶ Entered into force for the U.S. on 9 October 1973, TIAS 7762 at 4.

the nature of research or manufacturing operations, which of course are controlled by the state which owns the space vehicle. The space vehicle owner should be liable for infringement of a national patent of that state if the ownership theory for registry has any validity.

Manfred Lachs in his treatise¹⁷ states, with regard to the legal status of space objects, that the old maritime rule of the "law of the flag" or the law of the air which relies on the notion of "nationality," does not apply. He states that reliance is placed on the institution of jurisdiction and is linked with two essential elements: registry and location of the space object within a defined environment. Lachs believes that the registry is one to be established and kept by the states themselves. The Secretary-General of the United Nations has been requested to establish and maintain a registry from information furnished by the states. A U.N. General Assembly resolution¹⁸ (1) calls upon states launching objects into orbit to furnish information promptly to the Committee on the Peaceful Uses of Outer Space, through the Secretary-General, for the registration of launchings; and (2) requests the Secretary-General to maintain a public registry of the information furnished in accordance with paragraph (1) above.

Thus jurisdiction rather than nationality is considered to be the governing factor by some writers in this field of law. Since the space vehicle, its crew and passengers are under the jurisdiction and control of the state under whose registry the space vehicle is made, it can be said that not only is the space vehicle and its crew subject to the laws of the state of registry, but that any passengers of whatever nationality are within the jurisdiction of the state of registry and subject to the laws of that state. Joint ownership by several states, or the launching and operation and maintenance of the space vehicle under joint effort of two or more states raises other problems.

There is no reason why there could not be joint registration or registration in the name of an international body or organization, even though this is not permitted under maritime or air practice. Article VI of the Space Treaty states that when activities are carried on in outer space by an international organization, responsibility shall be borne both by the international organization and the states forming such organization.

¹⁷ Lachs, *The Law of Outer Space*, Sijthoff Publishers, Leyden, 1972.

¹⁸ No. 1721 [XVI of 20 December 1961], Part B.

For the solution of some of these problems, an analogy may be made with the law of airspace. In the case of the SAS airline, which is a combine of states comprising Sweden, Denmark and Norway, each aircraft bearing the SAS insignia is registered under the flag of *one* of the member states. Thus in the case of a joint effort of two or more states in launching and maintaining in orbit a space vehicle, it would be advantageous that such vehicle be registered by only one of the states. In the case where a space shuttle is provided by one state for the purpose of carrying into space a separate vehicle such as a space laboratory or manufacturing facility, provided by another state, then the problem becomes more complicated. One solution would be for one state to register both portions so that in questions of liability only one state would be involved. Another solution would be to register the shuttle vehicle and the orbiting laboratory separately.

If it is assumed that ownership of an invention conceived or reduced to practice aboard a vehicle in outer space shall be determined under the laws of the state of registry of that vehicle, then one must take into consideration that provision of the Space Treaty which states: "The exploration and use of outer space . . . and celestial bodies . . . shall be carried out for the benefit and in the interests of all countries . . . and shall be the province of all mankind."¹⁹ If viewed broadly this could be construed as meaning that not only are new inventions and discoveries to be disseminated to the world, but that one state by virtue of its vast technological capability and economic position shall not obtain exclusive rights in inventions and discoveries made in outer space. One could take the position that such inventions, if covered by a patent granted by the state of registry, must be available for license to the other states on fair and reasonable terms. As a practical matter if the invention relates to a process which can be practiced only in outer space, then only a few states would be interested in obtaining a license. How would the use of such an invention be policed?

Although the Space Treaty was not intended to abolish the huge disparity in the technological and economic capabilities of the states, was its purpose to ensure that no state should claim or grant exclusive rights in intellectual property? To claim exclusivity in an invention made in outer space does not deprive anyone, or any state, of any rights that it enjoyed previously. If products are to be made in outer space, it is obvious that they will be made available to

¹⁹ 18 U.S.T. 2412, 2413, Art. I.

the world in the regular course of business. If such products can be made only in outer space then such process could be carried out by only a few states having the capability of providing a space vehicle for carrying out manufacturing operations. Is it the intent of the Treaty and would it be equitable, to require the state or its citizens to license an invention made at tremendous expense in outer space?

Conclusions

Although some of the leading writers in the field of space law believe that we should not be too hasty in looking for and using analogies with existing international law, there is one analogy that appears to be most useful for the solution of the problems stated in the beginning of this article—that of the “law of the flag.” This is so because the high seas, like outer space, belongs to no state, nor can any state lay claim to a portion of the high seas under existing international law. Under the Space Treaty, no state may lay claim to outer space or any celestial body. A ship upon the high seas, its crew and passengers are all subject to the laws of the state under which such vessel is registered. Is not a vehicle orbiting in space, its crew and passengers subject to the laws of the state of registry for all acts that occur *within* such vehicle while it is in outer space? This is not to be confused with liability for damage which occurs to persons and property by virtue of the maneuvers of the space vehicle which is under the control of the “launching state,” which may or may not be the same as the state of registry.

In view of the foregoing, this writer believes that the analogy of the “law of the flag” is a good one and utilizes it for a solution to the problems arising in the use of an orbiting vehicle in outer space for research or manufacturing operations. Thus the questions posed early in this article will be answered as follows:

1. The ownership of an invention that was made in a vehicle orbiting in outer space will be determined under the laws, rules and regulations of the state under which the orbiting vehicle is registered.
2. The actual reduction to practice of an invention in outer space within a vehicle under U.S. registration will be considered to have been actually reduced to practice in the United States.
3. If a national patent on a process is used in outer space without authorization in a space vehicle registered by the state which granted the patent, then recourse would be available against

the infringer under the laws of the state of registry. If the unauthorized use takes place in space within a vehicle registered by a state different from that which granted the patent, then no recourse is available unless a patent were also obtained in the other state of registry. This would be very difficult to police. Under the U.S. Tariff Law, a patent owner may block the importation of goods into this country which if made domestically would have infringed the U.S. patent.

4. The unauthorized making or using in outer space of an invention covered by a national patent is an infringement of that patent in accordance with the laws of the state of registry of the space vehicle in which the unauthorized making or using takes place. Thus, if the state which granted the patent is the same as the state of registry for the vehicle in which the unauthorized making or using takes place, then recourse would be possible under the laws of that state.

5. The temporary presence of a space vehicle within the territory of another state for the purpose of launching such vehicle into outer space should be treated the same as a ship of a foreign flag temporarily in the port of another state. Any infringing acts which are committed in the vehicle while it is temporarily in such other state awaiting launch, shall be treated according to the provisions of the laws of the launching state.

6. Since the launching state is liable for damage to life and property by a vehicle launched into outer space because the launching state has control on the earth, in air space, and in outer space of such vehicle, any acts which take place *within* such vehicle while it is in outer space are within the jurisdiction and control of the state of registry of such vehicle.

7. Under the aims of the Space Treaty whereby "the exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries . . ." ²⁰ such language could be construed to mean that all discoveries, inventions, technical data, know-how, and improvements are not only to be made available to all countries, but that all countries may use such intellectual property. Thus inventions, discoveries, technical data and know-how achieved at tremendous expense by one state, or a private firm of that state, would receive no reimbursement from other states using such intellectual property. A more reasonable approach would be to permit exclusive

²⁰ See Note 19, *supra*.

rights to such intellectual property for a limited period, after which it would be available for use by any other state or its citizens on a fair and reasonable basis. Since the laws of the U.S. do not provide for compulsory licensing of privately owned patents or technical data or know-how, this arrangement would have to be made by contract with any firm to which the U.S. leases a space vehicle for research or manufacturing operations.

The U.S. has entered into a number of bilateral agreements whereby each party agrees to exchange free licenses under any patents owned or controlled by each participating government to the agreement. Thus, with those fourteen nations with which the U.S. has a Patent Interchange Agreement there should be no problem in granting patent licenses under patents owned by each party to the agreement.

The Law of Intellectual Property in Outer Space

HARRY M. SARAGOVITZ

Summary

Success in launching and maintaining in orbit satellites of international origin raises questions of ownership and infringement of inventions used, conceived or reduced to practice in outer space. According to the Space Treaty, no state may lay claim to outer space or any celestial body. The Treaty can be construed to mean that all discoveries, inventions, know-how and improvements are not only to be made available to all countries, but that all countries may use such intellectual property. Drawing from existing international laws (*e.g.*, maritime law) it would appear that ownership of an invention lies in the state under which the orbiting vehicle is registered. If a national patent is used in outer space without authorization in a space vehicle registered by the state which granted the patent, then recourse would appear to be available against the infringer under the laws of the state of registry; recourse would not seem to be available, however, if infringement occurred within a space vehicle registered by a state different from that which granted the patent. Infringement committed in a space vehicle temporarily in another state while awaiting launch, should

be treated according to the provisions of the laws of the launching state.

Words and Phrases

Invention

Maritime Law

High Seas Convention

National Aeronautics and Space Administration

Outer Space

Infringement

Invention

Liability

Patent

Space Treaty

Patent

Interchange Agreement

Tariff Act

Citations

19 U.S.C. 1337a

35 U.S.C. 271

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COMMENTS

The following are two communications received by the PTC office in response to Nelson H. Shapiro's article, "Toward a Realistic Standard of Patentability" (see, 16 IDEA 3, no. 2, 1974). The first, by Charles M. Hogan (AVCO Corporation, Cincinnati, Ohio), is a critical comment on our existing patent laws; and the second, submitted by Thomas G. Field, Jr. of the Franklin Pierce Law Center faculty, is a poetic gesture to non-obviousness. (Ed.)

"Heartiest congratulations on your very outstanding article entitled "Toward a Realistic Standard of Patentability" [Vol. 16, No. 2]. [Mr. Shapiro] has done an excellent job in attacking the superman myth, *i.e.*, the fellow whose brain encompasses the content of more than 3,000,000 patents, etc. As I understand [the] article [Mr. Shapiro] would prefer to have the authorities look at the usual armament or stock of knowledge of John Q. Citizen in the art. [The] article assumes a library of knowledge and a fellow in the library who is armed with a certain background. [This] article is going to lead the way to some interesting guides to invention. In addition to the stock of knowledge and the ordinary worker in the field, with his standard stock of training, we also have the factors of orientation and bias and conditioned outlook. When I was at Purdue University we thought of hydraulic analogies. Now electrical engineers think in terms of wave transmission.

Judge Markey made a speech here in Cincinnati and he spoke of all the patents in the world hung up on the wall and he suggested that the examiners be interrogated as to why the applicant was charged with the selection of a particular three or four patents, for constructive notice purposes.

A consideration of [the Shapiro] article plus the directive concept argument plus the reversal of trend argument plus the solution to the long sought problem argument begins to add up to a promising philosophy.

I think the standard of invention to the Patent Office is much too low, but I also believe that this obviousness test only adds to the confusion.

CHARLES M. HOGAN,
General Patent Counsel
AVCO Corporation
Cincinnati, Ohio

Ovarian Epic: A Comment on 35 U.S.C. § 103

THOMAS G. FIELD, Jr.*

From the days of Ferdinand and Isabell'—
When Columbus, he did sail,
There comes to us of present day,
A most enlightening tale.

It's told that when Columbus
Made his trip across the sea,
That jealous courtiers 'round the throne
Did bleat discourteously.

On that gay and festive eve
When all sat down to dine,
They poked fun at that poor lad
In a manner not sublime.

* Mr. Field is an Associate Professor at the Franklin Pierce Law Center, Concord, N.H.

"Any fool could sail to far-off lands,
 The wind doth blow the boat,"
 Such feats of exploration
 "Can be done by any goat!"
 To this our hero gently said,
 "Thou dost surely pull my leg,"
 And asked a nearby maid go out
 And fetch him back an egg:

He put it on the table,
 Bowed low with courtly bend:
 "A cheer to any fellow
 Who can stand it up on end!"

"Of course, chaps, in so doing
 You must not break the yolk . . . ,
 But I needn't tell you *that*,
 You are such gentle folk."

They all did try, to no avail
 (Of course, alas, alack),
 And after several hundred eggs
 To our hero gave it back.

He tapped it on its air-pouch
 And stood it up on end;
 Then he rose and bowed to them
 With his most courtly bend.

Then he quietly told them
 (When they ceased their awful row):
 "Any fool can do this trick
 When another's showed him how."

. . . And now, dear lads and ladies
 If *you* should try this trick
 (One small word of caution),
 Take care which end you pick.

Notes on PTC Progress

National Inventors Council

The National Inventors Council (see IDEA, Vol. 1, no. 2, 1957) has relocated its offices at the Franklin Pierce Law Center. Dr. C. Stark Draper has been appointed chairman of the Council and Jacob Rabinow will continue to serve as its executive director.

Council members include:

C.E. Anagnostopoulos,
General Manager,
New Enterprise Division
Monsanto Company
St. Louis, Missouri

Atty. Lawrence B. Biebel
Biebel, French & Bugg
Dayton, Ohio

Prof. William Bollay
Santa Barbara, California

Myrin A. Coler, Director
Creative Science Program
New York University
New York, N.Y.

Harry S. Kantor
Silver Spring, Md.

Narinder S. Kapany, President
Kaptron, Inc.
Palo Alto, California

William McLean
San Diego, California

Jan A. Rajchman,
Staff Vice President
Information Sciences
RCA Laboratories
Princeton, N.J.

Dr. Samuel Ruben
Ruben Laboratories
New Rochelle, N.Y.

Robert F. Rushmer, Director
Center for Bioengineering
University of Washington
Seattle, Washington

Brooks Walker, President
Shasta Forests Company
San Francisco, California

Richard Walton
Boston, Massachusetts

John Stedman
University of Wisconsin
School of Law
Madison, Wisconsin

The NIC is now in operation at the Law Center with Charles Herron (Administrative Manager) servicing members of the inventive community.

A meeting in the fall of this year of a planning sub-committee will be held to recharter the Council's priorities and programs.

*Center of International Studies on
Industrial Property (Strasbourg).*

In May of this year, M. Francois Savignon, Director of the Institute of Industrial Property (Paris), visited the PTC and Law Center. He is resigning his position in the French Ministry of Industry and will assume at the same time the responsibilities as vice president of the administration advisory council for the Center of International Studies on Industrial Property (CEIPI) at the University of Strasbourg.

M. Savignon brought with him ideas for joint ventures between the CEIPI and PTC in conducting research with the European countries, especially EEC countries, and the United States. Much of the day's discussion centered around an exchange program of CEIPI and Law Center students and faculty. These cooperative efforts between CEIPI and the Law Center are now under development.

M. Savignon has agreed to keep IDEA and its readers abreast of the current state of French and EEC laws as they pertain to areas of patents, trade regulation, and the like. The first of his articles appears in the Comments section of this issue.

Research

Technology Transfer of Domestic Corporations. The Licensing Executives Society (U.S.A.) has awarded financial assistance to the PTC for study on the role of United States technology transfer, nationally and internationally, and its effects on the research and development performance of American corporations.

Questionnaires have been mailed to corporations across the country with follow-up personal interviews planned where feasible. While the sample size of personal interviews will be smaller in number than the mailed questionnaires, information gained from the interview will be of a broader scope and lead to concepts not normally available in written responses.

Problem areas under investigation center on bargaining positions in the national and international market, trends toward or away from importation and exportation of technologies and products, the role of the corporation as licensee and licensor, and comparative interpretations of domestic and foreign trade laws.

The responses will be used as a guide in determining research and development performances of domestic corporations in light

of the current state, incentives or deterrents, of the law and current economic developments.

*Legal Periodical Abstracting and
Computer Retrieval.*

Communications from law librarians and other IDEA readers concerning the proposed abstracting legal periodicals (see IDEA, Vol. 17, no. 1, 1975) have been unusually rewarding. It appears to be a consensus of opinion that a substitute for present methods of information retrieval is greatly needed which could reduce search time while simultaneously enhancing the search quality.

As a result of the many positive letters received, the PTC plans to call a conference on this subject for the early part of 1976. For complete development of abstracting and computer storage-retrieval, input is required, however, from more than just the library community so that representation from the legal, publishing, and computer technology communities can be solicited, as well. Problems expected to be encountered at the conference include a common method of abstracting adaptable to all legal periodicals and the needs of different types of legal researchers, the technology suitable for accessing the same, and reproduction implications, such as copyright considerations.

Comments are welcomed by the PTC which will assist us in the augmentation not only of this program, but also our other programs for the continued interfacing of law and science.

The Manufacturing Clause: A History and Critique of a Sophism in the Copyright Act

ROBERT N. HERMAN

Summary

The manufacturing clause (§ 16) of the Copyright Act has endured almost three quarters of a century of amendments, dilution, and attempts at repeal. Its effect has turned from one of aiding an infant printing industry to one of penalizing and restricting American authors. Instead of guaranteeing the exclusive possession of intellectual productions to their creators, the Copyright Act, through its manufacturing clause, has become a protective measure for an industry that has far outgrown its need.

Words and Phrases

Berne Convention

Copyright Act

Ad Interim Provision (§ 22)

Manufacturing Clause (§ 16)

Generally

History

American Copyright Association

American Copyright League

Chace Bill

Clay, H.

Simond Bill

Affidavit Provision (§ 17)

Copyright Revision Bill (1975—S. 23, H.R. 2223)

International Copyright Union

Universal Copyright Convention

Citations

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The Manufacturing Clause: A History and Critique of a Sophism in the Copyright Act

ROBERT N. HERMAN*

Introduction

Located in Section 16 of the Copyright Act are certain restrictions that regulate the place where United States' authors can manufacture their works. These restrictions must be complied with before U.S. copyright protection for the exclusive reproduction and distribution of a work is granted to its author.

The manufacturing clause, as Section 16 is commonly called, has endured through almost three quarters of a century of amendments, dilution, and attempts at repeal. Its effect has turned from one of aiding an infant printing industry to one of penalizing and restricting American authors. Instead of guaranteeing the exclusive possession of intellectual productions to their creators, the Copyright Act, through its manufacturing clause, has become a protective measure for an industry that has far outgrown its need.

This paper is an examination of the manufacturing clause, its history of dramatic changes, and the constant attempts of those favoring repeal. Starting with a brief look at the present manufac-

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turing provision, emphasis is given to legislative history, case interpretation, and attempt at international agreement, culminating in the proposed Copyright Revision Bill now pending in Congress.

It is hoped that a view of the manufacturing clause, in light of its effect on the literary public, will heighten the intent of those persons who agree that an immediate amelioration of the effects of the clause is the least that should be demanded in reaction to a sophism in our copyright law.

The Present Manufacturing Clause Requirements

The basic requirements of the manufacturing clause are set out in Section 16 of the present Copyright Act.¹ This section requires that all books, periodicals, and illustrations within a book consisting of printed text and illustrations be typeset, printed and bound within the United States.

The printing requirements extend to type which is set by hand, by machine, or by plates which are required to have been made within the United States, and to printed copy produced by lithography or photoengraving.

Section 16 also sets out certain exceptions to the manufacturing requirements. They are:

1. uncopyrighted works;
2. works in a foreign language other than English;
3. illustrations, lithographs or photoengravings of a scientific work, or that reproduce a work of art, that represent subjects located in a foreign country;
4. works in braille for the blind;
5. works printed or produced in the United States.

An exception is also made for fifteen hundred copies of a book or periodical printed in English in a foreign country and imported within five years after its first publication. To qualify under this exception, the work must contain notice of copyright in accordance with Sections 10, 19 and 20 of this title, and ad interim provisions must be fulfilled according to Section 22 prior to importation into the United States.

The Affidavit Provisions

Section 17² of the Act requires that books (but not periodicals) deposited with the Copyright Office must be accompanied by an

¹ 17 U.S.C. § 16 (1964).

² 17 U.S.C. § 17 (1964).

affidavit confirming that all the manufacturing clause requirements have been observed.

Any person knowingly making a false affidavit under Section 18³ is subject to a fine of up to \$1,000 and forfeiture of copyright protection.

The Ad Interim Provisions

The requirements that must be fulfilled before the ad interim exception in Section 16 is allowed for books or periodicals first published abroad in the English language are set out in Section 22 of the Act.⁴ One complete copy of the foreign edition must be deposited with the Copyright Office with a request for reservation of copyright. This must be accomplished no later than six months after the initial publication abroad. The protection lasts for five years from that publication.

If within five years of the first publication abroad an edition of the work is published in the United States according to the manufacturing clause requirements, Section 23⁵ extends the protection for the work for the full twenty-eight year period starting from the date of that publication.

Regulations on the importation of foreign books are set out in Sections 107, 108 and 109.⁶

Universal Copyright Convention (U.C.C.) Exemption

Subsection (c) of Section 9 determines the application of all the manufacturing requirements in the Act.⁷ It provides exemptions for certain works from the provisions of Sections 14, 16, 17, 18 and the manufacturing requirement related to import restrictions of Section 107. These works must be authored by subjects or citizens of, or first published in, a member country of the Universal Copyright Convention, signed in Geneva on September 6, 1952. Authors who are citizens of or domiciled in the United States are not included within this exemption regardless of the place of first publication of the work. Also, works in English which were first published in the United States do not qualify, whether of foreign authorship or not.

³ 17 U.S.C. § 18 (1964).

⁴ 17 U.S.C. § 22 (1964).

⁵ 17 U.S.C. § 23 (1964).

⁶ 17 U.S.C. §§ 107, 108, 109 (1964).

⁷ 17 U.S.C. § 9(c) (1964), amending 17 U.S.C. § 9 (1947), by the Act of August 31, 1954 (68 Stat. 1030).

*History of the Manufacturing Clause**Early Copyright Legislation: The 1891 Copyright Act*

Until America developed its own literati, it freely and openly pirated the works of many of England's well-known authors. This created a body of writing with which the young printing industry in the United States could start to build.

It was thought at that time that if the United States recognized any copyrights of foreign authors, the growing, but vulnerable, book manufacturing industry would suffer. It would not be permitted to copy and print any of the world's great literary pieces without the approval of the copyright holder. Such holders of copyright would naturally give this right as a first choice to printers in their own countries.

Connecticut, in 1783, passed the first law regulating the granting of copyright protection.⁸ Before the passage of any federal copyright law, twelve out of thirteen states had passed legislation of their own.⁹

In 1790, the federal government passed its first law on the topic of copyright protection.¹⁰ This law did not have a provision requiring that works be published in the United States in order to secure copyright protection. The law gave copyright protection only to American citizens by excluding all aliens from American protection and by fostering piracy of the works of foreign authors. Thus, this legislation still did not afford any protection to foreign authors but did protect American authors, without any condition of manufacture.

In 1837, after constant pressure from British authors, Henry Clay submitted a bill¹¹ to a Senate Committee. Clay tried to persuade Congress that copyright protection in the United States should not be limited solely to its citizens. He expressed his desire to have a law that would "promote the progress of science and the useful arts" between the United States and other countries, as well as within the United States itself.¹²

In an attempt to pacify the interests of the printing trades, Clay's

⁸ Stat. of Conn. 133 (1786 ed.).

⁹ Paul, "A Reappraisal of the Manufacturing Clause of the Copyright Act in Light of Its History and the Universal Copyright Convention," 13 *Miami L. Rev.* 304 (1959).

¹⁰ Act of May 31, 1790, 1 Stat. 124 (1848).

¹¹ S. 223, 24th Cong., 2d Sess. (1837).

¹² S. Rep. No. 134, 24th Cong., 2d Sess. (1837).

bill contained provisions which required simultaneous publication in the United States and in the foreign country of origin as a prerequisite to copyright protection.¹³ This provision was not enough to satisfy the printing industry in the United States,¹⁴ and their pressure, along with the dominant theme of protectivism prevalent at the time, defeated Clay's proposal; the rights of foreign authors remained non-existent in the United States.

Still the desire to secure protection for foreign works in the United States persisted, and many bills were presented to Congress, although none ever passed. This led to the formation of the American Copyright Association in 1868 and the foundation of the American Copyright League in 1883.¹⁵ Even so, the feeling that all products that reach the hands of Americans should be of American manufacture, and pressure by the printing industry to aid it in continuing to reap the benefits of the piracy of foreign books, prevented any reform until 1891.

In 1886, two bills dealing with international copyright were introduced into the Senate. Only one, the Chace Bill,¹⁶ contained a provision requiring American manufacture of books. This bill still had its problems in that it allowed the importation of plates made up in foreign countries and this was strenuously objected to by the American typesetting interests.¹⁷

Senator Chace tried a second time in 1888 with a new bill that incorporated a requirement for American typesetting as well as American manufacture.¹⁸ These additions considerably eased the political pressures that were opposing the passage of all attempts at international copyright protection in the United States.

On March 3, 1891, the Chace Bill was finally passed¹⁹ under the name of the Simond Bill²⁰ after the original bill had been allowed to die in the 50th Congress. The Act applied equally to all works of foreign origin, whether in English or in a foreign language, and importation of printed foreign books was prohibited.²¹ Due to the strong opposition all during the inception stage of the law, a strict

¹³ *Id.*

¹⁴ Putnam, *The Question of Copyright*, 176 (1891); Solberg, "Copyright Law Reform," 35 *Yale L. J.* 48 (1925).

¹⁵ Solberg, *Copyright in Congress 1789-1904* (Copyright Office Bull. No. 8, 1905).

¹⁶ S. 1178, 49th Cong., 1st Sess. (1886).

¹⁷ Putnam, *supra* note 14.

¹⁸ S. 554, 50th Cong., 1st Sess. (1888).

¹⁹ 26 Stat. 1106-10 (1891).

²⁰ H.R. 10881, 51st Cong., 1st Sess. (1890).

²¹ 26 Stat. 1107 (1891).

interpretation was given to the law, and all works printed prior to the passage of the act were not given retroactive protection.²²

The Berne Convention

Although this new concession by the American book manufacturing industry gave rights to foreign authors whose works had been previously unprotected in this country, criticism from foreign countries was still heard. In 1886, the United States found itself unable to join the Berne Convention for the Protection of Literary and Artistic Works,²³ which was dedicated to the principle of automatic copyright without formalities.

Briefly, the Berne Convention, of which the United States, to this date, has never been a member, began as an unofficial body that met first at Brussels in 1859 and then periodically thereafter.²⁴ Advocating international copyright, the group strove to create universal cooperation in the field.

Formal intergovernmental conferences were held in Berne in 1884, 1885 and 1886 where nations were invited to discuss and agree on a method of obtaining international protection. This resulted in the creation of the International Copyright Union.²⁵

The Berne Convention consisted of a multilateral treaty that granted, without prerequisite formalities, automatic protection of all works of the member nations from the time of publication.

The Convention was signed in 1886 by ten nations out of the twelve attending. The United States (along with Russia) refused to sign the treaty contending that the rules of the Convention were dramatically opposed to the regulations of its Copyright Act. The main stumbling block was the manufacturing clause, which completely circumvented the ideals of the Convention.

The 1909 Copyright Act

In 1909, Congress recodified the 1891 Copyright Act which was the law of the land²⁶ up to the United States' entrance into the Universal Copyright Convention.

At that time, several important changes were made in the law

²² Paul, *supra* note 9 at 307.

²³ Berne Convention, signed Sept. 9, 1886.

²⁴ Henn, "The Quest for International Copyright Protection," 39 Cornell L. Q. 43 (1943); Paul, *supra* note 9 at 311.

²⁵ Ladas, *The International Copyright Protection of Literary and Artistic Property*, 71-86 (1938); Paul, *id.*

²⁶ 35 Stat. L. 1075 (1909).

affecting copyright. One of the changes was of no direct applicability to the manufacturing clause but did affect copyrights in general: an increase in the renewal term of protection to twenty-eight years. Another major change was the exemption of manufacturing clause requirements of books written in a foreign language. This exclusion applied to "the original text of a book of foreign origin."²⁷ In giving in to this change, the book industry was going on the assumption that those books in foreign languages that proved popular in this country would eventually be translated into English and then become subject to the manufacturing clause.²⁸

The ad interim protection of books of foreign origin, enacted in 1905,²⁹ was continued in the 1909 Act but was extended to works in English of foreign authors rather than just to works of foreign authors in a foreign language. The ad interim clause, as introduced in 1905, required the author to deposit a copy of his work with the Copyright Office within thirty days after he first published it abroad. It then gave him one year to comply with all the requirements of the manufacturing clause and the Copyright Act, in general, in order to receive the normal copyright protection period.³⁰ However, in 1909, because of the limitation of the ad interim clause to exclude from its requirements all works not written in the English language, the ad interim protection, after filing with the Copyright Office, only extended for a period of thirty days.

A provision requiring an affidavit of manufacture in the United States was enacted in 1904³¹ and was incorporated, intact, into the 1909 revision.³² Another provision that placed a further burden on authors was the requirement that binding, as well as printing, be done in the United States.³³

The next thirty years were to see successive attempts to legislate provisions that would exempt authors from the manufacturing requirements,³⁴ permit United States entry into the International Copyright Union,³⁵ and to permit adherence to the Rome Conven-

²⁷ 17 U.S.C.A. § 16 (1964).

²⁸ Howell, *The Copyright Law*, 91 (3d ed., 1952).

²⁹ 33 Stat. 1000 (1905).

³⁰ *Id.*

³¹ H.R. Rep. No. 13355, 58th Cong., 2d Sess. (1904).

³² 35 Stat. 1079 (1909).

³³ 35 Stat. 1078 (1908).

³⁴ H.R. 8177, H.R. 9137, 68th Cong., 1st Sess. (1924), introduced by Rep. Dallinger. H.R. 11258, 68th Cong., 2d Sess. (1925). H.R. 5841, 69th Cong., 1st Sess. (1925), introduced by Rep. Perkins.

³⁵ H.R. 6249, H.R. 10353, H.R. 10434, 69th Cong., 1st Sess. (1925), introduced by Rep. Vestal.

tion.³⁶ Their attempts all met with failure and no significant modification of the manufacturing clause was adopted.

Case Interpretation Up to 1949

A look at case law before the 1949 amendments to the 1909 Copyright Act offers very little insight into the operation of the manufacturing clause up to that point. This is due mainly to the lack of litigation on the subject.

Several decisions were handed down interpreting the 1891 Act. The passage of the Act of 1909 did not change the effectiveness of the results of these cases, and they retained their application.

*Oliver Ditson Co. v. Littleton*³⁷ dealt with the provision in Section 3 of the Copyright Act of March 3, 1891, which provided that "in the case of a book, photograph, chromo, or lithograph," the two copies required to be delivered to the Library of Congress shall be manufactured in this country. It was held that this requirement did not include mere musical compositions though published in book form or made by a lithographic process.

Another case handed down in the same year focused on the nature of the pleadings required in an infringement case. The decision in the case of *Osgood v. A. S. Aloe Instrument Co.*³⁸ stated that it was not required of the complainant in the first instance to allege or prove that the copyrighted books in question were printed from type set within the limits of the United States, but that this was instead the subject matter of an affirmative defense. The opinion also stated that the 1891 Copyright Act of Congress did not make the doing of this work within the limits of the United States a condition precedent to the securing of a valid copyright, but merely prohibited its importation during the existence of such copyright.

An early Attorney General Opinion³⁹ dealt with the application of the 1909 Act to the question of the importation of works not in compliance with the manufacturing clause. It held, due to the striking changes in phraseology compared with the 1891 Act dealing with this question, that books copyrighted prior to 1909 and subsequently printed abroad would be denied importation into the

³⁶ S. 2465, 74th Cong., 1st Sess. (1935), introduced by Sen. Duffy. H.R. 11420, 74th Cong., 2d Sess. (1936), introduced by Rep. Serovich.

³⁷ 67 Fed. Rep. 905 (1st Cir. 1895).

³⁸ 69 Fed. Rep. 291 (E.D. Mo. 1895).

³⁹ 28 Opinions Att. Gen. 91.

United States. This overruled an earlier Attorney General Opinion⁴⁰ on the 1891 Act that would have applied the manufacturing clause provisions prospectively and would not have affected works which were copyrighted prior to its enactment.

The case of *Bentley v. Tibbals*⁴¹ involved an author of a book on telegraph cyphers that was printed in the United States with type set in Great Britain and shipped into the United States. The case stands for several propositions in the copyright law, but insofar as the manufacturing clause is concerned, it supports the requirement of typesetting in the United States in order to receive the benefits of protection.

In 1916, the case of *Meccano Limited v. Wagner*⁴² came up to the district court on a charge of infringement of an educational toy and its printed manual. The copyright holder of the manual was an Englishman who supposedly complied with the manufacturing clause in the printing of the manual for the toy. The defendant claimed that since Frank Hornby, the copyright holder, did not see the type set for the manual, or see it bound, his affidavit of satisfaction of the manufacturing clause requirements⁴³ was not valid, and he did not have copyright protection. The court ruled that the affidavit of the plaintiff, which stated a printer had been employed and furnished with a copy of the manual to print by, was good enough to establish prima facie evidence of compliance with the provisions of the manufacturing clause. This set a guideline for what was to be required in an affidavit of compliance in future cases.

Finally, the question of whether illustration in catalogue form must comply with the manufacturing clause was settled in the case of *Basevi v. Edward O'Toole Company, Inc.*⁴⁴ Here the court came down on the side of the copyright holder who had imported a catalogue containing illustrations of paintings located in a foreign country. The court said it was not necessary to have the printing of the catalogue done in the United States as a prerequisite to securing copyright of the catalogue, even though there was some printing in the catalogue identifying and describing the illustrations.

These cases are important as a progression of application of the law rather than legislative history per se.

⁴⁰ 23 Opinions Att. Gen. 373.

⁴¹ 223 Fed. Rep. 247 (2d Cir. 1915).

⁴² 234 Fed. Rep. 912 (S.D. Ohio 1916).

⁴³ 17 U.S.C. § 18 (1964).

⁴⁴ 40 U.S.P.Q. 334, 26 F. Supp. 41 (S.D.N.Y. 1939).

Early Criticism of the Manufacturing Clause Provisions

At this point in my survey of the manufacturing clause, it would be appropriate to take one step back and view the clause in terms of its impact on, and the reactions of, those affected up to this point.

Even as far back as the Act of 1891, respected professionals in the field of copyright law expressed grave doubts and objections about the manufacturing clause. Mr. Thorvald Solberg, Register of Copyrights from 1897 to 1930, in 1926⁴⁵ commented on the findings of a Senate report submitted in 1901 on the effects of the manufacturing clause. His comments show a building reaction to the manufacturing clause as a protectionist device in the Copyright Act. He states that major publishers were against a manufacturing requirement as the method for insuring the stability of the book manufacturing industry in the United States. Little, Brown & Co. maintained that copyright should be extended to citizens of foreign countries without any requirements as a matter of intellectual right. D. C. Heath & Co. expressed the compelling argument that international copyright and tariffs should not be intermingled and that they were mutually exclusive. This view was shared by the American Book Company who maintained that there should be "natural" laws of trade. Other publishers felt that the clause was too great a hardship on publishers and authors and that it actually deterred foreign authors from attempting to secure copyright in the United States.

In this same publication, Solberg discussed an article published in 1901 in *The Nation*. The magazine listed ten separate reasons why it felt the manufacturing clause should be repealed because of its stifling effects on international copyright. As will later be illustrated, these reasons bear a striking similarity to many of the present arguments for repeal. A history of almost three-quarters of a century has added to the weight of the following arguments:

1. American printers' fear of foreign competition was baseless.
2. Electroplating here was better and cheaper than abroad.
3. Existing import duties made foreign book importation on a large scale impractical.
4. Tariff laws gave ample protection to printers.
5. "Special tastes of American book buyers can be trusted to compel manufacturing here to meet requirements."

⁴⁵ Solberg, "The International Copyright Union," 36 Yale L.J. 68 (1926).

6. "That it involves a wrong principle to compel the producer to do his manufacturing with one set of printers rather than another."
7. The clause does not have the practical effect of forcing manufacture here, but rather forces foreign books to do without American copyright protection.
8. It was unjust to book buyers to force them to take American editions.
9. The clause resulted in a tax on the public.
10. There was unfair treatment of English authors.⁴⁶

Dissatisfaction with the manufacturing clause in the Copyright Act continued and grew from the time of its inception. It became the subject of much talk and debate both within the literary profession and in the Committees of Congress. In 1949, just before the amendments to the clause, statements in the Senate show that relaxation of the clause was favored by many of the publishing houses and printing unions, such as the Allied Printing Trades Council that contained representatives from all the printing unions.⁴⁷

The Senate was informed of the great growth in the industry where in 1937 a \$2,000,000,000 figure was given as a total value of its products and receipts. Many commentators thought that this figure would have been higher if the manufacturing clause had not deterred foreign authors from publishing here because of their doubts as to the popularity of their work in this country and their feeling that the ad interim provision did not adequately allow a testing of the market. These men felt that the needs of the industry would be better served by a tariff, rather than a provision that had as its harsh result a complete denial of copyright protection.⁴⁸

Foreign countries continuously expressed their discontent with the treatment of their citizens' works in the United States. The United States, while not a member of any international copyright agreement, still reaped the benefits of the agreements of other countries. Thus, even though not a member of the Berne Convention, the United States was able to secure protections of the convention without giving reciprocal rights itself. All an American publisher had to do was to publish his work in this country and a Berne Convention country simultaneously.⁴⁹ The work would then

⁴⁶ Solberg, *id.*; Paul, *supra* note 9.

⁴⁷ S. Rep. No. 375, 81st Cong., 1st Sess. (1949).

⁴⁸ S. Doc. No. 99, 76th Cong., 1st Sess. (1939).

⁴⁹ The Berne Convention, Brussels Revision, Art. 4 and Art. IV(3).

be protected in all the Convention countries because the Berne country would be considered the country of origin. This is why many of the publishers set up publishing houses in Canada and England, as well as in the United States.

Canadian Reprisals

This type of inequity among the countries of the world in their copyright protection brought forth a very real threat of reprisal by those countries most affected, such as Canada and Great Britain.

In 1924, Canada did, in fact, set up a retaliatory measure aimed at the manufacturing clause of the United States Copyright Act. They passed a law that required citizens holding copyrights in Canada to publish their books in Canada and supply any reasonable demand for them through Canadian publication. Theoretically, this required an American author to secure the printing of at least one thousand copies of the book within two months and two weeks from the mailing of the notice, or the Minister of Trade and Commerce could grant a license for any Canadian firm to print and sell the work regardless of the American copyright. Since the members of the International Copyright Union were exempt, this burden fell directly on the American interests in Canada.⁵⁰ The Canadians, it seems, were tired of the United States demanding reciprocal rights and not giving them in return. (The United States' response to the Canadian problem is given further comment in a later portion of this treatise.)

Many writers of the time felt that the buying habits of the public and the printing customs of the countries were set in such a way that repeal of the manufacturing clause would not affect the American printing industry. They maintained that the custom of American publishing was to put out large, moderately priced editions of books designed to reach as large a reading public as possible, whereas the countries of main concern to the United States printing interests, for example England, produced smaller, more expensive editions aimed at their selective book-buying public. Since middle class America was the main purchaser of books here, it was felt that even if the manufacturing clause were repealed, English authors would still manufacture in the United States because of its more expansive marketing techniques. Moreover, English writers felt it was unreasonable to force com-

⁵⁰ C. 32, R.S.C. 1927 as amended.

pletely new and expensive manufacturing of technical or historical works when the limited publication of the work in England would satisfy the limited demand for it in the United States.⁵¹

At this point, internal and external pressures were building up and threats of reprisals against the United States, similar to Canada's, began to concern the American government. They started to look for ways to alleviate some of the discontent caused by the manufacturing clause. The hearings on H.R. 2285 reflect this concern of possible retaliation and show the State Department's belief that amendments to ease the harshness of the manufacturing clause could act to hold the tide that had built up to overflow proportions at that point.⁵²

The 1949 Amendments

In 1949, the United States took affirmative steps to alleviate the problem by amending the manufacturing clause, but pressures from labor and industry prevented the ultimate in desirability—the complete repeal of the clause.

Instead of complete repeal, the ad interim registration period was extended from sixty days to six months after the date of first publication abroad. And now permission was given to import fifteen hundred copies of a book in the English language during the five years after the first publication abroad.

The fifteen hundred number was reached after trying to find a compromise figure where foreign authors would be allowed to adequately test the American book market and where the book manufacturers' interests here would not be faced with a loss of volume.

The hearings before the Committee on the Judiciary concluded that a fifteen hundred number would not result in a loss to our market since publication and sale of fewer than three thousand copies in this country by an American publisher would result in a loss.⁵³

It is quite ironic that after all this deliberation and careful legislation under the fist of powerful labor pressure, a long awaited and unprecedented breakthrough in copyright protection lay right around the corner.

⁵¹ Appleman, "Compromise in Copyright," 19 *Boston Univ. L. Rev.* 619 (1939).

⁵² S. Rep. No. 375, 81st Cong. 1st Sess. (1949).

⁵³ H.R. Rep. No. 2285, 81st Cong., 1st Sess. (1949).

The Universal Copyright Convention

Realizing that the principles of the Berne Convention were too dramatically opposed to the present American copyright law, the international copyright community, under the sponsorship of UNESCO, arrived at a compromise between the American objections to the Berne Convention and the Convention's basic principles. On September 6, 1951, in Geneva, Switzerland, the United States, along with thirty-five other nations, formed the Universal Copyright Convention (U.C.C.).

The Universal Copyright Convention provided that each Convention country would grant protection to the works of citizens of fellow Convention countries as they would protect the works of their own citizens, with the exceptions of minimum term of protection, minimum translation rights and maximum standards of formalities.⁵⁴

As expected, the printing, binding and typographical unions came forth with vehement opposition to a liberalization of the manufacturing requirement in relation to international copyright. They again expressed their fears about the opportunity of foreign authors to flood the American market with cheaper foreign-produced books and how this foreign competition would have a disastrous effect on our economy and labor force. In addition they expressed their concern on opening up American copyright protection to communist nations.⁵⁵

These charges were answered by those who felt that an industry which in 1953 had grown to show a profit of twenty-four million dollars in book exports alone could survive the challenges of international copyright cooperation.⁵⁶

It would belabor the obvious to spend too much time showing how the international threat of reprisal influenced the passage of our U.C.C. participation. These considerations were well fixed in the minds of those who favored our admission into the U.C.C. However, a greater ideal should have overshadowed the entire discussion of international copyright protection. This ideal is the basic principle and reason for copyright itself. This broad principle

⁵⁴ U.C.C. Articles II, III(1), IV, V; Duben, "The Universal Copyright Convention," 42 Calif. L. Rev. 89 (1954).

⁵⁵ *Hearings before a Subcommittee of the Committee on Foreign Relations and a Subcommittee of the Committee on the Judiciary on Executive M. and S. Rep. No. 2559*, 83d Cong., 2d Sess. (1954).

⁵⁶ *Id.*

is the international free exchange in the world of thought and international protection of the fruits of the labors of the mind.

Effect of the U.C.C. on the Manufacturing Clause

Public Law 743, passed on August 31, 1954,⁵⁷ made the required changes in the international aspect of our copyright law; the President signed the treaty on November 5, 1954.

The most dramatic change in our Copyright Act in compliance with the U.C.C. provisions was the addition of Subsection (c) to Section 9 of the Act. Subsection (c) exempted from the manufacturing requirements all works of U.C.C. countries first published abroad.⁵⁸ This concession, of immense magnitude, was made for a return concession that the United States be allowed to retain its manufacturing clause provisions with respect to works published here in English by American authors, foreign authors domiciled here, and of course with respect to countries who are not members of the U.C.C.⁵⁹

At the same time that the United States was joining the U.C.C., it was taking advantage of the mood for change and amended Section 16 so as to give ad interim protection to American authors and alien authors domiciled here. Prior to this time, these two groups had no relief from the manufacturing clause at all.⁶⁰

The Manufacturing Clause After Change

At this point, it is interesting to take a look at just what effect the manufacturing clause retained after its many transformations. It is now applicable to all works published in the English language by an American author, a foreign author domiciled in the United States, and those countries who are not members of the U.C.C. Even authors of non-member nations can find some relief in the ad interim exception to the manufacturing provisions that allows a 1500 copy, five-year exception. This irony is unexplainable when one realizes that the historical reasons for the very existence of the manufacturing clause was to prevent the flood of foreign manufactured works on the American market by the very countries who now have free access to our buying public through the U.C.C. The

⁵⁷ 68 Stat. 1032 (1954).

⁵⁸ 17 U.S.C. § 9(c) (1964), amending 17 U.S.C. § 9 (1947), by the Act of August 31, 1954 (68 Stat. 1030).

⁵⁹ Duben, *supra* note 50.

⁶⁰ 17 U.S.C.A. § 16 (1964), as amended, 68 Stat. 1032 (1954).

effect of the clause has turned around completely until it now has become a burden to all American authors who for one reason or another will have their works published in a foreign country.

If this erosion and diminution cannot be said to justify repeal of the manufacturing clause, let us now take a look at an interesting practice that has all but dealt the death blow to the clause.

The Repro-Proof Loophole

One of the major methods of printing books in this country is by lithography. In this process, an offset lithographed work or book is printed from a flat surface so treated that ink will not adhere to parts of the surface. These flat surfaces are almost always made from film, which in turn is made from photographing the material to be printed. A copy of the work to be lithographed is printed in a foreign country from type set there and is then shipped into the United States. These copies are called reproduction proofs, but are better known as "repro-proofs." This one clean set of proof sheets is photographed in the United States and the photographs are made into plates. The plates then are printed and bound within this country thereby fulfilling the requirements of the manufacturing clause provisions.

This process has proven to be of great popularity and its use has increased greatly. The language of the statute on this point is ambiguous. Not to belabor this one point, it should be sufficient to say the process has been supported somewhat by the Copyright Office, resulting in a great volume of works protected by American copyright.

It is evident that this process has directly undercut one of the main reasons for the inclusion of the manufacturing clause in the 1891 Chace Act. This was to appease the typographical unions who feared that international copyright would result in a bite out of their pocketbooks.⁶¹ The typographers found themselves completely circumvented by the repro-proof loophole.

The Candy Case

If the basic burdens of the manufacturing clause provisions were not enough to frustrate the founding fathers' intention of "promoting the Progress of Science and the Useful Arts,"⁶² subsequent

⁶¹ Bowker, *Copyright, Its History and Its Law*, 35 (1912).

⁶² U.S. Const., Art. I, § 8, cl. 8.

application of the provisions by the courts proved to be equally, if not more, punishing.

One of the more controversial of the recent cases was *Hoffenberg v. Kaminstein*⁶³ concerning the well-known book *Candy*. This book was first published in the English language in France in 1958. Each of the published copies contained the correct copyright notice but no further steps at formally registering with the American Copyright Office were taken.⁶⁴

At that time there was a small, strange publishing world in Paris where works such as Henry Miller's *Tropic*, J. P. Donleavy's *The Ginger Man*, and Southern and Hoffenberg's *Candy* were issued. Other works circulating in England were of the same nature and were affected in the same manner. To name a few, there were *Lady Chatterley's Lover*, *Fanny Hill*, and Frank Harris' *My Life and Loves*.⁶⁵

Mr. Charles Rembar gives us a few insights into why United States publication was not attempted at the time. He explains that the laws on obscenity at the time forbade their importation into the United States and the publishers felt that the Post Office Department and Customs would not have allowed their circulation. Even if the works had been allowed to enter the United States, the authors were afraid that the copyright protection of the law would not apply to their works because of the obscene label placed on them by American morality standards.⁶⁶

In 1964, *Candy* was published in the United States by an American firm, G. P. Putnam's Sons, under a contract with the authors. The Copyright Office registered a claim to copyright in this revised version on the basis of *editorial revisions*, and not on the work as a whole.⁶⁷

Soon afterwards, unauthorized editions were published by Lancer Books, Greenleaf, and Brandon House Books. At this point, the authors of the novel, Mason Hoffenberg and Terry Southern, brought an action for copyright infringement and unfair competition against the defendant publishers.⁶⁸

The result of this litigation was an involuntary dismissal without

⁶³ *Hoffenberg v. Kaminstein*, 396 F.2d 684 (D.C. Cir. 1968), *cert. denied*, 393 U.S. 913 (1968).

⁶⁴ Schrader, "Ad Interim Copyright and the Manufacturing Clause: Another View of the Candy Case," 16 Vill. L. Rev. 215 (Dec. 1970).

⁶⁵ Rembar, "Xenophilia in Congress: Ad Interim Copyright and the Manufacturing Clause," 69 Colum. L. Rev. 775 (1969).

⁶⁶ *Id.*

⁶⁷ Schrader, *supra* note 60 at 216.

⁶⁸ *Putnam's Sons v. Lancer Books Inc.*, 239 F. Supp. 782 (S.D.N.Y. 1965).

prejudice for the defendant because of the plaintiff's failure to state a ground upon which relief could be granted. This was predicated on the fact that the defendant had reproduced only the foreign edition, and based on Section 13 of the Copyright Act⁶⁹ no infringement action could be maintained until the 1958 French edition had been registered and a deposit made with the Copyright Office.

On March 11, 1965, copies of the original French edition (in English) were sent to the Copyright Office in an attempt to secure an ad interim registration of the foreign edition, and for registration of the complete text as a domestic publication. The Copyright Office refused registration on the grounds that the authors had published abroad without compliance with the ad interim provisions,⁷⁰ and because of this, the work was now in the public domain.

The authors brought the required separate suit⁷¹ to compel registration and issuance of a certificate by the Copyright Office. This suit stirred up such a storm of controversy that amicus briefs were filed by authors' organizations, publishers, and governmental organizations as well as the parties to the litigation. The effect of the litigation was to have a direct bearing on interpretation of the requirements of the manufacturing clause, causing a diminution or strict interpretation of its provisions.

What seemed to have the greatest effect on the case was a Copyright Office directive that read, in brief:

Books (class A) . . . (b) Ad interim registration. (1) An American edition of an English language book or periodical identical in substance to that first published abroad will not be registered unless ad interim registration is first made.⁷²

This, along with a strict interpretation of the statutes, had a direct application to the contentions of the plaintiff. In substance, the directive said that in order to obtain American copyright protection, an English language work must comply with the ad interim clause when first published abroad.

The authors, with knowledge of the directive, tried to argue around it on two basic theories.⁷³ The first of the theories, and the

⁶⁹ 17 U.S.C.A. § 13 (1964). This prohibits any infringement action until deposit and registration of the work is made with the Copyright Office.

⁷⁰ Schrader, *supra* note 60 at 218; the Copyright Office claimed that there had been no compliance with § 16, § 22 and § 23 of the Act.

⁷¹ Vacheron & Constantin—Le Coultre Watches Inc. v. Benrus Watch Co., 260 F.2d 637 (2d Cir. 1958).

⁷² 37 C.F.R. § 202(4) (1967).

⁷³ Rembar, *supra* note 61 at 775.

more potent of the two, was an argument based on logic and legislative history (which one knows can be used to support both sides of an argument). With this argument the authors maintained that publication in France with the required notice of copyright was sufficient to obtain copyright protection in the United States, and that the *ad interim* clause was just an alternative to protection that did not come into play until the author decided to publish in the United States.

To support this, the authors came up with an ingenious interpretation to the reading of Section 10 of the Act. They argued that Section 10 had in fact two parts. The portion before the semi-colon would be read to mean that an author could secure copyright protection by publication anywhere in the world so long as the required notice of copyright is affixed to it. The portion after the semi-colon would be read to mean that if the work were published in the United States, then and only then would the “except” sentence of compliance with Section 22 become binding. The authors argued that this would be consistent with an historical reading of the meaning of the copyright provisions and the *ad interim* clause, which was to help out authors who found it difficult to comply immediately with the manufacturing clause requirements. They maintained that it would not be equitable to penalize authors for publishing in other countries so long as the basic requirements of United States manufacturing were met when sales in the United States are begun.

To these arguments, the government countered with a literal reading of the Copyright Act provisions and an argument that Section 10 provides only a general method for obtaining copyright in the United States. It claimed that although Section 10 was a fundamental section (there were other fundamental sections), Sections 10, 22 and 23 had to be read in conjunction with it to arrive at its fullest meaning.

In reference to Section 16, the authors again argued their contention that the requirements only applied to the copies sold in the American market. The authors used a brief legislative history to focus on what they claimed to be the real purpose behind the Section 16 and Section 22 requirement—that of protecting the American market from lower priced foreign editions. They maintained that the publishing of their book in France, and not in the U.S., did nothing to thwart the congressional intent of the legislation because the American markets were not infiltrated or imperiled. In addition, the authors felt that if the purpose of the manufacturing clause was to protect American manufacturing,

they had fulfilled this purpose by acquiring American manufacture of the book when it came time for American distribution by complying with the statutory requirements.

The government replied by showing that if one applied the statutes as the authors interpreted them, they would be left without any meaning at all. Dorothy Schrader, a Senior Examining Attorney for the Copyright Office, and of counsel during this litigation, concluded that the plaintiff's contentions would render the manufacturing clause a moot item. She maintained that the ability to get ad interim protection any time after publication with notice in a foreign country would in itself act as a deterrent to piracy, and because of this, the holder of the copyright would enjoy a full twenty-eight year protection without ever actually manufacturing his work in the United States. Also, under the plaintiff's theory, a derivative work like a stage play or motion picture could be authorized, and the manufacturing requirement would have no effect on such versions. This, Schrader contended, was inconsistent with the intentions of the manufacturing requirements.⁷⁴

The second, but least persuasive of the major themes of the case, was based on a contention by the plaintiff that under the *United Dictionary* ruling,⁷⁵ events outside of the United States could not act to forfeit copyright in the United States. Therefore, the 1958 Olympia publication in France did not affect a subsequent publication in the United States. He argued that if this were not so, every outstanding American literary work of the twentieth century would now be in the public domain, because each had been published in Great Britain and the British edition had not been manufactured in the United States. He continued that up until then, no one had sought, without authority from the copyright proprietor, to publish these works on the theory that the printing of the work outside of the United States had forfeited the U. S. copyright protection.

The government easily rebutted this argument. They explained that a closer examination of the *United Dictionary* case would show that the work in that case had been first published and copyrighted in this country and that the real issue was whether the later publication in England, without notice of United States copyright, had forfeited such protection. The court in the *United Dictionary* ruling held that the later edition did not forfeit the protection of the edition first published.

This "first publication" theory was, the government contended,

⁷⁴ Schrader, *supra* note 60 at 222-225.

⁷⁵ *United Dictionary Co. v. G. & C. Merriam Co.*, 208 U.S. 260 (1908).

the correct application of the statutes. There was, in fact, a distinction between the first publication of a work and all those that come later. The British edition of the literary works that the plaintiff was referring to were not first editions; therefore, the requirements of United States manufacturing and ad interim compliance were not applicable.

The arguments in the *Candy* case were a refreshing, creditable attempt to destroy, or at least weaken, the foundations of the manufacturing clause. Logically, the plaintiff's theories would have helped to remedy some of the harsh results with which the clause has burdened us over the years. It would have been very easy to allow the plaintiff-author's interpretations of the law to prevail and reinnovate the application of the manufacturing and ad interim requirements. Because the Copyright Office's job was to apply the law as it is written, there was little choice by the Copyright Office but to retain its present construction and application. They were forced to carry out the congressional purpose of retaining the mandatory force of the manufacturing requirements as to works by Americans for the benefit of the American printing and labor interests, while removing certain foreign authors from the operation of this mandatory clause in order to promote better international copyright relations.⁷⁶ Even though the Copyright Office had made clear their objection to the anachronistic remnant of a past era, they were forced to throw another literary work into the depths of the grab-bag called the public domain.

To further exemplify the burdens the manufacturing clause has placed on the field of literature, a quick glance at a case with a slightly different twist is in order.

In France, the works of the Marquis De Sade had been circulated in French for a substantial period of time and were in the public domain. One of his writings, *Juliette*, was translated into English by an American citizen, Austin Wainhouse, under the pen name Pieralessandro Casavine. This new work was subject to the copyright provisions of the United States.

When an infringing copy was slavishly published by Lancer Books, the injured publisher, Olympia Press, went to court for relief.⁷⁷ A counterclaim by the defendant charged Olympia with fraudulent concealment and misstatements to the Copyright Office in order to procure the copyrights to the translation.

⁷⁶ Schrader, *supra* note 60 at 281.

⁷⁷ *The Olympia Press v. Lancer Books Inc.*, 267 F. Supp. 920 (S.D.N.Y. 1967); 153 U.S.P.Q. 349 (1967).

The basic issue was the status of the author at the time he translated the work. If the author had been merely an "employee for hire" under the definition of Section 26 of the Act,⁷⁸ the publishers would have been the proprietor of the copyright and entitled to protection under their U.C.C. exemption to the manufacturing clause. But if Wainhouse had been an independent author, he would not have been entitled to the exemption and would therefore have been required to fulfill all the requirements of manufacturing and ad interim clauses in the Act.⁷⁹

After a review of the evidence, the court concluded that Olympia Press considered Wainhouse the author and not an employee for hire, and that in order to hide the fact of his citizenship, the Press had gone so far as to use Wainhouse's pen name on the application for copyright, fraudulently stating he was a French citizen.

Obviously, if not for the manufacturing clause and its provisions, there would not have been a need to bother with a determination of who in fact was the proprietor of the copyright. The burden placed on authors and publishers by the clause has more than a few times caused the complete loss of protection for the literary creations from the minds of great authors.

Present Attempts at Legislative Reform

The cry for relief from the shackling provisions of the manufacturing clause was now at a great pitch and all there was left was for Congress to hear it and take affirmative action towards repeal.

Governmental response was particularly slow and awkward in taking the initiative and carrying it through. There were telltale signs of union pressure trying to force the legislature to retain the status quo of present law regardless of the need for change.

Reluctantly, funds were set aside in 1955 for a comprehensive program of research and study by the Copyright Office which was to last three years. There was hope that these studies would provide the groundwork for a possible revision in the copyright law.

In 1961, a Copyright Office study, "Report of the Register of Copyrights on the General Revision of the United States Copyright Law," generally recommended the repeal of the manufacturing

⁷⁸ 17 U.S.C. § 26 (1964).

⁷⁹ 17 U.S.C.A. § 9(c) (1964) exempts from the manufacturing clause authors whose work was first published in such a country, but exempts from this exception "works of an author who is a citizen of or domiciled in the U.S. regardless of the place of first publication. . . ."

clause. It advised Congress that if the United States printing industry needed protection, it should be done in some way not related to the copyright statutes.

After constant and intense consultation and investigation, the initiating step forward occurred when Chairman Emanuel Celler introduced, at the request of the Register of Copyrights, H.R. 11947.⁸⁰ The Senate version of the bill was S. 3008.⁸¹ These bills were modifications of the present manufacturing clause provisions rather than repeal. It was evident to the Copyright Office that even though they favored repeal, the pressures from those who supported the interests of the American printing industry would not allow them to do more than compromise between those interests and the interests of authors and other copyright owners.

Unfortunately, the 88th Congress adjourned before detailed consideration could be given to the proposed legislation. But on February 4, 1965, H.R. 4347 and S. 1006 were introduced into the 89th Congress. H.R. 4347 was referred to Subcommittee No. 3 which held twenty-two days of hearings on it.⁸²

Many commentators spoke in great depth of their intense belief that the manufacturing clause provisions should be entirely done away with. Many of their arguments emphasized the historical significance of the manufacturing clause and how all the basic reasons for its creation had long ceased to exist. The progression of the clause through its amendments and finally entry into the U.C.C., as I have shown, have consistently relaxed the effect of the clause without any injury to the printing industry in this country.

In his comments before Subcommittee 3, Robert W. Frase,⁸³ representing the Joint Washington Office of the American Book Publishers Counsel and the American Textbook Publishers Institute, observed that the objections to complete repeal were similar to those of entry into the U.C.C. He testified that if predictions of the printing industry had been borne out, the numbers of titles manufactured in the United States should have decreased drastically. He then produced figures illustrating that the growth in the number of copies printed in the United States between 1953 and 1964 had grown from 30.8 million to 43.7 million. In addition, in 1964 the total number of English language copies imported were

⁸⁰ H.R. 11947, 88th Cong., 2d Sess. (1964).

⁸¹ S. 3008, 88th Cong., 2d Sess. (1964): introduced to the Senate by Senator McClellan on the same day H.R. 11947 was introduced to the House.

⁸² H.R. Rep. No. 83, 90th Cong., 1st Sess. 2 (1967).

⁸³ *Hearings on H.R. 4347 Before Subcommittee No. 3 of the House Committee on the Judiciary*, 89th Cong., 1st Sess., ser. 8, pt. 3 at 1579 (1965).

only 2.1 million as compared to 4.5 million English language copies manufactured in the United States by foreign authors in that same year. This indicates that larger editions of books for the American market were more economical to print here, regardless of the manufacturing clause. Only the scientific, educational or technological editions, with a very small market, were imported.

Additional figures showed an increase in the number of production workers from 23,732 in 1958 to 29,063 in 1963 and an increased value added by manufacture of \$122,422,000 over the same period.⁸⁴ These figures again indicated that the American printing industry no longer needed the protection of a maternalistic law that had outlived its usefulness. The industry had grown to become one of this country's giants with exports exceeding imports three and one half times over.

Among those favoring complete repeal was Dan Lacy, the managing director of the American Book Publishers Council.⁸⁵ He, too, felt that the effect on American publishing would be negligible if the manufacturing clause were repealed. Although the wage rates in the United States are higher than in other countries, he felt that (in addition to this gap now closing) this disadvantage was offset by the high speed printing and binding facilities and convenience of a nearby source of supply when a book is distributed within the United States.

Eight major benefits of repeal were given to the Judiciary Subcommittee by Mr. Frase:

1. Repeal would resolve doubts about copyright registration on repro-proofs from abroad being lithographed here. This would allow the importation of small editions of scientific, educational and technical works that would not injure our printing industry and would aid in obtaining international exchange of vital information in these fields.
2. Repeal would allow foreign-published co-editions using American authors for an English language text.
3. It would reduce the possibility of retaliation in the same manner as our manufacturing provisions, or in tariffs and/or exchange restrictions.
4. An American author would be free to publish abroad without losing copyright protection in all but a few instances. (Most authors find it more advantageous to publish where they

⁸⁴ *Id.* at 1590.

⁸⁵ Book Production Magazine, Vol. 29, No. 2 (Feb. 1964) at 42-48.

write. The few American authors stationed other places may, for convenience and cost, want to publish there.)

5. American authors would contribute to small scientific, technical, and educational works put out by foreign publishers or international agencies. As the clause applies now, this is prohibited.
6. Foreign authors domiciled here temporarily, and writing in English, would not lose copyright protection if they decided to publish through their home publishers.
7. Complete repeal would ease pressures with Canada. Canada mainly wants to seek contributions to works by American authors without losing protection.
8. Repeal would eliminate all the intricate procedures now required to show compliance with the provisions of the Act.⁸⁶

In addition to these important benefits, the inescapable argument exists that the manufacturing clause is indefensible on moral and logical grounds. No valid relation can be found between an author's right to enjoy the fruits of his works and the accident of the place of physical manufacture of one particular form of the work.

The arguments by the interests of American printing and labor were adamantly against repeal. Gerhard Van Arkel, general counsel for the National Typographical Union AFL-CIO,⁸⁷ argued that the publishers just wanted to take advantage of the cheaper production markets in foreign countries. He felt that the disparity in the wage rates would play a great part in injuring American printing if the manufacturing clause were repealed. The growth of the industry, as he saw it, was based on a law which included the manufacturing clause, and he did not want to take a chance on the results of continuing without it.

It was the contention of Harry F. Howard of the Book Manufacturers Institute⁸⁸ that the elimination of the manufacturing clause would catch the United States book manufacturing interests in a financial squeeze. With financial conditions as tight as they are, and with the necessary purchases of new machinery, higher wages and many companies already in debt, he maintained that many United States book manufacturers would not survive the loss in volume.

This contention was supported by other commentators who

⁸⁶ *Hearings on H.R. 4347, supra* note 79 at 1585-1586.

⁸⁷ *Id.* at 1633.

⁸⁸ *Id.* at 1666.

concluded that the high volume we currently maintain, because of the clause, was holding our per-unit cost down, and if the clause were repealed, foreign machinery and technology would get a higher volume and their per-unit cost would drop to a point lower than ours.⁸⁹

Those favoring retention of the clause felt that it does no more than what many other countries do by way of tariffs, licenses, internal equalization taxes and exchange rate restrictions. The United States has none of these except a three percent ad valorem tariff which is claimed to be lower than any other country's.

Many of their contentions can be summed up in a statement by James H. French of the Book Manufacturers Institute:

The granting of a copyright monopoly takes away from the printer the power to control the multiplication and distribution of printable works, and the manufacturing clause in return gives him a limited measure of protection against foreign competitors whose labor and hence, production costs are far below his own, and whose destructive competition he otherwise could not effectively combat.⁹⁰

Section 601 of the Proposed Act

It became obvious to both houses of Congress that the economic interests of our printing industry would not allow agreement in any way to a complete repeal of the manufacturing clause. With pressures bearing on them from each side, Congress finally concluded with a compromise to the argument of both sides and S. 597⁹¹ and H.R. 2512⁹² were introduced to the 90th Congress as the best alternative to repeal at the present time.

The manufacturing requirements in the proposed revision limit the harshness of the present law considerably. Under Section 601(a) they would only apply to a "work consisting preponderantly of nondramatic literary material that is in the English language and is protected under this title," and would thus not extend to dramatic, musical, pictorial, or graphic works; public domain material; or works consisting preponderantly of material that is not subject to the manufacturing requirement. For example, a work that is a pictorial, musical score, graphs or charts, or play will not be subject to the manufacturing clause in whole or in part since the literary material will necessarily consist solely of a forward, preface, cap-

⁸⁹ Book Production Magazine, Vol. 29, No. 2 (Feb. 1964) at 42-48.

⁹⁰ *Hearings on S. 597 Before the Subcommittee on Patents, Trademarks, and Copyrights of the Senate Committee of the Judiciary*, 90th Cong., 1st Sess. (1967) at 669.

⁹¹ S. 597, 90th Cong., 1st Sess. (1967).

⁹² H.R. 2512, 90th Cong., 1st Sess. (1967).

tions or headings. Section 601 also provides that when an entire work is subject to the clause, the requirement of manufacture in the United States just applies to those portions that are “non-dramatic literary material” in English.⁹³

Section 601(b) covers the circumstances where “nondramatic literary material” would be excepted from Section 601(a) application. Exceptions are made for works whose author is neither a national nor domiciliary of the United States, or, through a great concession, has been “domiciled outside of the United States for a continuous period of at least one year immediately preceding the date” when importation or public distribution is sought. A concession is also made as to allow American authors to contribute to works that are substantially the product of foreign authors or a foreign employer.

Subsection (2) of Section (b) in the 1965 H.R. 4347 Bill would have raised the number of copies permitted importation, before application of the manufacturing requirement, to 3,500 from the 1,500 mark of the present law.⁹⁴ This figure was reached after a consideration of the present book market and after the realization that beyond that point it is generally more costly for a publisher to import copies than to manufacture an edition here.⁹⁵

This proposal brought a wrath of objection from the printing industry. Spokesmen such as Van Arkel felt that a one hundred percent jump in the copy limit was too much and was not necessary in light of the “market testing” theory behind the original 1949 exemption. He felt that this amount takes too great a bite out of the American market.⁹⁶ In response to this political and labor pressure, the 1965 bill was amended to set the limit at 2,000 copies.⁹⁷

Clause (3) of Subsection (b) permits the importation of copies for governmental use, other than in schools, by the United States or by “any State or political subdivision of a State.” Clause (4) allows importation for personal use of “no more than one copy of any one work at any one time” and also exempts copies in the baggage of persons arriving from abroad and copies intended for the library collections of nonprofit, scholarly, educational or religious organizations. Braille copies are completely exempted under Clause (5),

⁹³ H.R. Rep. No. 83, *supra*, note 82 at 134.

⁹⁴ H.R. 4347, 89th Cong., 1st Sess., § 601(b)(2) (1965).

⁹⁵ H.R. Rep. No. 83, *supra*, note 82 at 135.

⁹⁶ *See*, note 83, *supra*.

⁹⁷ H.R. 2512, 90th Cong., 1st Sess., § 601(b)(2) (1967).

and Clause (6) permits the public distribution in the United States of copies allowed entry by the other clauses of that subsection.

During the hearings on proposals concerning what restrictions would be placed on foreign typesetting or composition, one of the most difficult problems to overcome turned out to be the effect of the new law on the repro-proof loophole.⁹⁸ This practice occurs when manuscripts are set in type abroad and then the reproduction proofs resulting are imported. The actual printing of the manuscript is effectuated from offset plates created from these reproduction proofs by a lithographic process that is "wholly performed within the limits of the United States" thereby satisfying the requirements of the manufacturing clause.

The book publishers opposed any definition of domestic manufacture that would close this loophole since a large practice through this method had developed, and new techniques including the use of importation of computer tapes had been recently introduced. The publishers were in doubt as to what results a change in the law would have on the great bulk of works already under copyright protection via this process. Further arguments were based on what the publishers claimed would be a violation of the General Agreement on Tariffs and Trade (GATT)⁹⁹ if a more restrictive bill were passed.

The printing industry, on the other hand, contended that this process had drastically circumvented the purpose of the manufacturing clause and they were vehement in their opposition to a complete exemption to the practice. Speakers such as O. R. Strackbien, representing the International Allied Printing Trades Association,¹⁰⁰ felt that GATT did not pose a blockage to a more restrictive interpretation of the problem in the new Act. He contended that GATT was an executive agreement rather than a formally passed congressional treaty, and therefore had no standing or power to make objections to alter United States policy or legislation.

When the smoke finally cleared, the amended Subsection (c) of Section 601 contained no provision that would prevent the importation of reproduction proofs, however they were prepared (which included the importation of computer tapes) so long as the plates from which the copies were printed were made here and not themselves imported.

⁹⁸ See, "The Manufacturing Clause After Change," *infra*.

⁹⁹ H.R. Rep. No. 83, *supra*, note 82 at 136.

¹⁰⁰ *Hearings on H.R. 4347, supra*, note 83 at 1626.

The new bill does away entirely with the ad interim time limits and registration requirements of the present law. But most importantly, the result of noncompliance with the manufacturing provisions of the act no longer constitutes a condition of copyright protection. Subsection (d) sets out that, even if copies are imported or distributed without compliance to the manufacturing clause provisions, it will not act to prohibit the owner of the copyright from making or distributing phonorecords of the works, from publicly performing the works or from making derivative works from it.

Noncompliance with the manufacturing provisions does, however, provide a complete defense in any civil or criminal action by the copyright proprietor against any infringer of his exclusive rights of reproduction or distribution, if the infringer can prove a violation of the manufacturing requirements. This defense is only in respect to "all of the nondramatic literary material comprised in the work and any other parts of the work in which the exclusive rights to reproduce and distribute copies are owned by the same person who owns such exclusive rights in the nondramatic literary material."¹⁰¹

In overcoming the burden of this defense, the infringer is required to show three things:

1. clause (1) of Subsection (d) requires him to show that the proprietor of the copyright, by himself on his authority, imported or publicly distributed copies of the work in the United States in violation of the manufacturing provisions;
2. he also must prove that his infringing copies were manufactured in the United States [(d)(2)]; and
3. that his infringement had started before the copyright proprietor had effectively registered his authorized edition, even if copies of the authorized edition were manufactured in the United States [(d)(3)].

Complex issues concerning copyrighted material in computers, other forms of information storage and retrieval systems, and the cable television question delayed passage of the copyright revision legislation in the 90th Congress.

On January 22, 1969, S. 543¹⁰² was introduced which, other than a few technical amendments, was similar to S. 597 of the 90th Congress. Again it failed to be passed by the whole Senate and

¹⁰¹ S. 595, 90th Cong., 1st Sess., § 601(d) (1967).

¹⁰² S. 543, 91st Cong., 1st Sess. (1969).

reformers would have to wait until the 92nd Congress for another attempt at affirmative action.

On February 18, 1971, Senator McClellan read to the Senate S. 644¹⁰³ with an interesting change. In response to various Canadian and United States printing industry proposals, this bill provided for an exemption from manufacturing clause requirements for copies manufactured in Canada as well as in the United States. The reason given was the wage standards in Canada were substantially comparable to those in the United States,¹⁰⁴ but one must also assume that Canada's manufacturing requirements weighed heavily on Congress' mind.

Pending the formulation and adoption of new cable television rules by the Federal Communications Commission, action was postponed on S. 644¹⁰⁵ and Congress adjourned without its passage.¹⁰⁶

With the manufacturing clause provisions remaining intact, *verbatim*, S. 1361¹⁰⁷ was submitted on March 26, 1973. Additional hearings held on this version afforded additional insight into the mechanics of the manufacturing clause section. Although admitting that there was no justification "in principle" for the manufacturing requirement, Congress concluded that there may be a lingering economic reason for it, and therefore found that this possible adverse economic effect that might be felt by the American printing industry outweighed the possible benefits outright repeal would bestow upon American authors and printers. They, however, recommended outright repeal once it could be shown that the effects would not seriously injure the American printing industry.¹⁰⁸

The 94th Congress brought the introduction of S. 22¹⁰⁹ by Senator McClellan on January 15, 1975, followed by H.R. 2223¹¹⁰ by Representative Kastenmeier on January 28, 1975. The manufacturing clause provision of these bills are identical with S. 1261¹¹¹ and both have been referred to their respective judiciary committees.

¹⁰³ S. 644, 92d Cong., 1st Sess. (1971).

¹⁰⁴ S. Rep. No. 93-983, 92d Cong., 2d Sess., 102, 198 (1974).

¹⁰⁵ S. 644, *supra*, note 103.

¹⁰⁶ *Id.* at 102.

¹⁰⁷ S. 1361, 92d Cong., 2d Sess. (1974).

¹⁰⁸ S. Rep. No. 93-983, *supra*, note 104 at 196.

¹⁰⁹ S. 22, 94th Cong., 1st Sess. (1975).

¹¹⁰ H.R. 2223, 94th Cong., 1st Sess. (1975).

¹¹¹ S. 1361, *supra*, note 107.

During committee hearings the proposed Act was supported, among others, by Barbara H. Ringer, Register of Copyrights, and by the Department of State's Deputy Assistant Secretary for Commercial Affairs and Business Activities, Joel W. Biller.¹¹² In endorsing the Act as proposed, Mr. Biller did lodge the State Department's opposition to the retention of any type of manufacturing clause requirements. It was his opinion that a manufacturing requirement is a non-tariff trade barrier and therefore an impediment to an open international economic system and is inconsistent with the United States' aims to reduce or eliminate non-tariff barriers of other countries. Presently, new rounds of multilateral trade negotiations at Geneva are about to begin, and Mr. Biller contended that the United States will be placed in an awkward position in view of our participation in various treaties that forbid the prohibition of other countries' products unless the product is similarly prohibited by third party countries. Objection to the specific exemption of Canadian-produced works has already been lodged by the United Kingdom.

Conclusion

It is evident that great care and deliberation was taken in the creation of the proposed revision of the Copyright Act. Compromises had to be made to satisfy two factions that were equally staunch in the support of their beliefs.

Still it is hard for many, this author included, to be satisfied that anything short of repeal of the manufacturing clause would ever truly uphold the principle of copyright protection to the creator of the products of his mind. Restrictions on the output of this resource can be of no benefit, but could impede the freedom by which those who create things of beauty from the mind share it with the world.

The proposed revision is one large step in alleviating many of the burdens placed upon our American authors, but it is not yet complete enough. To quote Robert Frase:

Still the author's right to the creation of his own mind is made dependant on the circumstance of the manufacture of one physical form in which his work is embodied.¹¹³

¹¹² Statement on H.R. 2223 by Joel W. Biller, Deputy Assistant Secretary for Commercial Affairs and Business Activities, Bureau of Economic Affairs, Department of State, before the House of Representatives Committee on the Judiciary, May 8, 1975.

¹¹³ See, note 79, *supra* at 1585.

All one can do is to urge Congress to take prompt and expedient action to pass the proposed Copyright Act revision to at least partially eliminate the harsh results the manufacturing clause has cast on the literary community.

The New Doctrinal Trend—1975

T. L. BOWES

Summary

A consensus of opinion among some members of the patent community is that the judiciary is little aware of the patent incentive to the public. One of the most useful incentives to research, development and commercialization of inventions is the limited exclusivity which is the patent. There is analyzed in this respect five of the "great and classic inventions."

Words and Phrases

Patent

"Flash of Genius"

Validity

Patents

Electric Lamp—Pat. No. 223, 898

Barbed-Wire Fence—Pat No. 157, 124

Telephone—Pat. No. 174, 465

Induction Motor—Pat. No. 381, 986

Air Brake—Pat. No. 88, 929

Citations

Cuno Engin. Corp. v. Automatic Devices Corp., 314 U.S. 84 (1941).

Picard v. United Aircraft Corp., 128 F. 2d 632 (1942).

The New Doctrinal Trend—1975

THEODORE L. BOWES*

In the Journal of the Patent Office Society Vol. XXX, Number 2, there appeared an article entitled "The New Doctrinal Trend" by Laurence B. Dodds and Francis W. Crotty.¹ That article derived its title from the following statement of Mr. Justice L. Hand in his opinion in *Picard v. United Aircraft Corporation*:

We cannot, moreover, ignore the fact that the Supreme Court, whose word is final, has for a decade or more shown an increasing disposition to raise the standard of originality necessary for a pronounced new doctrinal trend which it is our duty, cautiously to be sure, to follow, not to resist.²

The crisis at the time of the Picard case stemmed from the statement of Mr. Justice Douglas in *Cuno Engineering Corporation v. Automatic Devices Corporation*, that "the new device, however useful it may be, must reveal the flash of creative genius. . . ."³ The "flash of genius" test has been relegated to its proper place but findings of validity in litigated cases involving patents has not changed in favor of patent owners. The doctrinal trend has continued.

Two examples will be cited. First, there is the statement of Mr.

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¹ This paper will rely heavily upon that article in its analysis of particular patented inventions.

² 12 F2d 632 (1942).

³ 314 U.S. 84 (1941).

Justice Jackson who said that "the only patent that is valid is one which this Court has not been able to get its hands on." This, of course, is not factually correct, but is illustrative of the frustration felt, not only by Mr. Justice Jackson, but also by many lawyers, inventors, and patent owners.

The second example is taken from a speech by former justice Abe Fortas who has said:

Many federal appellate judges—perhaps most of them—approach patents with the kind of suspicion and hostility that a city bred boy feels when he must traverse a jungle full of snakes.

The patent system is strange and weird territory to most judges. They have never seen anything that resembles it. All patents look more or less strange and threatening to them; and since they are heavily armed with the power of the U.S. Government, they frequently get the idea that is their duty to kill everything that moves in this dangerous land.

These expressions have led many to the feeling that too many judges look upon patents as monopolies and since monopolies are bad, patents must be bad, too.

The attitude of the courts may be tested by the statistics of contested cases. In the period 1968—72, the Circuit Courts of Appeals invalidated 70% of the patents litigated in those courts. To put that figure in proper perspective, as pointed out by former Commissioner of Patents William E. Schuyler, Jr., it should be noted that less than one percent of all patents issued by the United States Patent Office in force during that period were involved in litigation. Hence, it is a matter of fact that 70% of less than 1% of patents were held invalid.

It is not a correct extrapolation to argue that 70% of all patents are invalid. It is also an unwarranted conclusion that less than 1% are invalid.

A more recent study by the Patent & Trademark Office covered all cases decided by the Circuit Courts of Appeals and the Court of Claims, as well as unappealed decisions of the District Courts. According to this study, slightly more than 50% of litigated patents were held valid.

Most losers will appeal whenever potential exposure to royalties or damages or loss of royalty income is high because the cost of appeal is very modest compared to the cost of the trial in the district court.

Another interesting set of facts relates to results in the eleven Circuit Courts of Appeals for the year 1968—1972, inclusive. The

above mentioned Patent & Trademark Office study developed the following data:

Circuit	Totals	Valid	% Valid
1	12	4	33.33
2	35	6	17.15
3	20	5	25.00
4	22	4	18.20
5	40	20	50.00
6	23	10	43.50
7	56	21	37.50
8	11	1	9.10
9	38	5	13.20
10	12	5	41.70
DC	<u>2</u>	<u>0</u>	<u>0.00</u>
Totals	271	81	30 %

Whatever theory is adopted, the results should be roughly equal across the board. Obviously, this is not the case, and patent owners have just cause for alarm and concern. The statistics cited have of course, led to much maneuvering by litigants among the various circuits.

A review of the patents discussed by Dodds and Crotty may be useful and particularly pertinent to the decision-making process of those judges fitting Mr. Fortas' description.

There are several patents which would be recognized by almost everyone as covering key inventions because of the benefits resulting for the consumer. These include the electric lamp of Thomas A. Edison, and the telephone of Alexander Graham Bell. The agriculture oriented will recognize the public benefit growing out of the barbed wire fence invention of J. S. Glidden. At least the technology oriented person will appreciate the value of the induction motor of Nikola Tesla, and the air brake of George Westinghouse, Jr.

These five inventions were selected by Dodds and Crotty because they were basic inventions even though they were not the first, broadly, to perform the function imperfectly performed by prior devices. They said:

The majority of the great inventions discussed above founded a whole new industry, but each represented a relatively minor structural deviation from its impractical or unsatisfactory forerunner. . . .

In each case, a modest improvement made earlier inventions

commercially valuable. This writer has often alluded to this proposition by observing that often the more valuable invention is the one making the basic invention commercially sound and giving the public a real benefit.

These five patents were also selected because the apparent advance over the earlier technology was so modest that most courts today, perhaps the Patent & Trademark Office, and certainly the Circuit Courts of Appeals in the 2d, 4th, 8th and 9th Circuits would hold them unpatentable, if litigated, as obvious in view of the prior art and conceivably as fully anticipated by that prior art. Only in the 5th and 6th Circuits have patents fared according to theory.

In the words of Dodds and Crotty,

What the Court fails to realize is that the foregoing picture is typical of virtually *all* patent litigation and has been since the inception of our patent system. And this has been true even in the case of the majority of the great and classic inventions.

The five mentioned "great and classic inventions" will now be reviewed briefly and compared with the prior art.

ELECTRIC LAMP
Thomas A. Edison
Patent No. 223, 898 (1880)

Edison's lamp involved a glass bulb. Within that bulb there was a carbon filament, the ends of which passed through the glass. The bulb was exhausted and hermetically sealed after assembly.

Edison's patent was held valid in eight or more infringement suits and in one of these the Supreme Court denied certiorari.

Using *Edison Electric Light Co. v. United States Lighting Co.* (CCA 2nd—1892) 52 Fed. 300, as an example, the best prior art is described as follows:

An earlier patent of Edison's (No. 130,910 issued in 1879) disclosed an electric lamp having a filament consisting of a wire of platinum or platinum alloy rolled on a form to make a coil which was supported in a vacuum tube. Conducting leads passed through and were sealed to the tube. A glass envelope surrounded the described assembly.

British patent 10,919 (1845) illustrated a carbon element in the form of a thin "pencil" or plate mounted within a glass tube. Conductors extended from opposite ends of the carbon element to opposite ends of the tube. A vacuum was formed by partially filling

the tube with mercury so that a vacuum was drawn about the element on inversion of the tube.

British patent 3,908 (1879) showed a lamp having a fine wire filament made from platinum or iridium suspended within a glass envelope by conductors passing through and sealed to the envelope. Nitrogen gas filled the interior of the envelope.

Thus, the electric lamp art showed:

1. the need of a high-resistance incandescent element or filament,
2. carbon was a satisfactory material,
3. the filament could be spiral in form, and
4. a vacuum was necessary.

Thus, every element of Edison's claimed invention was old. Yet, the court in the Edison Electric case, found Claim 2 valid. The court said:

Although all-glass globes, with leading wires passing through the glass and sealed into it, had been used before to preserve the conditions of the interior of a chamber from the effects of leakage at the joints, and although the prior art, including the French patent, indicated that subdivision of the electric light was to be obtained by the use of burners of high resistance and small radiating surface, and although pencils of carbon had been tried in imperfect vacua, and found wanting, it was invention in view of the teachings of the art as to the disintegration of carbon under the action of an electric current, to still select that substance as a suitable material from which to construct a burner much more attenuated than had ever been used before, reduced in size to the filamentary form in which economy of construction requires that it must be used in order to avail of the philosophy of high resistance and small radiating surface, and so to combine old elements that the disintegration due to 'air washing' should be practically eliminated, and the burner thus become commercially stable.

Finally and principally, by the substitution, *there was presented the complete combination of elements, which for the first time in the art produced a practical electric light.* We are of the opinion that on principle and under the authorities such a substitution of material is invention.

BARBED-WIRE FENCE

J. S. Glidden

Patent No. 157,124 (1874)

Glidden's barbed wire fence was assembled by bending a short wire at its middle portion around one strand of wire and then twisting a second wire around the first to clamp the short wire in place.

Glidden's patent was upheld in five separate suits and its validity

was affirmed by the Supreme Court in *Washburn & Moen Manufacturing Company v. the Beat'em All Barbed Wire Company*, 143 U.S. 275 (1891). The Court affirmed validity even though it recognized that wire fences composed of twisted wire out dated the barbed feature by many years and that "barbs" of some kind were old in twisted-wire strands.

Hunt patent 67,117 (1867) showed spur wheels having sharpened spurs and centrally located openings through which a wire extended. The wheels were locked to the wire at selected positions.

Smith patent 66,182 (1867) disclosed single wire strands stretched between posts. Spools having four short wire spurs were strung on each wire and locked in place by deforming or offsetting portions of the wires.

Kelly patent 74,379 (1868) showed a wire passing through holes in diamond-shaped pieces which were deformed to clamp in place. A second wire was twisted about the first.

The court found that Glidden could not claim the use of twisted wires or thorns or barbs in combination with wires but that the use of a second twisted wire to lock the barb in place was not part of the prior art. The shape of the barb itself seemed to be the feature which made success possible.

TELEPHONE

Alexander Graham Bell
Patent No. 174,465 (1876)

Bell's method of sound transmission involved causing gradual changes of intensity in a current which continuously followed the changes in air pressure caused by the sounds to be transmitted.

A paper by Boursel disclosed a form of telegraphy in which a flexible disc made and interrupted an electric circuit according to air vibrations caused by the sounds to be transmitted. The resulting intermittent current controlled a receiving electromagnet to vibrate a second disc to reproduce the sound.

A paper by Legat described use of a sound-operated membrane to vibrate a lever which in turn opened and closed an electric circuit. The reed of a receiving electromagnet vibrated according to the vibrations.

British patent 1,044 (1870) disclosed use of a tuning fork and electromagnet to generate oscillations of particular frequency

which operated a remote tuning fork receiver to reproduce the tone.

The Supreme Court in the Telephone Cases, 126 U.S. 1 (1887), found that the prior art showed that what had to be done to transmit speech was known, recognized the vibratory character of sound and that similar vibrations could be reproduced by using electric currents. The prior art, however, taught use of intermittent currents rather than undulatory currents although the British patent spoke of undulatory currents but did not show any intensity changes which were gradual and "exactly analogous to the changes in the density of air occasioned by simple pendulous vibrations" which was the heart of Bell's invention.

INDUCTION MOTOR

Nikola Tesla

Patent No. 381,986 (1888)

Tesla extended the commercial utility of alternating currents from the narrow field of electric lighting to the broader and more general field of electric power transmission. His patented system involved electric power transmission using an AC motor and an AC generator.

Rotation of the generator armature induced alternating currents in two coils which were directly applied to the motor windings. The currents in the two circuits extending between the generator and the motor were sinusoidal alternating currents displaced in phase by 90 degrees. Each motor winding, energized by each phase or component of the alternating current produced a magnetic field in the stator of the motor of uniform intensity, the poles or axes of which shifted or revolved in synchronism with the rotation of the generator armature. The motor armature followed the rotation of the magnetic field thereby producing motor action. This system obviated the need for the commutator required in DC power transmission.

Four infringement suits ensued; defenses of invalidity were based on four pieces of prior art.

Arago's experiment involved horizontal suspension of a copper disc above the poles of a horseshoe magnet. Rotation of the magnet about a vertical axis resulted in rotation of the disc due to rotation of the magnet's field.

British patent 3,134 (1878) to Siemens suggested a power transmitting system as follows:

Although in what has preceded the apparatus has been mostly described as of the dynamoelectric kind, whereby mechanical power applied to drive them is converted into electricity, it is to be understood that with suitable modifications, these apparatus are generally applicable also as electrodynamic machines, their rotary parts being caused to revolve and give out mechanical power when electricity is applied to them, and thus one of these machines may be driven by any suitable motive power so as to generate electricity, and this electricity may be conducted to a similar machine at a distance, causing it to work and to give out a portion of the power applied in the first instance.

A Deprez publication involved an effort to reproduce displacement of two relatively rotatable objects at a distance with "absolute synchronism". His apparatus included a generator having a ring between the poles of a magnet, the magnet being arranged to rotate about the axis of the ring. Two pairs of brushes were connected at right angles to a collector and served as terminals of a signal generator. A stationary iron coring, called an annular comparer of currents, carried two windings, the ends of which were connected with the generator brushes. A magnetized needle was rotatably mounted in the center of the comparer.

Upon rotation of the magnet, two currents were caused to flow with intensities proportional to the magnetic components of the generator. These components determined the magnetization of the comparer and the position of the needle. The needle, then, always showed the relative movement of the magnet and brushes at the generator. The only application of this mechanism, it appears, was to an electric compass.

The court found that at the time of Tesla's invention, it was not known that an alternating current machine could be used as a motor, that Siemens referred to the use of commutators and did not describe use of alternating current.

It was admitted by plaintiff's expert that the Deprez article "demonstrated mathematically, the fact, which is also stated in the Tesla patents, that the polar line of an annular magnet may be shifted about through the entire circumference of the ring by the action of two magnetizing forces properly related." The Court, however, treated Deprez's apparatus as a laboratory experiment and was influenced by Deprez's statement to the effect that alternating currents were not useful in transmitting power but were suitable only for lighting purposes. The Court, finally,

concluded that Tesla was the first to show how to do what others said could be done but didn't suggest how to do it.

AIR BRAKE

George Westinghouse, Jr.,

Patent No. 88,929 (1869)

Reissue Patent No. 5,504 (1873)

In accordance with the patent, Westinghouse provided an air reservoir and used steam from a locomotive to operate a steam pump to charge the reservoir. Brake cylinders were connected to the reservoir through suitable piping. This invention was the first practical application of air brakes to railroad equipment and dramatically increased the safety of railroad systems.

The prior art showed that fluid-pressure brake systems of the type contemplated by Westinghouse had already been known in the art. The use of a valve arrangement for charging, discharging, and regulating the pressure in brake cylinders had been proposed (Br. 1,737—Du Trembley); driving engines, independent of the movement of the locomotive, for charging a pressure reservoir were known (Br. 2,886—Hollinsworth and Br. 2,594—McInnes); and automatically operated valves in fluid couplers had been described (Br. 6,220—Carson and Br. 2,015—Siegrist). And yet, in the Westinghouse case, *supra*, the Court rejected the patents as anticipations of the claims of Re. 5,504, stating that:

. . . some are too general, indefinite, and ambiguous in the descriptive parts to constitute an anticipation of that which the complainant has patented and introduced into general public use almost the world over, with most marvelous results in point of increased safety to life and property; and those that are clear and intelligible in the terms fall short in one or more material respects of containing the subject matter of the claims referred to. . . . They go to show that Westinghouse was not the first to conceive the idea of operating railway brakes by air-pressure, that he was not the inventor of the larger part of the devices employed for such purposes. But such fact does not detract at all from his merit or rights of a successful invention.

Suggestive as these prior patents and provisional specifications may have been, they do not any of them embody that which Westinghouse has invented and claimed; and a prior description of a part cannot invalidate a patent for the whole.

The Court was strongly influenced by the fact of successful commercial use of the Westinghouse air-brake system as shown by the following comment:

So far as appears from the testimony in this case 'none of the alleged prior inventions of air-brake apparatus have ever successfully been applied to practical use; and when we consider the immense importance of the introduction of the air-brake on

railroads, and the incalculable benefit which it has conferred on the public . . . in connection with the fact that Westinghouse was the first, so far as appears in the record and proofs, to put an air-brake into successful actual use.'

Conclusion

The patent system is a Constitutionally based incentive. This is a nation which became great through, in part, its rapid development of technology. Many of the problems besetting the world today are of a nature solvable by technology. The public interest demands solutions as expeditiously as possible. One of the most useful incentives to research, development and commercialization of inventions is the limited exclusivity which is a patent.

It is hoped that the judiciary will, more and more, have in mind the importance of the patent incentive to the public and the promise made to inventors in litigation involving patents.

COMMENTS

The European Patent System: The Crucial Year

Munich Convention

The Convention is, hopefully, to be ratified by the necessary number of Member States by the end of 1976 and will come into force three months hence. According to Article 169 of the Munich Convention, it "enters into force three months after the deposit of the last instrument of ratification or accession by six States on whose territory the total number of patent applications filed in 1970 amounted to at least 180,000 for all the said States." The number of alternative solutions to this arithmetical riddle is high enough to justify optimism as to the date of December 31, 1976 for the deposit of the last necessary instrument of ratification.

The European Stage

Three distinct, although closely interrelated actions, are going to occupy the European stage during the next few months.

1. The Interim Committee has to complete its already considerable work of preparation for an immediate and practical functioning of the European Patent Office as soon as possible after the entry force. (The Committee is composed of delegates of all the signatory States of the Munich Convention. It has created seven working parties, each one devoted to a

special task—general planning, search, examination, personnel, finance, legal matters, building.)

2. The Common Market countries have to discuss and adopt the draft Convention for the European Patent; or more briefly, the Community Patent Convention.
3. Every one of the sixteen countries who signed the Munich Convention must decide whether the Convention is worth ratifying. It is expected that the countries answering “yes” will propose to their respective parliaments to:
 - a. ratify at the same time the European Patent Convention, the P.C.T., the Strasbourg Convention of 1963, and if possible, the Community Patent Convention; and,
 - b. modify the national patent law, at least as far as it is necessary to comply with the prescriptions of the different international Conventions proposed for ratification.

I think that the only problem that can be exposed completely at this time is the second; that is, the Community Patent Convention. The other two topics are too much in the making and will become clear only at a later date.

*The Community Patent Convention*¹

A conference in Luxembourg was to be held and attended by the Nine, when, three weeks before the opening day, the British delegation explained it could not take part in the conference on the basis of the draft. It was, of course, an aspect of Britain’s “renegotiation” policy about participation in the Common Market.

The British delegation was consequently asked to produce a memorandum articulating its new views. This document came out late last year and active discussions were conducted, under the direction of Dr. Kurt Haertel, to find a new compromise solution for the draft Convention and fix a new date for the conference. All this succeeded in the spring of this year, and the Luxembourg Conference has been called to meet on November 17.

Among the points raised by the British delegation, two deserve special attention. In the previous draft, if one wanted to obtain a European Patent for one (or several) Member State(s) of the Common Market, there was no other solution than to designate *all* of them in the request. In the new draft, the option will be open to the applicant either to designate all Common Market States and

¹ See, *IDEA*, Vol. 16, Conference Number, 1973-1974.

obtain one patent for the nine states—subject to the Community Patent Convention—or to designate only the states where it really seeks patent protection and get an ordinary European Patent for these states (and, eventually, for other designated non-Common Market States, such as Sweden and Switzerland, who are members of the European Patent System).

It is generally thought in France that the second practice, seductive as it may seem, will not be advisable since the recent decisions of the Court of Justice of the Communities endanger the situation of industrial property titles protected in only certain parts of the Common Market.

The second, and still more important change following the British proposals, bears on jurisdiction and procedure in actions relating to Community patents. The previous draft provided for centralized procedure of revocation while the procedure for infringement took place before the national courts. Further, a Common Market Convention, signed in Brussels in 1968 and before the entry of the United Kingdom into the Common Market, provides that decisions of national courts in one State of the Common Market can be executed in other States. The United Kingdom is not yet bound by this Convention.

No agreement on what the final system will look like has been reached thus far, however, all delegations were in accord that there was still time to go more deeply into the matter before the first infringement case of a Community Patent comes before the court. But, as it is always dangerous to be too optimistic about an agreement to be concluded, one of the main problems of the Luxembourg Conference will be to prepare an interim solution giving enough freedom to the Member States, especially to the United Kingdom, to retain jurisdiction—even in the field of revocation—on a national basis.

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World Intellectual Property Organization: Geneva Conference (1975)

*Meeting of Advisory Group of Non-Governmental Experts
on the Protection of Computer Programs. June 23, 1975.*

L. Clark Hamilton, Deputy Register of Copyrights, and I attended a week long session of the Advisory Group of Non-Governmental Experts on the Protection of Computer Programs. The meeting, sponsored by the World Intellectual Property Organization (WIPO), convened in Geneva on 23 June 1975. It was a follow-up to a 1974 meeting to advise the International Bureau of WIPO on preparing a study of the best form for national protection of programs from the viewpoints of program producers and developing countries and the most desirable form of international arrangements for computer software. The group considered industry practices and existing laws with regard to software, as well as existing systems for registration and dissemination of programs. It also discussed an earlier (AIPPI) proposal for the establishment by WIPO of a register of computer programs.

A Draft Report, prepared by the Secretariat for the final meeting, treated separately the questions of legal protection and registration of computer software. As regards legal protection, it concluded that a special type of legal protection of programs should be established without prejudice to the continuation of extant protection. This special protection should be available for both original

programs and related materials, should be tailored to the particular technology involved, and should be commensurate with the degree of creativity evidenced in the program.

The Report proposed defining a special act of use of the program which would constitute an infringement, and provided that protection should be granted only against acts resulting from access to the software. The proposed term of protection would be in the range of five to twenty years; further study should be given to the questions of the starting date for protection and whether a doctrine of "fair use" should apply to program protection.

Regarding registration of software, the Draft Report concluded that at present WIPO should deal with a registration scheme only in so far as it served the purposes of legal protection, since the dissemination of information is an important objective of such a system. A system should be established for the optional deposit of software for the purposes of legal protection, with the materials deposited enjoying a presumption of access in the case of identity or close similarity of the software deposited and that used by another person. Although the precise format of deposits was not agreed upon, the group concurred that the deposit (or part of it) might, upon request, be kept secret.

In pursuance of these conclusions, the International Bureau of WIPO will draft model provisions for national laws on the protection of computer software embodying the above principles and alternatives. It will also draft treaty provisions providing for minimum protection according to the same principles on the international level and treaty provisions for the establishment of an international register and deposit system organized by the International Bureau. These drafts will be considered by the Executive Committee of the Paris Union at a meeting to be scheduled by Dr. Bogsch, Director-General of WIPO.

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A Review

Stephen P. Ladas, "Patents, Trademarks, and Related Rights—National and International Protection" (Harvard University Press; Cambridge; Mass., 1975; 3 volumes; 2,115 pages; \$75)

The author of these volumes discusses all aspects of industrial property throughout the world from a number of viewpoints. It is not designed to be a manual merely setting forth various requirements for filing applications or trademark applications in the countries of the world nor is it designed to be a manual to teach the uninitiated how to deal with the various patent and trademark offices throughout the world.

Instead the author has taken a historical view of the development of industrial property rights, bringing their treatment up to date as they relate to arrangements between countries and within particular countries.

Initially, the author provides a detailed review of the definition and historical development of industrial property legislation, both through means of national law and then various arrangements between two countries, mostly trademark agreements. The author then reviews events leading to the signing of the Paris Convention in 1883, its various revisions and the organization and operation of the resulting Paris Industrial Property Union are discussed in detail. The formation and functions of the World Industrial Property Organization (WIPO), as a result of the Stockholm Revision of the Paris Convention is considered. Other intergovernmental organizations dealing with industrial property are discussed including the various United Nations' agencies. Publications of this group

including the well-known February 1964 report on "The Role of Patents in the Transfer of Technology for Developing Countries" are analyzed. Relations of the Paris Convention to bipartite treaties, multipartite treaties and the national law of the member states is reviewed.

Chapter 12, which includes 174 pages, delves into the national treatment of patents including patentable inventions, employed inventors, formalities and procedures in obtaining patents, different kinds of patents, terms of patents, and the nature of the rights conferred by patents and their enforcement. Distinctions between process and product patents in different countries, exhaustion and limitations of patent rights, working requirements, ect. are reviewed including a number of statistics on patents throughout the world.

The author then reviews the evolution of the rights of priority from a historical and practical viewpoint, working requirements and reasons therefor and discusses in detail the recent development of the Patent Cooperation Treaty, the European Patent Convention, and the Common Market Patent Convention. Patents and the antitrust laws are discussed including those of the United States, EEC countries, EFTA countries, British law countries, Japan, etc. International treatment of industrial designs and models and utility models are reviewed.

Next trademarks throughout the world are discussed. The differences in trademark law in different countries is reviewed and various techniques in obtaining trademarks, rights conferred by trademark registration, and the law of trademark rights are reviewed in some detail. Transfer of trademark rights and territorial arrangements including the impact of antitrust law on such arrangements are analyzed. Also included is a discussion of the Madrid arrangement, international classification of trademarks, and the recent Trademark Registration Treaty. Trade names, know-how, unfair competition, the various inter-American Conventions on industrial property during and following World Wars I and II are discussed.

The author also treats the currently active problem of technology transfer to developing countries and recent proposals for patent license conventions.

A very useful feature is the provision of appendices which provide texts of the principle arrangements and conventions discussed in the book including the Paris Convention, the Madrid Arrangement, the Hague Arrangement, the Lisbon Arrangement,

the Patent Cooperation Treaty, the Trademark Registration Treaty, etc.

These volumes are a massive undertaking of substantial breadth and are a necessity for those who want to obtain an understanding of industrial property rights as they have developed over the years and their present impact on international commerce. The book will not be useful for those who limit themselves to practice before the United States Patent Office but should be found in the libraries of those working in the industrial property field on an international basis, not necessarily just in obtaining patents and trademarks in other countries, but in international transfer of technology and who wish to obtain an understanding of the world industrial property scene, how it reached its present status and where it may go in the future.

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Introduction

Damon Swanson:

Welcome to the 17th Public Conference of the PTC Research Institute or Foundation and the Second Annual Conference of the PTC at the Franklin Pierce Law Center.

This conference is entitled "Removing the Barriers to a New Copyright Law" and brings together those persons actively engaged in copyright; and from each it is anticipated there will be an expressed opinion as to the present and future status of Title 17, Copyrights.

Before beginning the program of events, I would like to thank all of those persons who graciously volunteered their services in bringing this conference together, and especially to Harry Saragovitz, Manager of the PTC Washington office, who made contact with our guest Washington lecturers so they could join us here. I also thank Lynn Clarke, the PTC's Administrative Assistant, who devoted so much extra time to the planning and organization of the conference.

I would now like to make two introductions, Robert H. Rines, Dean of the Law Center, and Alan A. Smith, Chairman of the PTC's Advisory Council. Dean Rines some years ago realized the paucity of technical experts in the legal profession and in 1973 founded the Franklin Pierce Law Center to provide a substantive science-technical background to modern legal education. Never in the history of legal education has a law school gained national prominence in so short a time as has the Franklin Pierce Law Center. We look forward in the very near future for the Law Center to be *the* leader in all phases of the law and science education.

Dean Rines:

It is gratifying to have this noted panel share their views with us. It is equally important for us to help in an endeavor that we've all felt has been long neglected in this country; that is, an opportunity for government people to sit down in a neutral forum or atmosphere with the people they are attempting to govern and to try to work out some of the policies, compromises and alternatives toward the administration of justice. And certainly copyright indicates justice.

The whole concept of copyright, as we all know it, was inherited from our Anglo-Saxon forebears and has at its very roots a respect for the intellectual property of the individual. Although the Common Law of copyright is certainly engrained in English Law, the only statutory rights authorized in the United States Constitution are the rights that one finds in Article I, Section 8. So at least in the eyes of the framers of the Constitution, with very broad disciplines and very broad interests, it was important for America to nurture and encourage the creative individual. It was and is also important, of course, for the State to benefit by such innovation. And if you remember the debates that took place prior to and during the Constitutional Convention, the question was raised as to whether the United States Government should follow the route we now experience with the Atomic Energy Commission and the National Aeronautics and Space Administration in terms of controlling and owning industrial and intellectual property.

Sometimes it's good to sit back a little bit and look at those roots and those ideas, and particularly as our 200th birthday approaches, to decide whether we want to rededicate ourselves to those ideas or whether we want to lay new ground and go our own route. It seems strange that the Soviet Union and other nations are supportive of these same concepts at a time when we're inherently suppressing and not trying to encourage the creative individual and reward him.

One of our purposes here at the Franklin Pierce Law Center is to try to attract lawyers and law students, among others, who are particularly interested and dedicated to the field of industrial and intellectual property. This is a specialty that our infant Law Center is trying to launch. We have law schools that are very much concerned with other kinds of social matters such as welfare, the underprivileged, and so forth. And this is as it should be. Until now, there have been no law schools with primary concerns for the encouragement of the creative person, as distinguished from the nurturing and protecting of the rights of the masses, and which is usually necessary to carry into practice the fruits of the innovations of the few.

So, we are very grateful to the speakers here in helping to have a discourse with our young, budding law students interested in this particular field and with attending members of the Academy of Applied Science, and to find in us a forum where people from government can meet with representative persons and organizations of opposing views in this copyright issue which faces us today.

Oh, yes, we can approach it in the way that some now propose—to appropriate sums of money for establishment of a commission. A word to the wise should be sufficient. We recently had a Presidential Commission to revise the patent laws and in my opinion you can put their work in the waste basket where it probably belongs. This erudite group of persons was gathered together to solve in a six month period all the “evils” of the patent system. I don’t necessarily say this is what is going to come out of a Copyright Commission. I do say that people can do a lot of things for themselves, and it’s about time the people who use the copyright system decide what they want and see to it that their Congress provides it; not the other way around.

And so, if we can in some measure be an academic forum in which representatives of government are willing to sit down with interested parties, not appearing in a Congressional hearing where everything must be black and white and where there is little opportunity for constructive interchange of opposing views, but in a relaxed atmosphere, then perhaps some practical alternatives will be suggested in this conference and we shall have been of service in helping advance a new copyright law.

Damon Swanson:

Thank you Dean Rines. Alan Smith was one of the persons instrumental in the transfer of the PTC from George Washington University to Franklin Pierce. Until January 1 of this year Alan was Director of the PTC. He resigned his position at that time to become Chairman of the Advisory Council and is now on a very busy schedule as a consultant to Environmental Research and Technology in Concord, Massachusetts.

Alan Smith:

There’s an old saying about mountaineers that short men make the best technical rock climbers. The point is that they simply cannot reach the footholds up there and they have to make do with what there is; they have to innovate. I think the PTC is more or less in that situation. We can’t reach those big holds, which is mostly money at the moment, so we innovate.

I’ve talked in the last few days with several members of the Advisory Council and the Academy, one of whom we have with us today, Nelson Shapiro, and it seemed to them that there are really

two ways for the PTC to continue innovation, and Dean Rines has touched upon one of them, which is cooperation with other institutions of higher learning. We are already very closely affiliated with M.I.T., we're delighted to say. We have just added to the Advisory Council a man who is part of the University of New Hampshire and we are hoping to establish further relationships of that nature so that we can work cooperatively toward the kind of thing that the PTC stands for.

The second mechanism is the continuation of the publication *IDEA*, the law journal which started many years ago at George Washington, to report the proceedings of such conferences as this. In the early days of the PTC, the annual conference was a sizeable operation. It was strictly an establishment affair and people came from all over the country, and that's very nice. But it is not demonstrably true that the proceedings of those conferences were any better than will be these proceedings. In a sense what is said here might be perceived as more real than anything that comes out of Washington.

An Overview of Copyright and the Copyright Bill

THOMAS C. BRENNAN*

As we approach 1976, there is some danger that a visit to New Hampshire by a member of a Senator's staff may be misinterpreted. I therefore wish to announce that I am not an advance man for Senator McClellan or any other member of the Senate although I do believe that Senator McClellan would do well in New Hampshire.

In doing my homework for this appearance, I read a short biography of Franklin Pierce. I learned that in his tenure in the House of Representatives he served on the committee which handled patent and copyright legislation. The author of the biography indicates that he was very conscientious in working on private patent relief bills. There is no indication in the biography of any involvement with copyright bills, but I would imagine, because of his close ties with Nathaniel Hawthorne, that he was acquainted with the problems of authors.

In the American legal system, the concept of copyright is not derived from any natural right of the author. It rests exclusively on the language of the Federal Constitution. It is clear from the view of the Founding Fathers with respect to the evils of monopoly, and some copyright experiences in the Mother Country, that the

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principal purpose of copyright is not to reward the author but to foster scholarship and research and thus promote the public good. The grant of exclusive rights to the author is viewed as a useful means of promoting this public purpose.

U.S. Copyright Law

The existing United States copyright law is essentially the Act of 1909. There have been a number of amendments made to the Act, some of which have expanded the types of works which are eligible for copyright protection. The most recent of these expansions relates to the granting of copyright protection for recordings and tapes. But throughout this century, it has been left to the Copyright Office by regulations, and to the Federal courts, to attempt to apply the archaic language of the Act of 1909 to the evolving forms of technology and communications. Until recently this worked fairly well and the courts, unlike patent proceedings, have been willing to undertake appropriate expansions of the rights of authors. More recently, however, this effort has completely collapsed as will be discussed later in respect to cable television and library photocopying. The Congress has been engaged in the copyright revision project for over a decade. Even before the Congress became involved, there was extensive preliminary work by the staff of the Copyright Office.

Were it not for one issue, the Copyright Bill would have been enacted in the late 1960's. The one issue which has contributed to the delay in the passage of the bill is the multi-faceted cable television controversy. It became clear in the late 1960's that any resolution to the cable television issue required a balancing of the communications and copyright aspects of that problem. And, unfortunately, progress in the Congress had to await developments in other forums, including the adoption in 1962 by the Federal Communications Commission of a new cable television regulatory scheme. During the same period, there were two Supreme Court cases which dealt with the liability of cable television under the Act of 1909, and which held that cable is not liable under that statute. During this ten-year period, both the House of Representatives and the Senate, in different Congresses, had passed Copyright Revision Bills. As you know, the Constitution requires that a bill pass both Houses of Congress in the same Congress.

The Senate passed the bill in September of last year, that is, late in the 93d Congress, and the game plan for the current 94th

Congress is to process the bill through both Houses of the Congress. What I will attempt to do in this opening presentation is give a broad review of the structure of the Bill and the major issues, to lay a foundation for the subsequent presentations. Although most of this conference will focus on issues in dispute, it is probably well to recognize that most provisions of S. 22 are relatively non-controversial. And, I would like to mention a few of them because otherwise I don't think anyone will make reference to them.

From the time of the original copyright statute of 1790, the United States has had a dual system of copyright protection. There has been the Federal statute and there has also been Common Law protection for unpublished works. The pending bill in Section 301 would end the dual system of protection and establish a single Federal system. Section 301 and the commentary on that subject makes clear that the Congress is providing a rather sweeping preemption of State and Common Law protection.

A second area which is probably non-controversial relates to so-called formalities. These are such things as the copyright notice that must be given to the public, and the various procedures for securing copyright registration. Some of the provisions in the Act of 1909 are rather detailed and a copyright owner or creator may suffer a total loss of his rights because of an inadvertent failure to comply with some technicality of the statute. So the purpose in this Bill is to considerably relax these formalities.

Third, we provide in Sections 110 and 112 for a number of exemptions from copyright liability for different types of performances of copyrighted works. These relate primarily to classroom instruction, instructional television, and religious services. This bill would repeal the so-called juke box exemption. One of several mistakes made by the Congress in 1908 was its treatment of what was then known as coin-operated machines. The Congress was persuaded that these coin-operated machines were simply a novelty or toy and they had no significant commercial impact. The Congress did not anticipate the development of the juke box industry, which has become a half billion dollar a year industry. Up till now, the juke box industry is not making any direct copyright payment to the creators of the music that is performed on their machines. This bill would eliminate that juke box exemption. The repeal of the exemption is not controversial although there is some dispute as to the amount of the payment.

A fifth area about which there is general agreement, and Dean

Rines already alluded to this, is the treatment of the new technology. The Congress has found it hard enough to deal with juke boxes, electrostatic copying machines, and cable television systems. It is neither anxious nor equipped to undertake to resolve in this bill the copyright implications of the evolving new technology. On the other hand, we agree with Dean Rines, that it would not be in the public interest to indefinitely delay any action to await the resolution of those issues. Consequently, the bill initially provided for the creation of a national commission to study these problems relating to new technology and to make appropriate recommendations to the Congress for changes in copyright law and procedures. But even this disposition was overtaken by events. While the general bill was bogged down in fighting over the CATV problems, technology was moving forward. At the end of 1974, the Congress decided that it was in the public interest to establish the commission at once rather than wait for the adoption of S. 22. Consequently, you will not find any reference in S. 22 to the creation of the national commission. Unfortunately, as technology moved ahead, it had already, to some extent, overtaken the mandate that was given to the commission in the adopted public law; however, the nature of commissions is such that they will do whatever they choose to do and there's nothing in the law which will restrict their activities. Dean Rines made some unkind remarks about commissions, he spoke primarily about the patent commission, but I think it would apply equally well to a number of other commissions. I suggest, however, that there is one important contrast between the copyright commission and the patent commission. The copyright commission is structured to provide a forum whereby knowledgeable individuals can come together and hopefully achieve useful compromises; whereas with the patent commission, although there were, I believe, two patent attorneys on the commission, most of the members of the commission had no prior experience with the patent system and very little conception of what would have been workable recommendations. So much for the non-controversial sections of the bill.

The Revision Bill

The most important chapter of the bill is Chapter I. It sets forth the rights which are granted under the statute. Section 106 of Chapter I is the place you look initially to find what exclusive rights

are granted to the copyright owner. These can be summarized essentially as five exclusive rights with respect to the use of a copyrighted work: the right to reproduce, to adapt, to publish, to perform, and to display. Having given with the right hand in Section 106, the Congress then proceeds with the left hand (maybe I'm getting myself in trouble by referring to the left but I think it's appropriate), in Sections 107 through 117 of Chapter I to place various qualifications on the rights granted in Section 106.

If I had to select one section of the bill which I would describe as perhaps a keystone, I would choose Section 107 which deals with the problem of fair-use. This requires a little background. The Act of 1909 was concerned almost entirely with the grant of rights to the creator and the copyright owner. Very little was said about the users, although there are a few limited special exemptions. Consequently, there evolved through the courts the doctrine of fair-use, which in substance provides that it is not an infringement of the rights of the copyright owner to make under certain conditions limited use, for purposes of research and scholarship, of a copyrighted work. What are these conditions? Section 107 essentially attempts to codify the case law on fair-use so that if you look at Section 107 you will find a four-fold test which should be used in determining whether or not a particular use may be permissible as a fair use. The four-fold test involves the purpose of the use, the nature of the work, the amount being copied and the impact of the copying upon the commercial market for the work.

I don't have time in this once-over-lightly to apply these criteria to particular illustrations. The theory in Section 107 under fair-use is to continue to permit practices which have been authorized under court interpretations of the Act of 1909. With respect to traditional types of classroom instruction, such as a teacher making multiple copies for members of a class of short excerpts from a larger work, those practices would generally be permissible under the fair-use approach in Section 107. That's the easy part of the problem. It becomes much more difficult when you deal with the use of audio-visual materials and off-the-air taping of radio and television programs. Some critics of the bill, such as law professors, have said that the approach in 107 is a cop-out, that all the Congress is doing is passing the buck. I suggest to the authors of such learned commentaries that it is not possible for the Congress either in the language of the statute or in the history or commentary of the bill to resolve each of the hundreds of problems that could be involved in the application of the fair-use doctrine.

Closely related to the fair-use problem in Section 107 is treatment of library photocopying in Section 108 and decision of the Supreme Court in the recent case of *Williams & Wilkins v. United States*. All I have time now to do is to indicate how Section 108 came about and in a very superficial manner indicate the substance of that section. We began with the view that nothing should be said in the bill about library photocopying, that it should be left to the application of the criteria of Section 107, and that if the library could fit their practices into the criteria of 107, it was fair-use, and that was adequate to resolve the issue. For various reasons, that easy resolution has not proved feasible, and the problem was magnified by the filing of the Williams & Wilkins' law suit. First, Senators added a provision which would authorize the reproduction of out-of-print works if the owner of the copyright had not made provisions for the reproduction of the work. Then the libraries indicated they required a provision which would authorize the making of a single copy of a work. Now, what is a single copy? Having gone down that road, we had to provide some guidelines as to what was meant by a single copy. Then we were concerned about multiple copying and systematic reproduction. So there was language added to the bill which says that in spite of everything which comes before this, if what you are doing is systematic reproduction, this exemption does not apply. I personally would have been happier if we had taken the cop-out and just stuck with the language in Section 107.

Performance Royalty

I want to turn now to an issue which is extremely fascinating but one which did not survive in the bill as passed by the Senate. This is the so-called performance royalty. The issue with respect to the performance royalty is whether radio stations and other commercial users of recorded music should make a direct copyright payment to the owners of the copyright in the record and the recording artists whose services are used on the record. Although radio and television stations make substantial copyright payments, none of these payments goes directly to the owner of the copyright in the record or the recording artist.

The first problem with the performance royalty is: does the Congress have the authority under the Constitution to grant such protection? The Constitution speaks of the writings of an author. Do records and tapes qualify as the writings of an author? I

suggest, ladies and gentlemen, that all respectable authority holds that records and tapes do qualify as the writings of an author. However, there was a very distinguished dissenter to this point of view, namely Senator Sam Ervin, and as we all know, Senator Ervin was regarded as the Senate's leading authority on the Constitution. Senator Ervin advanced what I can only describe as a novel argument. He had previously voted in favor of legislation to grant copyright protection to records and tapes. Consequently, he could not dispute the fact that the Congress had acted and that the courts had upheld the creation of a copyright in records and tapes. But Senator Ervin said that for the Congress to require broadcasters to pay a fee for the use of such records was unconstitutional as going beyond the powers of the Congress. Then we had a novel constitutional argument advanced by a Senator from Nebraska who said it was unconstitutional for the Senate to even consider this issue because it is clearly a revenue measure and the Constitution provides that revenue measures must originate in the House of Representatives. Now, I think everyone here knows that the Constitution was speaking of taxation and not the payment of copyright royalties by broadcasters. Fortunately, for the opponents of the performance royalty, the weakness of their constitutional objections was offset by effective lobbying techniques of radio and television broadcasters and other opponents of the performance royalty.

Consequently, if you look in S. 22 you will not find any reference to the performance royalty. My personal view is that there is considerable justification for the creation of a performance royalty. The radio stations contend that they are making indirect payments to the artists and the owner of the copyright because they play the records and that by playing the records they give exposure to the artist and the song and that this leads to increased sales for the record and, if the artist makes concert appearances, it improves the attendance at his public appearances. I believe this argument has some, but very little, foundation in reality. A number of radio stations play so-called standards or middle-of-the-road music and when we hear a record that was released in 1950 or 1960 we do not rush down to our neighborhood record shop to purchase the record. With respect to those stations that play top-40, or current hits, they are unwilling to run the risk of losing an audience by playing a record that has not been already established in the public mind as a hit. I also suggest for some of my broadcaster friends that they do seem to have an inconsistent position. They object to

having to pay for the use of program materials but they are very vocal, and I think correct, in contending that the cable industry should pay for the material which the cable industry picks up.

This brings me to Section 111 of this bill. There will be several presentations on the cable issues later in the conference and all I will do now is indicate what the bill provides.

Section 111 reverses the two Supreme Court decisions which held under the Act of 1909 that the cable industry was not required to pay copyright royalties for the material in the broadcast signals which they pick up. The bill grants cable television a compulsory license to carry whatever signals are authorized pursuant to the regulations of the Federal Communications Commission. It then specifies certain criteria which must be met by cable systems, including the payment of reasonable copyright royalties. The Congress, in S. 22, would establish an initial fee schedule, but Chapter 8 of the bill provides the mechanism for periodic review and adjustment of those rates.

Conclusion

I want to comment on what I would describe as the one overriding trend in the progress of this bill and it is one which I do not like. That is the trend toward a compulsory license. This pernicious practice can be traced back to the Act of 1909. There is one compulsory license granted in the Act of 1909 which relates to what is known as the mechanical royalty. The mechanical royalty is the payment which a record company makes to the owner of the copyright in a song which is used on a record or tape. The Congress provided in the Act of 1909, because of a concern with the danger of monopoly, that if the copyright owner allows a single record company to record its composition, it must, upon payment of a specified fee, allow any other qualified record company to make a new recording of that composition.

I'll skip now from 1909 to the mid-1960's. The Copyright Office submitted to the Congress a report which is the foundation for subsequent Congressional action on the bill. The Copyright Office took the very sound position that a compulsory license could be justified only if there was an overriding public interest, and in their initial report to the Congress the Office decided that there was no overriding public interest in preserving this mechanical royalty compulsory license. However, that was not the end of the story. Two industries, the music publishing industry and the recording

industry, had grown rather comfortable with their working arrangements under the mechanical royalty compulsory license and, consequently, the Congress was told that the mechanical royalty license should be preserved in the pending bill. Then the juke box operators started objecting and they said, "Alright, now we are willing to pay something. We recognize that the exemption in the Act of 1909 is not justified. But we are all small businessmen and we can't be concerned checking whether the rights for a particular song are controlled by ASCAP, BMI or some independent creator. If we are going to be protected, we need a compulsory license." When the House of Representatives passed the bill there was added a juke box compulsory license. Then the cable people came to us and said, "We don't originate these programs, we are simply transmitting what we receive from the networks and the independent broadcasters. There is no practical way for us to secure rights to this program material." So, Congress in S. 22 and predecessor bills, gave the cable television industry a compulsory license. Now when we get back to Washington there is waiting a new proposal. The public broadcasting people say, "You can't treat public broadcasting less favorably than you're treating the juke box industry. What's good for the juke box industry is good for public broadcasting."

That, in a rather superficial view, gives you the background for the subsequent lectures. Thank you very much.

The Role of ASCAP in Licensing the Right to Perform Copyrighted Musical Works

HERMAN FINKELSTEIN*

Copyright Revision and Bulk Licensing

Our discussions today are all in the context of the pending effort to revise our rather outmoded copyright law. Perhaps the most radical proposals are those which would set up a statutory compulsory licensing system in two new areas—cable television and juke boxes. These are in addition to the statutory license for the manufacture of phonograph records, which first made its appearance in the 1909 law. That law has no provision for review of the statutory rate of 2¢ for each record manufactured. The pending bills in both Senate and House, however, provide for such review by a Copyright Royalty Tribunal as applied to cable television and phonograms. The bill as reported by the Senate Judiciary Committee also provided for review of the juke box rate, but the juke box manufacturers were successful in having the provision for review stricken out on the Senate floor, when the bill

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was considered last September. Now the *cable* people are trying to eliminate the tribunal as applied to rates for cable. I share Tom Brennan's view that compulsory licensing is not desirable, and should be resorted to only when there is no feasible alternative for reaching agreement by negotiation. When compulsory licenses are imposed under the copyright law, any rate fixed in the statute should be subject to review by an impartial body from time to time. Without such review a statutory fee may have little relation to the actual value of the particular use of the copyrighted works.

Resort to compulsory licenses arises out of a need for access to a great number of copyrighted works where individual negotiation is not likely to serve the purposes. ASCAP is the classic example of licensing copyrighted works in bulk in a manner that assures to every user a license on fair and reasonable terms with a minimum of record keeping. At the same time it affords to all writers and publishers of musical works, large and small, the means of securing a fair return for public performance of their works in nondramatic form. In many respects, the problems that ASCAP faced in 1914 were not too dissimilar to those arising out of the current explosion in reprography. In both cases the nature of the use generally requires access to an unlimited number of works without an opportunity, in most cases, to negotiate individual permissions; the amount allocated for each use is small and record keeping must be eliminated wherever possible; the uses, though seemingly minimal on an individual basis threaten existing markets for the authors' works. The difficulties must be solved if professional authors are to be encouraged. If a new source of income is available to authors, the country will benefit by a corresponding increase in their numbers. If any proof is needed the world of music supplies it. Compare the opportunities of a composer in Stephen Foster's day with those at present. As performance royalties have grown, the number of outstanding American songwriters and composers of serious works has advanced correspondingly.

The Organization of ASCAP

Returning to the subject of ASCAP, which was organized in 1914 by a group of composers and authors of musical works including Victor Herbert and John Philip Sousa and their publishers, there were new users of musical works which were bringing profits to everyone involved except those whose talents and efforts created the works which accounted for these profits. People were just

starting to get out of their homes for entertainment. They used to gather around the piano on Saturday evening and play the current popular songs. Songs then would last for a year or two before they lost favor. (Now some say that playing a popular number doesn't lessen its value at all but try to find a popular number that remains popular for more than 16 weeks today.) When people found that entertainment was available outside of the home, they started moving away from the piano. That cut down the sales of sheet music substantially and then it made another area of communication very important. Victor Herbert happened to have a play on Broadway in those days called "Sweethearts"; it wasn't playing to startling box offices; he went into Shanley's Restaurant for dinner and found that the hit number of the play was being sung by an artist at Shanley's, who did a better job at making the customers happy than occurred at the theatre. He said to his lawyer, Nathan Burkan, "They can't do this to me. I want to be paid for that performance." Burkan said, "Well, we'll bring a lawsuit and find out whether you can be paid or not." They lost the case in the district court, lost it on appeal and took it up to the Supreme Court in 1917. The Supreme Court in an opinion by Mr. Justice Holmes pointed out:¹

If the rights under the copyright are infringed only by a performance where money is taken at the door they are very imperfectly protected. Performances not different in kind from those of the defendants could be given that might compete with and even destroy the success of the monopoly that the law intends the plaintiffs to have. It is enough to say that there is no need to construe the statute so narrowly. The defendants' performances are not eleemosynary. They are part of a total for which the public pays, and the fact that the price of the whole is attributed to a particular item which those present are expected to order, is not important. It is true that the music is not the sole object, but neither is the food, which probably could be got cheaper elsewhere. The object is a repast in surroundings that to people having limited powers of conversation or disliking the rival noise give a luxurious pleasure not to be had from eating a silent meal. If music did not pay it would be given up. If it pays it pays out of the public's pocket. Whether it pays or not the purpose of employing it is profit and that is enough.

That decision was considered a charter for ASCAP and everything was supposed to be simple after that. That was in 1917. In fact, it was not until 1921 that ASCAP had enough money in the treasury to make any distribution to members or to pay any legal fees to its counsel, Nathan Burkan.

¹ *Herbert v. Shanley*, 242 U.S. 591, 594 (1917).

The members of ASCAP are writers and publishers of music. It is sort of a co-op, there are 12 writer-members on the Board of Directors elected by writers and 12 publisher-members elected by publishers. All the money they take in is divided one-half to the writers, one-half to the publishers. The writer's one-half share cannot be diminished or invaded by any contract he may have with a publisher member of ASCAP. If the writer says to the publisher: I will give you all my rights of performance, that grant is not recognized by ASCAP; the writer has to get this 50%. The writer can, however, get part of the publisher's money. All he has to do, as Rodgers and Hammerstein did, is to make provision for it in his contract with the music publisher. The writer can get part of the publisher's share but the publisher cannot collect any part of the writer's share.

ASCAP has agreements with similar organizations throughout the world and recently even with the Russians.

ASCAP's Licenses to Users

Licensing must be on a bulk basis. Imagine what would happen if a dance hall had to arrange for individual licenses. A couple celebrating their 25th wedding anniversary would like to have a composition played that evening that was popular when they first met. They go up to the orchestra leader and say, "Play so and so." Suppose he had to find out whether he had a license for that particular copyrighted song. He would have to have a book there with about a million compositions, or I guess 200,000 would be the number that would satisfy anybody, and he would have to run through the list to see if he had a license. By that time the couple would have left to go somewhere else for the night's celebration. The owners of the place of entertainment would have to have some method of being able to perform anything without fear of being sued for infringement. In the early days, as a practical matter, if the composition was not in the ASCAP repertoire there was no fear of an infringement suit. The copyright owner would never know that it had been played. A blanket license gave the right to perform any musical work in any way so long as it was nondramatic or not dramatized.

Survey of Uses and Distribution to Members

How about accounting? How does each writer and publisher end up getting the right amount of money? The user pays a lump sum

per year. How is it going to be divided up? Well, in the early days ASCAP circularized some of its licensees to find out if they would report their uses. The most frequent responses they got was, "How would you like to go to hell?" Some were less polite. From that time on, there has never been any report of uses except by the radio and television networks who report all of their uses, and by symphony and concert presentors as well as wired music. If a writer or publisher knows his work has been performed on a radio or television network and it does not show up in his royalty statement, there's something wrong somewhere—either there was an improper report from the network or something happened after the report came in. The individual radio stations or television stations don't make any report to ASCAP of their uses. About one out of 300 performances is sampled so everytime a performance shows up within the period being taped, the member gets as much as 300 times the amount that user paid ASCAP.

BMI has the stations submit their own reports. They know in advance when they are going to submit them—for so many weeks a year. ASCAP maintains that such reports are unscientific because the station making the report knows that it will affect the distribution to a far greater extent than the payment by the station to BMI for the uses reported. Not all affiliates of BMI are paid on the basis of those reports. Many have special deals with BMI guaranteeing certain amounts regardless of the uses reported. ASCAP does not have any such deals; everybody is treated the same way. But we have had some of those BMI reports and there ought to be somebody from BMI here to answer me on this. We have had some BMI reports sent to us by accident, at the same time we had monitored the stations and in many cases we find that any resemblance between our actual tape and the report they sent BMI seemed purely coincidental. I think many stations, if you talk to them privately, will say, "Well, we can't afford to monitor these things precisely." Reports may be made up in advance, but they do not have somebody sitting there making a note of just what is actually performed.

A lot of people think that stations have to keep a record of what they perform and that they must file such reports with the FCC. The fact is they do not have to keep such a record at all. I think it would be great if they had that requirement but there is little chance of that happening. As a matter of fact, ASCAP has distribution advisors, two of them, appointed by the federal court. (We've had some antitrust problems, as you students can readily

understand if you have studied the antitrust laws.) A former distribution advisor thought that the idea of getting logs would be a good thing because there are times when you can't identify a composition by merely listening to it. So this distribution advisor wrote the stations and asked them whether they would be willing to send logs to ASCAP of what they performed, not for the whole year but for two or three months. A local association of broadcasters wrote back and asked when they would be required to start reporting ASCAP uses because they would at that time take ASCAP music off the air.

So that gives you an idea of how much chance there is of getting reports from stations throughout the country that you can rely on. That's one of the problems. ASCAP monitors the stations on a sampling basis. The stations sampled are selected by an outside agency. The whole program for sampling was set up by an outside agency in conjunction with the Department of Justice and the Bureau of Census and that's pretty much outside of ASCAP. The tapes are kept for a two-year period so that if any member wants to question whether the reports he got are accurate, he can go back to the tapes. Let's assume that a member knows that his work was performed in a certain place and yet the work doesn't show up on his royalty statement. You could say to him, "Oh, look through all the tapes and see if you can find your work." That would be small comfort to him. Actually, he writes ASCAP and says, "I want to know why my work was not reported." ASCAP writes back that the program he referred to was not included in the sample. If he's not satisfied with that reply, he can get in touch with the distribution advisors and they will make the search for him. They don't go into it at his expense; they go into it at ASCAP's expense. That's a great thing. When ASCAP was a small outfit in Victor Herbert's day, there wasn't any mathematical system for reporting or distributing royalties. They all knew each other and trusted each other. To make it attractive to the people down below, the people at the top accepted a little less than they were entitled to. So in the earliest days of ASCAP, there were four classes of membership; the top people in Class A who got a factor that we'll call X, those in Class B got 75% of X, Class C got 50% of X, and Class D got 25% of X. So every member of the society got something. With a distribution to the least performed writer, of an amount not less than one-fourth of the amount allotted to the most performed writer, it was necessary to limit membership to people who were really professional writers or real music publishers. And so in those days

a writer couldn't become a member of ASCAP unless he had five hits. Then as the membership grew, instead of having four classes they had six, eight and finally eighteen classes of membership. The membership grew enough so that some of the members down in the lower classes were not sure they were properly classified. It became necessary to have some kind of mathematical system. Today the distribution to publishers is on a purely mathematical basis—one hundred percent on the basis of performance during the past quarter or year. On the writer's side, the writer has a choice of getting paid on the same basis as the publishers are paid or being paid on the basis of a five-year average. A writer who has a hit this year but then doesn't have one for the next two or three years may be living high on the hog one year and then is close to relief for a couple more unless he can average his earnings. Most writers choose the five-year average and that works very well. A writer may write the kind of things that are not performed on radio or television. He may receive a special award out of a 5% fund that is set aside to reward writers whose works are not properly reflected in the survey, or whose works have unusual prestige. Writers receiving more than \$20,000 annually on a performance basis may not share in this 5% fund.

At this point, let me say something about the composer of "serious" or classical music. I ought to mention that symphony orchestras send in a list of works performed. They do not send in their encores but they do send in their programs. So, if the only thing they have performed is an encore, the member may be short-changed there. I do not know if we'll be able to solve that problem or not.

In our present world, universities have largely taken over concert entertainment. ASCAP has a license that furnishes universities and other educational institutions with an annual rate that ranges from \$25 a year to a maximum of \$200. That covers everything that is produced on campus except concerts presented by professional musicians. A lot of ASCAP's members have works performed within the universities. ASCAP was making a complete survey of these uses but it found that it cost too much to make such a survey in an area that paid only \$200 a year. It cost far more than that just to make the survey. They had to cut down the survey to a sampling of 1 out of 6 programs that are sent in by the universities.

The money that comes in from most symphony orchestras and universities is multiplied by 10 when it is paid out to the members. The reason for that is that in the United States a serious composer

does not receive the kind of recognition he gets abroad. Our copyright law, the 1909 law, provides that performances of musical compositions may be given in public without the composer's consent or any payment to him unless the performance is "for profit." The symphony orchestras do not challenge the "for profit" aspect of their performances. The members of the orchestra are paid and they charge admission. The symphony orchestras have all said, "If we didn't pay the composer, how would we get contemporary music?" Money from symphony orchestras is not enough to encourage composers of serious works, so that is multiplied by 10 when it is paid out and that money comes from the popular composers and publishers.

ASCAP does not have a treasury; anything paid out has to come from somebody else. That is why it is so important to have outside review of what ASCAP distributes. For the protection of ASCAP itself, there must be some method of assuring the members that no one group has control of the organization. And when you're distributing 70 million dollars a year you can have a lot of arguments over whether that distribution is fair or not. I spent a lot of time on the distribution aspect. I understood, indeed, from Dr. Swanson that anybody giving a talk here could invite you people to ask questions at any point and unless there are questions on distribution, I am going to leave that subject.

Scope of the ASCAP License

Most of ASCAP's receipts come from licensing broadcasters. Let's look at the forms of license available to them. They have an option for either a program license where they pay only on those programs which use music in the ASCAP repertory, or a blanket license where payment is based on sums received from all advertisers on all programs. When there were 600 radio broadcast stations in the United States, before television, 100 of those 600 stations had a program form of license. Today there is one, or there might even be two. We used to get those program reports with very little money. We checked the reports and found inaccuracies in abundance.

Today broadcasters almost universally have blanket licenses. They pay on the basis of a percentage of all the money they get from their advertisers—in radio, 1.725% less certain deductions. In the entertainment world contracts on a percentage basis are computed on the gross; a percentage of the net is likely to produce many arguments but little return. So the ASCAP percentage is on

the gross less certain specified deductions. That payment gives broadcasters the right to perform anything in the repertory in nondramatic form.

There is a question as to what is dramatic and what is nondramatic. ASCAP members are pretty liberal in their interpretation for the most part, but some members of ASCAP are fussy. One in particular does not want you to take his music (written for Broadway shows) and use it to present a ballet. A ballet is a dramatic use. Bear in mind that the ASCAP license is for nondramatic uses. Members reserve the right to license dramatic uses themselves. We have had some problems with the rock opera, *Jesus Christ Superstar*.² There was an outfit that wanted to put that work on in its entirety under an ASCAP license while another producer called the Robert Stigwood Group was putting on *Jesus Christ Superstar* as an opera under direct exclusive license from the members who wrote it. The latter sued the presentor who had gotten an ASCAP blanket license for nondramatic uses and was advertising that it was presenting *Jesus Christ Superstar*. The Stigwood Group claimed that that was in competition with the dramatic rights which they had acquired from the writers. There were several decisions, the basic one in the Second Circuit holding that the ASCAP license did not give them the right to advertise that they were performing *Jesus Christ Superstar* because that was a dramatico-musical work; that they couldn't perform *all* the numbers in the work, whether they advertised it or not, because that was dramatizing it, and that was the reserved right of the member, but they could perform some numbers.³ In radio or TV the general rule when songs are taken from a particular show is that if you perform two or three numbers from the show you will not have a problem with the copyright owners. Some may permit more.

There are other problems. I got a call one day from a member who said, "One of the networks is advertising in this morning's New York Times that they're going to perform Noel Coward's 'Blithe Spirit' this evening and they mentioned that they are going to use a song of mine in that dramatic work. I have not given such permission and I hope ASCAP has not purported to do so." Fortunately, ASCAP hadn't and he was able to work out his own arrangement with the network.

But there was another case where I was not that fortunate. One

² See Vincent Louis Perrone, "Small and Grand Performing Rights? (Who Cared Before *Jesus Christ Superstar*)," 20 Bull. Cr. Soc. 19 (1972).

³ Robert Stigwood Group Limited v. Sperber, 457 F.2d 50 (2d Cir. 1972).

of the networks was using a couple of numbers from a Broadway show and in one of them the performers were wearing the same costumes as they did in the original Broadway show. The writer complained that ASCAP apparently had assured the network that this use could be made under its ASCAP license. I replied that I was sure this hadn't been done, but when I checked back I found that ASCAP had confirmed the network's right to use this number the way they said they were going to, and that the clerk who had confirmed their right to do so was no longer in ASCAP's employ. On reporting this to the ASCAP member he responded, "If the network had asked me for permission to do this, I would have gotten about \$50,000 instead of the few hundred dollars I will get through ASCAP. But," he said, "that isn't what I'm complaining about. Suppose I had sold the dramatic rights to the show to a third party. It happens that I retained those rights myself. If I had sold the show to somebody else and were then told that my association, ASCAP, had given away the right to do this, how do you think I'd look?" Well, we have those problems and ASCAP tries to resolve them as much as possible, if it's a borderline case, in favor of the user. We try to get our members to be of the frame of mind that if the ASCAP system is going to work, you have to lean over backwards to be of service to the people who have paid for the rights. And I must say that the ASCAP membership by and large is pretty good about it.

There are some members who feel that their works ought to be sacrosanct and we respect that, and I must say that the networks respect it. But by and large you will find the members want this system to work and are very liberal. When cast albums first came out, it could have been claimed by ASCAP members that these albums presented the works "as such, in part," which is expressly outside the scope of the ASCAP license. I think, however, that almost every member of the Society permits stations to perform cast albums on radio treating them for practical purposes as if they were nondramatic performances.

The ASCAP system is voluntary and has worked well. Its method of licensing has been followed by a user group, BMI, and by a private corporation, SESAC, Inc. Through these three organizations all the music of the entire world is available for nondramatic performances, to all American users. The ASCAP experience may be helpful in resolving current problems in other areas.

Technology and the Law in Copyright

L. CLARK HAMILTON*

As a personal note, I would like to begin by saying, "Franklin Pierce, where have you been all my life?" I am one of those people who have mixed the careers of law and technology over the years. When I first became exposed to this particular subject, or group of subjects, no one knew how to cope with them. There were lawyers and then there were technicians; there didn't seem to be a mixture. Two or three years ago I tried to interest the Dean of the Georgetown Law Center in giving a course on law and computer technology. In support of my proposal, I submitted an outline for the course covering several pages. It was returned to me with a very nice letter which stated, in effect, "I understand law but I don't understand technology. I see a lot of technology in the course outline, but I don't see any law." So it comes down to a problem of communications. I think that the Franklin Pierce Law Center is embarking on a challenging, and stimulating course in terms of what can be done in the combining of these important disciplines.

Reprographic Reproduction

We are talking about technology; and we are talking about copyright law. Let's talk about what the technologies are that are impacting and influencing the copyright law. First there is

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reprographic reproduction and that's a mouthful in itself. The term covers the complete spectrum of reproduction of an image ranging from Xerographic process, with which all of you are familiar, to capturing information as it is created; converting the information to machine-readable form; and automatically composing the information for final printing.

Computer Technology

As regards computers, we have to talk in terms of both the hardware and the software. Actually there is a whole range of processes that can occur which involve the application of the computer hardware and software. It is now possible to couple computers with computers using a variety of media. We use the term "data communication" to describe the capability. What we are witnessing is a technological explosion which affects the entire information spectrum from its creation to its final distribution and, legally, we are unable to cope with the results.

Let's talk about this information spectrum. First there is source data capture. In the early sixties, forward-thinking publishers took a long hard look at how they were producing materials with an eye to reducing printing costs. Most printing at that time was of the cold lead variety—in other words, manually operated by typesetting machines. Technology, at that time, offered great promise in relation to photocomposition systems. By using a computer and associated software to drive a photocomposer, publishers could produce an infinite variety of typefonts for a variety of different texts. After the usual gestation period that occurs for the introduction of a technology, we came up with a series of automated photocomposition systems. Of course, in doing this the publishers achieved their goal of substantially reducing production costs through the elimination of cold lead type.

The Lawyers' Cooperative Publishing Company (LCP) is a good example of this development. LCP now directly inputs all of its material to be printed and the associated type composition codes using computer terminals. The computer software operates with this input to drive the photocomposers which create the plates for the final printing of LCP products which are law books. But LCP now also has a valuable by-product—all of their material is in machine-readable form. What will LCP do with this material? LCP plans to make their machine-readable data bases the source for a variety of other services to the legal profession. The Information

Services Division, Lawyers' Cooperative Publishing Company, has been established to market these services which, as I noted previously, are by-products of publishing. These services have the advantage of portability, since they are on tape or on disk. Unlike lead type, the data can be easily transported from one computer installation to another. Expanding this concept to include data communications, the information does not have to be resident on a particular customer's computer. The information can be resident on a central LCP computer with access by a large number of customers using telephone lines and terminals.

Once the machine-readable data base has been created, it is necessary to move to the next part of the information spectrum which I would label information retrieval. The means of performing this function are also included in the general category of software or software products.

IBM, which is dominant in hardware, enjoys a similar position regarding standard software. Prior to 1969, IBM was including the software in the price of its computers. In 1969 IBM changed its policy, partly in response to antitrust actions which were brought against them by the Department of Justice in 1968, and began to sell the programs or software as proprietary products. They called them "program products." The data processing industry, in general, followed suit. So now, with few exceptions, you will find that all of the general purpose software produced by the computer industry of the United States is being sold as proprietary program products.

Furthermore, the creation of program products is not limited to the data processing industry. Substantial activity of this sort takes place at all levels of government. I will use the Library of Congress as an example. At present there are no less than five major software systems that have been developed for various Library functions. These packages cover data entry (source data capture), photocomposition and information retrieval. The Library creates data in machine-readable form that are in the public domain. These data are primarily catalog entries or abstracts which describe the holdings of the Library. However, the Library has had the experience of private concerns modifying both the software and the data which are in the public domain, adding new matter or work product and thus creating a proprietary product, the new portions of which are entitled to copyright protection. Of course, when software is developed which is capable of storing and retrieving information, it is not possible to limit how software,

particularly that available in the public domain, will be used. If an unscrupulous party converts copyrighted materials to machine-readable form for storage in a computer, the developer of the software and the copyright owner could be oblivious to this fact until substantial damage had occurred.

I have previously mentioned data transmission. This is the next link in our information spectrum. The technologies of source data capture and information retrieval had permitted the creation, manipulation and retrieval of large quantities of information. However, until relatively recently there was not available an economically viable medium to transmit large volumes of information to remote locations.

At first, the technology for long-distance, broad-based communication was available only within the Department of Defense. In reality, the DOD was the only organization that could absorb the high development costs for this technology. Now we are seeing this technology used increasingly in commercial environments such as international conglomerates. A major factor in the expanding use of this technology is the availability of high-capacity communication satellites.

Another technological development that is having and will continue to have an impact is cable television. Although CATV will be treated separately later in this seminar, it deserves mention at this point because of its potential role in the information spectrum. CATV was originally developed as a method of improving VHF fringe area reception and essentially that continues to be a significant portion of the CATV market. I should note that CATV is an extremely capital intensive activity; in other words, you have to have a lot of money to set up these systems. Also there are some very difficult legal problems, such as getting permission to string cable on telephone poles and revising or interpreting local ordinances to permit cable to be drawn through the cable raceways going into condominiums and apartments. Talk to some of the cable attorneys some time; they will tell you some interesting stories of just how you have to deal with these things.

Little by little CATV is penetrating the major urban areas of the United States. This development is highly significant when one considers the phenomenal information transfer capabilities of CATV; literally thousands of voice communication circuits or several VHF or UHF channels can be contained in a single cable. Now we tend to think of CATV in terms of broadcasting only network television programs. That is the concept in our minds

when we look at the receiver that we have in our homes. We do not comprehend the different types of information transfer and presentation capabilities that are latent within television systems.

CATV is the final link of the information spectrum in terms of what the technologies can do and what they're capable of doing. When that link is completed, we will have to think in terms of transmission not of just digital information over telephone lines—we will then be dealing with a variety of different types of transmission over CATV into the home. Further, we will not be receiving the great number of images that you have to transmit so far as the television program is concerned; it will be a relatively slow rate of transmission of images, such as pages. In fact, it is so slow in terms of the human eye viewing the image that a very large number of different images can be placed in a single time slice and simultaneously sent to a number of different receivers.

Let us now consider the television receiver. The FCC is the principal regulatory agency for the television industry in the United States and can mandate that certain things be done by the industry. For example, in the early sixties, the FCC directed that all television receivers manufactured after a certain date had to have a UHF reception capability. Of course that tremendously expanded the channel capacity of television receivers. I've been told (I can't confirm this) that there is a regulation that will shortly be put into effect that after a certain time television receivers must have a capability to be easily modified for transmission as well as reception. In other words, it will become a transceiver. If this is the case, it adds still another dimension to what we are talking about so far as technology and copyright—with an information user out there rather than a passive viewer. That information user can be extremely selective in terms of what he or she would like to receive. The technology is there—the technology to do all these things. The problem is, in my opinion, that we are not at the point of being able to effectively cope with those technologies, from a legal standpoint.

WIPO

The World Intellectual Property Organization (WIPO) in Geneva, which is a U.N. specialized agency, is charged with the administration of the Berne Convention and other international treaties related to intellectual and industrial property. WIPO has been grappling with a facet of this problem, that of the protection

of computer software, for the past four or five years. The initial meeting of experts on this subject was held in 1972; there was a second meeting in 1974, and there will be a third meeting this year. The purpose of these meetings is to determine whether existing law of intellectual or industrial property can provide the protection desired or whether a sui generis system must be developed.

The consensus of the conference in 1974 was that patent protection for computer programs would be desirable but there is a trend of judicial decisions both in the United States and elsewhere in the developed countries away from this approach. Also the time consumed in applying for patent protection and the search for prior art that must occur tends to create additional impediments. The use of copyright protection was viewed by a number of the countries as a relatively painless method of obtaining legal protection. Of course, what is being protected in this instance is the expression or description of what the program, or software, does, rather than the underlying software itself. Hopefully under S. 22, we will have a little bit more flexibility, and I agree with Tom [Brennan] that the more general you make the legislation, the better off you're going to be. You don't want to tie yourself down too greatly.

*National Commission on the New Technological
Uses of Copyrighted Works*

The technologies are obviously impacting the law and vice versa. Somehow we will have to effectively rationalize these two disciplines. The vehicle which is supposed to do this is the National Commission on the New Technological Uses of Copyrighted Works. The Commission was established by separate legislation at the end of the last Congress, signed into law on December 31, 1974 by President Ford. However, the President still has to appoint the members of the Commission and Congress has to appropriate funds for its operation. The National Commission has a three-year life. Within one year of the first meeting of the Commission, a report will be required on reprographic reproduction or library photocopying. At the end of the three-year period, the Commission is required to produce a second report relating to the generation of copyrighted works using computers.

The legislative history of the Commission is a further indication of how technology has outstripped the law. When Title 2 of the Copyright Revision Bill (the National Commission) was originally

written in 1969, the great concern was the matter of the machine-readable copyrighted material, its creation, transmission and dissemination. Of course library photocopying was included but secondarily. In the intervening time, there has been a flip-flop. Library photocopying has been the subject that has come to the fore and the other aspect has tended to recede. So, I think that the great bulk of the activity of the Commission will probably relate to library photocopying, because, as Bob [Shafter from Xerox Corporation] will probably tell you later on, it's no longer photocopying. The Xerox Corporation is developing all sorts of machines right now which will let every man be his own publisher. Of course they have to pay a substantial monthly lease to do this, but from a cost-benefit standpoint, it will probably make commercial sense to a number of individuals and firms.

In effect what has happened here is that the whole spectrum is being compressed. You can't talk anymore just about library photocopying, reprographic reproduction—you have to talk about information, creation, storage and transfer. It becomes impossible to determine where one part of the spectrum ends and where another part begins. So, we hope that the National Commission will be appointed and proceed to speedily address these problems.

Library Photocopying

For several years, library photocopying has been the subject of much debate and acrimony between various persons. The groups or persons in contention can be generally divided into the intellectual property producers (authors and publishers) and the intellectual property consumers (librarians and educators). In September of 1974 the Register of Copyrights, Barbara Ringer, and Mr. Fred Burkhardt, Chairman of the National Commission of Libraries and Information Sciences, undertook to use their good offices to establish a forum for bringing the contending parties together so as to determine whether there were some areas where minimum agreement could be established. The first meeting occurred in November 1974. The essential thrust of the meeting was to try to define three things: first, those areas, if any, where agreement could be obtained; second, those things where there was not presently agreement but where agreement might be obtained with some work; and third, those areas in which there was no agreement at all. When the group met initially, there wasn't much of number one, there was some of number two and there was a lot

of number three. But as a result of the first meeting there was established a working group to sit down and define the various positions. They met on several occasions and at the second meeting of the general group, in January 1975, the working group was able to report that they had reached some agreement on certain points. The most important was that they agreed to avoid getting involved in such non-productive activities as defining "systematic photocopying" and to concentrate instead on developing practical solutions to the problems. Specifically, the working group is looking into methods of compulsory licensing for the reproduction of all or portions of scientific and technical journals and the effective distribution of the proceeds from such a system.

The Proceedings of the Conference on the Resolution of Copyright Issues were recorded and printed. I would like to leave a copy of the proceedings of the first meeting with you. I think you'll find it rather interesting reading.

Comments

Going back to what Tom [Brennan] said in terms of compulsory licensing—it scares me, because under the Revision Bill the Copyright Office is going to be charged with the collection and distribution of royalties from juke boxes and CATV. At present we are an office of records. Applications for registrations of copyright come in; we receive the money for fees and disburse that to the Treasury; we insure the two deposit copies required by law are included; and then we examine the application form to see if it's properly filled out, to make sure the proper parties have applied and if the material is of a type that can be copyrighted. Under the new law we will become what might be termed a quasi-regulatory agency, with all of the horrors that that can imply. As I said previously, everybody thinks about CATV in terms of fringe area reception. We do not know what information will be coming over that cable, but we will be charged under the Act with collecting for all copyrighted material, depending on whatever schedule is developed by a royalty tribunal. We don't know exactly how we're going to cope with these problems. It's going to become more complex and we're going to need a lot of help from the copyright bar and a variety of technologists who hopefully can provide us with some practical solutions to these problems. Some of the recommendations coming out of the National Commission should be helpful, but I think the National Commission is going to have a

job on its hands just wading through the material that's been printed so far relating to library photocopying, the new technologies, industrial property and copyright generally.

Last evening Mr. Finkelstein and I were briefly talking about *Williams and Wilkins* and I said, "Billions of dollars" and he raised his hand and said, "No, not as far as library photocopying is concerned." I said, "No, I didn't mean that. I meant billions of dollars in terms of what's been written so far as *Williams and Wilkins* is concerned." There is a whole separate sub-industry now going so far as the *Williams and Wilkins* case. There was a two-volume book recently published in which was collected all of the material on this case. Naturally, the book was copyrighted. The Supreme Court split four to four on *Williams and Wilkins* with Justice Blackman dissenting. As such it affirmed the Court of Claims decision which was in favor of the U.S. Government but on a very narrow basis. I don't think anybody should take any great solace from the decision, from either side. I think that this is something the National Commission does have to address. Hopefully, we will see the appointment and selection of the members of that Commission soon and that they will be able to go on and do the good work and the necessary work that has to be done.

Finally, I had alluded generally to international activities when I talked about legal protection of computer software. There are a number of other activities involving both industrial property and intellectual property throughout the world. An example is the adherence of the Soviet Union to the Universal Copyright Convention in May 1973.

The Register of Copyrights and I visited the Soviet Copyright Agency in October 1974 at which time we discussed a wide variety of matters involving copyright in both of our countries. I think that the Soviets are seriously considering a registry system like we have in the United States. They also are seriously considering the development of a nationwide, automated information system. There has been serious writing about this system in the Soviet Union for the last three or four years. They contemplate an extremely broad-based system that will enable them to communicate any type of information to anywhere in the country (an essentially government-operated system involving all of their establishments). It would probably be something that would be done on a much more organized basis than perhaps you'd see in the United States. That does not imply that the system will be any better. We raised the following question with them: "Have you ever

thought about the copyright implication of such an information system?"

The answer was "No," that they hadn't thought about it. We raised the same question with the librarians of the Lenin State Library and they hadn't thought about it either, and also they didn't care. I'm not saying that in a disparaging way. I'm just saying that they didn't care because they view it from the standpoint of public use and the dissemination of public information. That is the danger so far as technology is concerned. We tend at times to become so embroiled in the technology that we don't think about those things. Technology traditionally has moved ahead of the law, and the law is always, it seems, trying to catch up. I hope that the work of the Commission, coupled with seminars like this and the overall work of the Franklin Pierce Law Center, will put us in a position in the future where we can at the same time intellectually cope with both law and technology.

I wish to express my appreciation for the opportunity to talk to you this morning and to wish Franklin Pierce Law Center much success in this conference and in its endeavors generally.

The Photocopy Industry and Copyright:

Section 108 of the Bill

ROBERT L. SHAFTER*

I am very privileged to be here and would like to thank the PTC Research Foundation, the Franklin Pierce Law Center and the Academy of Applied Science. Herman Finkelstein commented earlier this morning about public servants and I think that would apply equally well to Clark Hamilton. There are not very many people in public service with whom we are privileged in the Copyright Bar to be associated, who actually spend the time, their own time and creative efforts, to work out the resolutions to these very, very complex problems. I pay tribute to Clark Hamilton and all the others of the Copyright Office.

I will not give you any particular words of wisdom. But, I would like to share with you some random observations that I've had on copyright and photocopying. I have been associated with publishing for fourteen years, approximately seven of which were with McGraw-Hill and seven with the Xerox Education Group. I hope that I can persuade you to believe, as I do, that this Copyright Revision Bill is the best bill we are going to have; and it's important that we have it and have it soon. I hope you students won't still be talking about the Copyright Revision Bill when you are professors!

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I am the Copyright and Trademark Counsel with the Xerox Corporation and also am Group Counsel, which is analogous to the General Counsel, of the Education Group of Xerox. I think it is only fair to you to give you my bias; that is to say, what my background is. I am here, not in an official capacity representing Xerox Corporation, but as an individual. But I do not think that anything I say will be inconsistent with that of Xerox.

Williams and Wilkins, Time for Change

I will now quote briefly, if I may, from last Sunday's New York Times [March 2, 1975] editorial page. "United States Supreme Court ruling on the nettlesome subject of photocopying has done little to remove confusion, encourage creativity in the free marketplace or allow equitable arrangements covering the various users of original works. Instead, a divided court has thrown matters back to the years before the technological revolution resulting from xerography. The *Williams and Wilkins* case, expected to provide guides for the future, has proved no landmark The effect of the unusual 4 to 4 split in the Supreme Court, with no opinions rendered on either side, is to restrict photocopying in the particular circumstances of this case."

While I'm still on my background bias, as well as the introduction to the problem, I notice in this very fine brochure of the PTC Research Foundation that there is a reference to the members, and there's Xerox listed. Xerox is cited in the informational brochure as Xerox in Rochester, New York and Xerox in Stamford, Connecticut. You might think that Xerox in Rochester, the heartland of our photocopying equipment, and Xerox at Stamford, Xerox' International Headquarters and where the Education Group is headquartered, might have two different views. Basically, we're all of one view at Xerox and our Chief Executive, C. Peter McColough, wrote Senate counsel Tom Brennan, back in November of '72, to the effect that we urge the prompt passage of the Senate Bill. We consider it a substantial advance over the present law of 1909 to warrant prompt and favorable action by the Senate. That letter happened to say, "We also commend the voluntary efforts, albeit unsuccessful, of several publishing and library representatives for a detailed consensus on library photocopying." Those meetings failed at that time, I think they are referred to as the Dumbarton Oaks Meetings and, lo and behold, here we are today and they are meeting again—the so-called

"Upstairs-Downstairs" Group. This time we hope they won't fail. There was some very serious concern they would end after the recent *Williams and Wilkins* decision.

Williams and Wilkins is the first case on photocopying with respect to copyright infringement. The trial judge in that case, Judge Davis, sets forth in his decision the substantial amount of photocopying being made per year. The facts were that, within a pertinent accounting period, two governmental libraries made at least one photocopy of each of the eight articles from one or more of four journals. These photocopy requests, as shown in the trial, were made by National Institutes of Health researchers, and an Army medical officer based in Japan, in connection with their professional work and used solely for those purposes. In seven of the eight counts of the petition, the article requested was more than two years old and in the eighth instance it was 21 or 22 months old. So basically the facts, really the record in that case, as I understand it, was that there were eight articles from four journals that were photocopied at least once. Seven of them were two years old and one of them almost two years old. It's hardly a situation that generates much sympathy for the publisher. The trial court, however, did find copyright infringement. It then went to the full Court of Claims and in a 4 to 3 decision there was, it held, no copyright infringement. The majority, weighing what they thought were the balances, found that the medical community had an overwhelming right to have the information. The case then went to the Supreme Court of the United States, and in a "no" decision—it was a 4 to 4 decision without opinion—they said nothing but divided the votes and sustained the Court of Claims. So what we've had is 16 judges hearing the *Williams and Wilkins* case, 8 apparently saying it was infringement and 8 apparently saying it was not infringement.

This is really a very complex situation. Even though the courts are saying that the decision relates to the narrow facts of *Williams and Wilkins*, obviously human beings are going to read the decision more broadly—that journal article photocopying is freely permissible under all circumstances.

There is an obvious concern that perhaps the librarians will feel they got everything they wanted and have no further need to confer with the publishers and authors in line with what the Senate Committee has suggested about the library photocopying situation. However, I understand they did meet yesterday. I don't know what happened, but I don't think everything was completely resolved

because one of the items on the agenda, as proposed by the librarian side, was the date for the next meeting. So, there will be other meetings. But it is a very good sign that they are voluntarily trying to resolve this very complex problem of library photocopying.

Photocopying and Royalty

The librarians are overlooking the point of what is and what is not infringement, and instead are trying to come to the practical means whereby people can have access to information and the means to account for it. One suggestion has been that a library pay an extra amount of money in its subscription and then they will have the right to freely photocopy. They are trying to work out some sort of accounting system. As I perceive the publishers' position, they are opposed to a blanket accounting system in a manner of ASCAP because, they say, that there are too many publishing houses involved; therefore, it becomes too complex for an ASCAP-type system to work out.

The publishers also feel it's an arbitrary determination of how the money will be divided. The other aspect of it is that you could spend dollars to collect nickles and dimes. I don't know what route will eventually be selected. The major point is that the parties are really trying to arrange a practical means to have prompt access to information.

Now, there is, and I am saying this mainly for the benefit of the law students, a difference between access to information and photocopying. You can easily have access to information, because copyright is to get the ideas out to the public. If you publish with the statutory copyright notice, your wording is protected. But, your ideas are out there. And nobody in this day and age, perhaps in any day and age, wants to bother to read past what they read in somebody else's words; the idea they just read, they don't want to rewrite it. It is easier to make a copy of what somebody else said—maybe they can't say it as well. And that's where the copyright infringement can come to play.

Future Technology and Copyright

With that "discourse" as the background, I now move ahead to the future. I'm sure each one in this room had a situation where he or she has seen an article or book chapter which was copyrighted,

and copied it without regard to copyright. I think this has happened to all of us.

I know from our experience in connection with our *Publisher's Weekly*, the magazine for publishers, that there are some articles in there that are reproduced within the publishing houses. Permission is rarely asked to photocopy. Even the good guys, if you will, don't always request permission.

If you can think about this in your own context, when should you request permission? You are making very subjective judgments whether permission is required when you photocopy something. Yet somebody else will say, "Well, there should be some rules of thumb which we can go by." It's a very difficult thing. But, it's got to be resolved for the technology not only of today but also of tomorrow.

Unless the problems of copyright and access to information are solved in the future, we are going to have a conflict. It may be, and I say this more as a publisher than anything else, that from people's pressures to get what they want to get, the copyright side will be pushed down. That is to say, the copyright owners will be the losers unless they come up with a meaningful solution for prompt access to information.

I don't really want to sound pompous but I am just trying to stress the point of urgency of the situation, and the need for the passage of the Senate bill, and certainly the establishment of the National Commission, which has already been passed into law but has not been established.

Senate Bill S. 22, Section 108

You have with you a handout. I refer you to the Senate Bill, S. 22, the bill introduced this year which is, please correct me Mr. Brennan if I'm wrong, identical with the bill passed last year [MR. BRENNAN: Make it substantially the same] without Title II.

Let's turn, if you will, to Section 108. That begins on page 9. This is the so-called library photocopying problem. We heard Mr. Brennan say, and I am delighted to hear him say it, that in the late '60s the major holdup in the passage of the copyright revision bill was CATV. I was glad to hear that, rather than as some people say that it was the photocopying problem.

If you look at 108 it says, "Notwithstanding the provisions of section 106 [which is the exclusive rights of the copyright

proprietor], it is not an infringement of copyright for a library or archives, or any of its employees acting within the scope of their employment, to reproduce no more than a copy . . . of a work, or distribute such copy . . . , under the conditions specified by this section." The general conditions are that the copy must be done without purpose of direct or indirect commercial advantage; the library's collections are open to the public; and the copy must bear a copyright notice.

Section 108(b) refers to unpublished works. That subsection is not really a bone of contention between publishers and librarians.

Section 108(c) does apply to the published work. A qualified library may make a duplicate for the "purpose of replacement of a copy . . . that is damaged, deteriorating, lost, or stolen, if the library . . . has [this is the key], after a reasonable effort, determined that an unused replacement cannot be obtained at a fair price." That's one of the things the Upstairs-Downstairs Group—the group Clark Hamilton was mentioning and I referred to as a group of publishers, authors and librarians—should focus on.

Then Section (d) applies to a copy of no more than one article or other contribution of a copyrighted collection or periodical issue. A qualified library can make a copy for one of its users or another library if the copy becomes the property of the user providing the copying library has no notice that the copy will be used for any purpose other than private study, scholarship, or research and further providing that the library places a copyright warning notice on its order form and at the place where orders are accepted. The library's copying rights under section 108(d) extend to the isolated and unrelated reproduction or distribution of a single copy of the same material on separate occasions. The section does not exempt cases where the library engages in the systematic reproduction or distribution of single or multiple copies. (That limitation against "systematic" is set forth in section 108(g).)

Section 108(e) is basically similar to subsection (d), just discussed, except it applies to entire works with the requirement that the libraries first determine on the basis of a reasonable investigation that a copy of a copyrighted work cannot be obtained at a fair price. In section 108(f), the library is clearly exempted from liability, if any, from the use of photocopiers by its patrons. "Nothing in this section—(1) shall be construed to impose liability for copyright infringement upon a library or archives or its employees for the unsupervised use of reproducing equipment located on its premises, provided that such equipment displays a

notice that the making of a copy may be subject to the copyright law." That is to say, when you have those coin-operated copiers, whether IBM, SCM, 3M, Xerox, the library itself is not liable for any copyright infringement being done on those copiers provided they have an appropriate notice thereon. And, in that respect, you've got to remember that there's a lot of material in libraries that is not copyrighted.

As I said, Section 108 is important in that it makes clear the rights provided to libraries. Section 108 was not intended to affect the fair use rights of libraries already under Section 107. Section 108(g), on page 11, is intended to prevent the "systematic reproduction [or systematic photocopying]." What exactly is systematic photocopying? In every instance? No one knows what that is but what (g) is designed to prevent is the photocopying consortiums of the future, wherein photography equipment is more advanced and the results are faster yet the copies easy to read. Let me phrase it a little differently than that. It's supposed to prevent the so-called extended interlibrary loans, whereby a consortium library member of the future would only take one subscription and then supply requests on demand via any reproductive process to any of its subscribing member libraries, thus cutting down the number of subscriptions ordinarily that would have been available to the publishers. This is the key area, I think, of concern.

There are of course some publishers, and I don't presume to speak for them, that would oppose any form of photocopying under any conditions. There are others whom it really doesn't bother if there is any photocopying. For example, I referred earlier to my own *Publishers' Weekly*. To our knowledge, we don't think that whatever photocopying is being done has hurt us at all.

But there are the half-way areas, particularly the technical, medical and scientific journals; the ones who have a very expensive subscription rate. Because their circulation is limited, and perhaps, because the subject matter is more esoteric, they are very seriously hurt financially when the number of subscriptions decreases. And eventually the subscribers to a professional society journal may be deprived of the information that would normally be circulated by those magazines. So it is to prevent this multi-photocopy situation for which (g) is designed.

As in virtually all sections of this bill (g) is a compromise. No one side is going to say it's perfect. It is not really intended to be perfect because you are not going to get everybody to agree on the same

points. The sections of the bill are compromises. They are hard fought-out compromises. As I say, in a pragmatic and philosophical way, I think it is an ideal bill. I believe Barbara Ringer said some time ago, in response to a query, that if she were asked to write her own copyright revision bill, it would be basically the same as the present bill. I think that is quite a compliment to the effort of all the people in the Copyright Office, Tom Brennan's staff, and others, who worked on this bill. It really is a fair compromise bill.

Senate Committee Report

You have the Bill, S. 22, which is, as Mr. Brennan says, except for Title II, essentially the same bill that the Senate passed last year. What you do not have is the Senate Committee report. I have copies here, if anyone wants them, of the Senate Report on Section 108, the library photocopying section. I would like to quote, if I may, from part of that report.

"The Committee [the Senate Committee] believes that Section 108 provides an appropriate statutory balancing of the rights of creators, and the needs of users. However, neither a statute nor legislative history can specify precisely which library photocopying practices constitute the making of 'single copies' as distinguished from 'systematic reproduction.' Isolated single spontaneous requests must be distinguished from 'systematic reproduction.' The photocopying needs of such operations as multi-county regional system, must be met. The committee therefore recommends that representatives of authors, book, and periodical publishers and other owners of copyrighted material meet with the library community to formulate photocopying guidelines to assist library patrons and employees. Concerning library photocopying practices not authorized by this legislation, the committee recommends that workable clearance and licensing procedures be developed."

Well, the Upstairs-Downstairs Group, referred to by Clark Hamilton, is meeting and I hope they do succeed. I think the Committee has made it quite clear, at least to the copyright proprietors, that if the people want access, they are going to get that access. So, really it's important that we do come up with meaningful solutions for appropriate access.

Licensing: Copyright Royalties and Exemptions in the Music Industry

RALPH PEER II*

The creators of copyrighted works . . . the sole and only beneficiary of the Copyright Law of the United States under the Constitution . . . have been treated shabbily and stingily from the very beginning of our copyright system . . . (Their) situation . . . needs to be protected . . . not only as the creators of works of economic values but as something that is infinitely precious to our country.¹

Music copyright owners today face a two-fold challenge. Technology and the forces of the market have created an urgent need for improved legislation while simultaneously demanding new procedures to smooth the flow of copyrighted material to the user without abridging the intended protection of the works.

Law is the *sine qua non* of intellectual property. It alone prescribes the ways society is to compensate creators and thus “promote the progress of science and the useful arts”²—a national goal since our Constitution was framed 200 years ago.

Efforts to secure a new copyright law, to replace the current and

* Vice President of Peer-Southern Organization (a major international music publishing house), New York.

¹ Ms. Barbara Ringer, Register of Copyrights, Opening Statement, House Judiciary Subcommittee Hearings, May 7, 1975.

² U.S. CONST. art. I, § 8, cl. 8.

outdated act of 1909,³ have been active in Congress since 1964. At this writing the House is again considering copyright reform after a hiatus of six years. A bill was passed in the Senate by a strong 70 to 1 vote in the fall of 1974. Now entitled S. 22 or H.R. 2223, the proposed legislation contains many provisions of interest to composers and publishers of music.

Compulsory Licensing in the Proposed Legislation

A departure from previous copyright legislation is the extent to which the proposed law defines the relationship between creators and users. Whereas definitions of exclusive rights and remedies for infringement constitute the essence of the 1909 act, the new legislation devotes more attention to limitations of traditional exclusive rights and specific price schedules for the creator-user relationship. These price schedules, known as compulsory licenses, may be framed either as a percentage of the revenues or as a ceiling price that may be sought by the copyright owner.

Compulsory licensing is anathema to creative talent. It is heartening that some congressional leaders are now questioning the extent to which Congress should be involved in this rate setting.⁴ Special interests who continue to plead for compulsory licensing are users who must believe their ability to persuade Congress is stronger than their position in the free market. Expanded protection for the user does not serve the national interest and certainly does not serve the creative community that copyright protection is intended to foster.

Heretofore, the compulsory license has applied only to mechanical reproduction rights of musical copyright owners.⁵ Current draft bills broaden the concept to cover Jukeboxes⁶ and CATV,⁷ an amendment has been offered to include Public

³ 17 U.S.C.

⁴ 94th Cong., 1st Sess. viz questions by Mr. Drinan and Mr. Pattison, hearings on the Mechanical Rate before the HR subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee on the Judiciary, Sept. 11, 1975.

⁵ 17 U.S.C. § 1(e) reads in part: "whenever the owner of a musical copyright has used or permitted or knowingly acquiesced in the use of the copyrighted work upon the parts of instruments serving to reproduce mechanically the musical work, any other person may make similar use of the copyrighted work upon the payment to the copyright proprietor of a royalty of 2¢ on each such part manufactured, to be paid by the manufacturer thereof." § 101(e) specifies remedies for infringement of mechanical reproduction rights.

⁶ S.22, 94th Cong., 1st Sess. § 116 (1975).

⁷ *Id.* § 110(d).

Broadcasting⁸ and there is discussion of a further extension to cover library photo-duplication.

The Mechanical Compulsory License

Compulsory licensing of mechanical reproductions came into American Copyright Law in response to circumstances not present today.

In 1908 the Supreme Court in *White-Smith Publishing Co. vs. Apollo*⁹ held that "the making and sale of a pianola roll of a copyrighted musical composition did not constitute copying" and therefore was not an infringement. In a concurring opinion on the basis of the facts, Mr. Justice Holmes stated, "on principle anything that mechanically reproduces that collection of sounds ought to be held a copy, or, if the statute be too narrow, ought to be made so by a further act except so far as extraneous consideration of policy may oppose."

At Congressional hearings in May of 1906, bills had already been introduced which clearly included mechanical reproduction in the scope of protection. During joint hearings on this bill a representative of several New York player piano manufacturers claimed that the proposed wording would give a monopoly in the music roll business to the Aeolin Company, a rival manufacturer. The basis for this allegation was that the Aeolin Company had received from numerous music publishers exclusive long-term license agreements to manufacture music rolls in consideration for its carrying the White-Smith case to the U.S. Supreme Court. This representative of the manufacturers indicated that they were not opposed to giving the composer some return provided this was done in such a way that every manufacturer would have the right to use the music upon paying for it.

At subsequent hearings, committee sentiment was largely divided between those who favored a compulsory license and those who favored mechanical reproduction rights without compulsory license. At the behest of the Committee Chairman, representatives of the songwriters, talking machine people and piano roll manufacturers met and hammered out an agreement in favor of

⁸ S. 1361, 93rd Cong., 2nd Sess. (1974) amendment offered by Senator Mathias.

⁹ 209 U.S. 1 (1908) (Holmes, J., concurring). Lower courts had previously ruled to the same effect. *Stern v. Rosey*, 17 App. D.C. 562 (1901); *Kennedy v. McTammany*, 33 Fed. 584 (C.C.D. Mass. 1888), appeal dismissed, 145 U.S. 643 (1892). Accord: *M. Witmark & Sons v. Standard Music Roll Co.*, 213 Fed. 532 (D.N.J. 1914), aff'd, 221 Fed. 376 (3d Cir. 1915) (pre-1909 work).

the 2¢ flat rate as proper and reasonable for 1908. Displeased, the talking machine people felt that for certain inexpensive records this amount was too high. Therefore in a bill introduced subsequent to these hearings,¹⁰ a compulsory license provision first appeared that was based on either a most favored nations approach or, if it was the first use, on a percentage of the gross sum received. A rival bill¹¹ introduced soon thereafter provided for compulsory license at 10% of the marked retail price.

Subsequently in January and February of 1909 other bills were introduced which fixed the royalty at "10% of the selling price but in no event less than 2¢,"¹² "5%"¹³ and finally H.R. 28192 provided, for a "royalty of 2¢ on each part manufactured."¹⁴

In practice the compulsory license is a *ceiling, not a rate*. No matter how good a song is,¹⁵ manufacturers need pay no more than 2¢. Yet, record companies consistently ask for and frequently receive rates lower than the 2¢ ceiling.¹⁶ The mechanical compulsory license provision is a government price ceiling on the most desirable uses set below the price level which would be achieved under free market supply and demand. Without the converse, a government price support, free market forces reign below the statutory rate, giving a one-sided benefit to users. Whereas record companies, many of whom are multimillion dollar corporate giants, can take advantage of their significant marketing strength in bargaining for lower rates, musical copyright owners are prevented from seeking a higher remuneration.

We have become wed to a system which has outlived its original

¹⁰ 60th Cong., 1st Sess. H.R. 21592 (1908).

¹¹ 60th Cong., 1st Sess. H.R. 22071 (1908).

¹² 60th Cong., 2d Sess. H.R. 5162 (1909).

¹³ 60th Cong., 2d Sess. H.R. 27310 (1909).

¹⁴ 60th Cong., 2d Sess. H.R. 28192 (1909).

¹⁵ Mr. Chet Atkins, one of America's most gifted artists and executive of RCA's Country Music Division recently spoke about the fundamental creative contribution of the song to a successful record.

The song's the thing. You can have the biggest and most expensive studio, the best sounding musicians and experienced engineers and technicians: *If you don't have the song*, the artist cannot be expected to have a hit.

In 1974, Mr. Goddard Lieberman, then President of CBS Records and Chairman of the Board of the Record Industry Association of America spoke on creativity to the International Music Industry Conference. He told them, "The basis of any successful record is the song."

¹⁶ A recent study by Robert R. Nathan Associates, Inc., Washington D.C., indicates that in the last quarter of 1974 the mechanical rate was below 2¢ on 67.6% of licenses issued, the average rate being 1.62¢ per selection.

purpose. There is no evidence today of monopoly or even oligopolistic characteristics in the supply function for musical copyrights. Yet, it seems probable that Congress will include some form of mechanical compulsory licensing with a statutory rate in our new copyright legislation. If so, what should that rate be? Certainly, the higher it is set, the closer music copyright owners will be to free market conditions.

The 1974 Senate-passed bill provided for a statutory rate of 3¢. In a joint statement in September of 1975, composers and publishers asked the House Subcommittee for a ceiling of 4¢, pointing out that such an increase would not even fully compensate the creators for the value lost through inflation since 1967 when the House set a 2 1/2¢ statutory rate.¹⁷

At the September, 1975, hearings, the record industry testified that they would be under a vast financial burden if the creators *were given permission* to negotiate for more than 2¢ per selection. Their arguments are not persuasive. In seeking a 4¢ rate ceiling before the House, publishers and composers asked for a raise of less than 6% of the total amount by which the record industry, on its own initiative, has increased the price of the typical album over the past ten years. During that decade the cost per selection to the record consumer increased by 110% with no permitted raise in the maximum that could be sought by the publisher/composer.¹⁸

A structure that sets the ceiling rate in absolute terms will necessarily become outdated as the dual forces of inflation and changing technology carve their certain impact. Recognizing this, the proposed legislation creates a royalty tribunal to periodically examine the ceiling rates. Nevertheless, I am persuaded that the fairest way to compensate a creator and publisher, if there must be a ceiling to protect record companies, is to have the compulsory license rate as a percentage of the suggested retail price as is done in almost every other advanced country of the world.

Jukebox Licensing

As they stand in the 1974 Senate-passed bill, the new provisions for compulsory licensing of jukeboxes¹⁹ are a most serious abuse of

¹⁷ The 1975 value for the 2.5¢ is in excess of 4.23¢. This is obtained by multiplying 2.5¢ by 1.69, the ratio of the consumer price index (CPI) for June, 1975, to the CPI for 1965.

¹⁸ 1965, typical record sold: \$3.98 for 12 songs (\$0.332 per selection) 1975, typical record sold: \$6.98 for 10 songs (\$0.698 per selection).

¹⁹ S.22, 94th Cong., 1st Sess. § 116 (1975).

this concept. When Congress was debating our current act in the early 1900's, it was not difficult for them to be persuaded that putting a penny in a slot to hear a scratchy cylindrical record through earphones did not constitute a public performance.²⁰ Today not even the jukebox interests can deny that their \$55,000,000 cash industry no longer qualifies for this exemption. Instead they have turned to compulsory license as a shield. S. 22 provides for a maximum fee of \$8 per year with this amount being set on an absolute basis and not subject to review by the tribunal. Have we learned nothing of the inequities of setting fixed rates in times of change? In this case the imbalance is so blatant that I am optimistic that tribunal review of the statutory jukebox fees will be restored.

Performance Rights

The proposed legislation contains other provisions important to the composer and the publisher of music. Even though limited by fair use provisions²¹ and possibly even compulsory licensing,²² the expansion of the exclusive right of public performance by the removal of the "for profit" test²³ would be an important modernization of our statute. Under the current law, the Public Broadcasting System and other similar organizations are paying no copyright royalties. It is morally untenable that these well-financed broadcasting organizations should pay the manufacturers of their expensive broadcast equipment, the landlords of their premises and countless other suppliers of tangible goods and services and pay nothing to the creative community who supplies them with essence of the programs they deliver. The lack of compensation from this source is particularly burdensome to contemporary serious music composers who are limited to television exposure through "educational" channels because contemporary serious works, by their inherent nature, seldom have the immediate mass appeal necessary to attract commercial advertisers. Certainly our

²⁰ 17 U.S.C. § 1(e) provides:

The reproduction or rendition of a musical composition by or upon coin-operated machines shall not be deemed a public performance for profit unless a fee is charged for admission to the place where such reproduction or rendition occurs.

²¹ S.22, 94th Cong., 1st Sess. § 110 (1975).

²² S. 1361, 93rd Cong., 2nd Sess. (1974) amendment offered by Senator Mathias.

²³ 17 U.S.C. § 1(e).

society would benefit by providing these additional incentives to serious music composers.

Term of Copyright

Another provision of the proposed legislation that is particularly significant to publishers with commitments to composers of serious music is the extension of copyright protection to the life of the composer plus 50 years. Public tastes lag far behind the genius of our young American serious composers. An extended term is conducive to justifying the costly investments required to bring this important music to realization. The extended term, furthermore, would be a step towards allowing the United States to join the Berne Convention,²⁴ adhered to by most developed nations, thereby, automatically guaranteeing the broadest protection for American works used in foreign member nations.

Reprography

The recent Williams and Wilkins Circuit Court decision, affirmed by an equally divided Supreme Court,²⁵ has put the creators in the embarrassing position of pleading that copyright should include the right to copy. The "fair use" provisions of Section 107 do relatively little to clarify the intended guidelines in the increasingly important field of reprography.

Creators are rightfully incensed that hundreds of thousands of copies of their works may be distributed in classrooms each year with revenues paid to the manufacturers of photoduplication equipment, but without so much as a nod to the composers, authors and publishers who have provided the substance of this classroom experience. On the other hand, teachers argue that the process of procuring permission for duplication in advance is cumbersome and in order to react to classroom situations they must have immediate access to copyrighted music and other teaching materials. The solution of these dual requirements may well lie in new methods of administration rather than in new law. The copyright community can and should create new procedures to provide access for the user and insure fair remuneration for the use. Copyright proprietors are not and should not be restrictive.

²⁴ Berne Convention for the Protection of Literary and Artistic works of Sept. 9, 1886.

²⁵ *The Williams & Wilkins Company v. The United States*,— U.S. —; 43 U.S.L.W. 4314 (Feb. 25, 1975).

With few exceptions, we want our material to be as broadly-used as possible. Therefore it is incumbent upon us to find the creative solution, most likely in the form of a licensing agency to handle reprographic rights on a non-exclusive basis. In this way immediate access could be assured and bargaining could take place in the free market where it belongs.

Reprography is not unique as a difficulty arising from the confluence of copying technology and intellectual property protection. The music business has recently been plagued with illicit tape duplicators who have mass-produced copies of successful recordings. In this case active policing and legal pursuit is proving effective. But what new challenges will come as the result of video disks and other forms of advanced information storage? The field of copyright today and in the future promises many new challenges. These can only be faced adequately with the help of modern legislation and responsive industry innovation. We need both to do the job of encouraging our creators.

Royalties and Educational Exemptions in Copyright

HARRIET L. OLER*

As most of you know, the copyright revision issue has been ongoing, in the legislative sense, for some 11 years now, preceded by another ten years of study and discussion. The early version of the Revision Bill passed the House of Representatives in 1967, and just last year S. 1361 was passed by the large vote of 70 to 1 in the Senate. The Copyright Office, at least, is optimistic of ultimate passage of the Revision Bill in the 94th session of Congress. So, I think that our discussions at this seminar are somewhat more than academic for the first time in a long history of copyright deliberations.

The topics I will discuss are embodied in Sections 111, 107, 110 and 114. These are three of the most controversial areas in the revision legislation; and at least one of them, performance rights for sound recordings, may perhaps provide the biggest stumbling block to the passage of new copyright legislation.

When I was thinking of what I would say today, for some reason I thought of the reputed deathbed statement of Gertrude Stein. As she was about to pass on, she reportedly heaved a sigh and said, "What is the answer?" And her friend, Alice B. Toklas, replied, "In

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that case, Miss Stein, what is the question?" I guess that's the same type of dilemma that faced the drafters of the Revision Bill in the areas dealing with new technology. Because technology necessarily predates legislation, it is sometimes hard to define what the questions will be. The attempt of the drafters, I think, was to keep the Bill somewhat flexible, and perhaps general, while still being specific enough to lend predictability to areas of new technological developments.

Cable Television

The first area that I want to talk about is Section 111, the cable television provision. This provision was not included in earlier revision legislation which passed the House, but it was embodied in basically the same form in the Senate version which passed last year. The Bill will create quite a few differences from the law as it stands now. I think Mr. Feldstein will probably fill us in on the cable television operator's point of view; so, I'll try to stick generally to the legislative provisions, and maybe give a few of the copyright proprietor's concerns just to try to balance his views in advance.

As the FCC defines cable systems, they are superior television reception systems which receive T.V. and radio signals off the air or by microwave, amplify them or otherwise modify them, and then distribute them to paying customers.

I suppose most of you know that under the present law, Justice Stewart has authored two Supreme Court decisions which hold that cable television operators are not liable to copyright owners for reception and retransmission of cable signals embodying their copyrighted works. In the earlier case, the 1968 *Fortnightly* case, the Court held that in the area of local broadcast signal retransmissions, the cable system's retransmission of copyrighted works did not infringe plaintiff's exclusive right to perform a copyrighted work. In other words, the retransmission did not constitute a performance within the meaning of the 1909 law. The Court's reasoning was basically that *Fortnightly's* cable system functioned more as a passive viewer than as an active broadcaster in that the cable system merely improved its subscribers' capacity to receive broadcasters' signals; and, therefore, its activities did not give rise to any copyright liability. Some of us, at least, tried to confine this decision to the local broadcast area of transmissions or retransmissions, but we were wrong. In last year's *Teleprompter* decision, Justice Stewart again authored the Supreme Court's

opinion. It extended the *Fortnightly* rationale to cover the importation of distant signals. As the law now stands, neither the importation of distant signals, nor the retransmission of local broadcast signals in the local area, gives rise to copyright liability. Interestingly, I thought, the *Teleprompter* decision was based somewhat on an economic argument. The Court reasoned in part that the compensation which an advertiser is willing to pay a broadcaster, and which the broadcaster will pay the ultimate copyright holder, will be based on the size of the direct broadcast market as augmented by the cable T.V. market. In other words, the Court averred that the advertiser is willing to pay the broadcaster (who in turn will pay the copyright holder) for all the viewers, when he pays for the initial primary broadcast. Thus, the Court said that the copyright holder was not in any sense disadvantaged from the nonpayment of copyright fees by the CATV system. Of course, the countervailing economic argument, and one which prevailed in the Second Circuit below, was that the local advertiser is not willing to pay higher fees for additional viewers in a distant market when that extends beyond the area where his product or service is sold.

As I see it, the present status of the law is that first, there is no copyright liability for CATV reception service irrespective of the distance between the broadcaster and the ultimate viewer, although the FCC may restrict the importation of distant signals. Second, there is copyright liability for the use of copyrighted works in cablecasting, or program origination. This has been held to constitute a performance under the *Teleprompter* decision. Third, there is liability for a non-simultaneous transmission on the basis of a video tape copy. This was established by a memorandum opinion in the 1969 case of *Walt Disney Productions v. Alaska Television Network, Inc.*, holding that the preparation of video tapes of copyrighted materials infringed upon the rights of a copyright owner, and the dissemination of programs by non-contiguous cable systems also constituted an infringement. And, finally, there is possible liability for alterations in the broadcast program, such as where advertising is edited or commercials substituted. Liability in that situation would arise from the *Teleprompter* decision's rationale that CATV systems carry what they receive without editing.

The new copyright Bill changes these concepts by incorporating the principle that CATV operators should pay for the use of copyrighted materials. As you may know, the Bill includes a system of compulsory licensing, which is an increasingly popular legislative

solution in the copyright area when opposing interest groups face an issue created by new technology. A compulsory license relieves the copyright holder of his control over his copyrighted work; but, at the same time, it ensures him of compensation for the use of his work. Thus, it represents a balancing of interests.

Under the latest version of the copyright Revision Bill, compulsory licensing will be available for secondary transmissions of FCC licensed stations. The Bill will make the compulsory license available for any secondary transmission permitted under FCC rules, where the primary transmission is an exclusively oral or radio signal. Also, it will be available where the CATV is providing reception service for local signals. And, finally, compulsory licensing will be available where the carriage of signals constituting the secondary transmission is permitted under the FCC rules.

This is a more general provision than that which was included in previous versions of the Bill. Instead of specifying the FCC regulations, the new Bill simply says that these signals must meet the FCC specifications with some flexibility for changing the regulations without having to go through another arduous legislative process.

Cable operators under this new compulsory licensing system will have to file a notice in the Copyright Office within one month before they use the signal, that is, before they make the secondary transmission. They will have to identify the operator and the broadcaster and bring the Office up to date on what stations are being carried. Secondly, they will have to file a quarterly accounting in the Copyright Office, listing the number of channels, identifying the broadcaster, and giving the number of subscribers, gross income, and revenues received from such sources as advertising, leased channels, cablecasting (if a program or channel charge is made), and reception service. Finally, the operators will have to pay their royalties to the Copyright Office; and then the Copyright Office, if everything goes well, will distribute the royalties to the copyright owners. In a case of a dispute over royalty sums, a Copyright Royalty Tribunal will be convened under Chapter 8 of the Bill.

The Royalty Tribunal is also empowered to review and adjust royalty rates, subject to a Congressional veto. The royalty under the new version of the Bill has been substantially reduced. It is a graduated royalty based on a percentage of the amount of gross receipts for the reception service. The Bill retains full copyright liability if the signals are carried contrary to the FCC rulings, if the

operator fails to file his notice in the Office within one month of the secondary transmission, or if the primary transmission was to a controlled group such as a closed circuit T.V. program.

Also, under the Bill, several secondary transmissions other than cable transmissions will be exempt from any sort of liability, compulsory licensing or otherwise. That would include local secondary transmissions to private hotel rooms and the like, instructional broadcasting under Section 110, which I will discuss shortly, signals carried by passive common carriers who provide only the cables or the physical means of transmitting the signal, and nonprofit secondary transmissions by governmental bodies or other nonprofit organizations.

I would say in summing up the CATV provision that the proprietors seem to be unhappy with the cuts in royalty rates and are concerned about some specific provisions dealing with noncontiguous states. Under the Bill now, certain areas which are not geographically contiguous to the United States may be permitted to make video tapes of programs for retransmission in their locales. Video taping is not allowed under the normal CATV provision. At the same time, cable operators seek frozen royalty rates, exemption of small systems from the licensing scheme, and freedom from suits by local broadcasters under §501(c). And, finally, there still is some activity on the part of special interests who want to include a sports blackout provision (which was formerly in the Bill but has now been taken out and left either to the Commerce Committee legislation or to the FCC). Thus, positions on the cable issue are undergoing chronic reassessment as interested parties await hearings in the House of Representatives later this summer.

Educational Uses

The second legislative area where there is some controversy still remaining is that of educational uses. Clark Hamilton has already spoken to you about library photocopying, and it certainly is one of the most controversial issues. But there are others under the fair use provisions of Section 107 and under the educational broadcasting provisions of Section 110. Here, again, the Bill attempts to reach a compromise between the legitimate needs of the copyright holders to control the compensation for their works, and, on the other hand, those of the educational community to enjoy inexpensive access to copyrighted works. As regards the fair

use provisions of Section 107, authors and publishers have argued that the user should bear the burden of proving a fair use defense when he uses a particular work. On the other hand, educational organizations want a specific exemption to allow for educational uses so they won't be risking any kind of copyright liability. The Bill seeks to resolve this controversy by giving statutory force to the present judicially created doctrine of fair use. It sets out some rather general standards for judging whether a particular use is a fair use. It also enumerates a few specific examples of fair use, such as criticism, comment, newsreporting, and the like.

Section 504(c)(2) embodies a further attempt at compromise by providing that teachers who innocently infringe may be absolved from copyright liability. This legislative provision has incurred some opposition. Authors feel that it will open the door to massive infringements through educational uses, whereas educators are fearful that the statute fails adequately to protect them.

Section 110, limiting the exclusive rights of the copyright owner in certain defined situations, is one of the most controversial sections of the Revision Bill. As you know, the 1909 Copyright Law exempted non-profit educational radio or T.V. broadcasts of nondramatic literary or musical compositions. By 1965, it was felt that this exemption was too broad in view of potential transmissions to mass audiences by way of linked computers, communication satellites, and other forms of broadcasting. Hence, the new broadcasting provisions retain the current law's distinction between dramatic compositions and other works, and, in addition, attempt to differentiate the liability for uses of copyrighted works by educational broadcasting as an adjunct to in-school classroom activities from liability for uses in programs to entertain, or educate, the general public.

Section 110(1) provides an exemption for the non-profit performance of a nondramatic literary or musical work or display of a work in the course of face-to-face teaching activities, except in the case of audiovisual works where the copy is known to have been unlawfully made. Subsection 2 then exempts educational broadcasts, including performances of nondramatic literary or musical works, provided they are non-profit performances or displays. But, it adds the caveat that such broadcasts must be part of a systematic instructional activity, must be directly related to that activity, and, thirdly, must be made primarily for reception in classrooms.

This last provision has created controversy because the educational users claim that the value of educational broadcasting

is in reaching mass audiences and that's where the future of educational broadcasting lies. They see this restriction, that the transmission be primarily for reception in classrooms, as a very inhibitive one.

Former Sec. 110(2)(d), which dealt with computer uses of educational materials, was postponed for study by the newly created National Commission on New Technological Uses of Copyrighted Works. Finally, I might mention that Senator Matthias has proposed a Section 118, which would set up a compulsory licensing system for public broadcasting. The provision was not introduced in the last session; but it is scheduled, I think, to come up early this year. Thus, we may see a compulsory license system for public broadcasting provisions, as well as for CATV and others.

Performance Rights for Sound Recordings

Finally, a third area where compulsory licensing has been instrumental in achieving a compromise is that of performance rights for sound recordings. Section 114, as it was passed by the Senate, contains no provision for performance rights for sound recordings' but, we expect one to be introduced either as separate legislation or as an adjunct to the Revision Bill. In the latter case, that might pose a problem for passage of the Bill because it is a contentious and long standing issue. Protection of recording artists was emphasized by the American Federation of Musicians during the 1967 revision hearings. I don't know whether anybody here attended those hearings, but Julie London at that time sang the Mickey Mouse Club song in a very provocative voice. It sounded quite different from the renditions of the Mouseketeers on the Mickey Mouse Club program! Miss London was emphasizing a performer's point of view, that a performance is an active, original creation; and, as such, it is entitled to protection under the copyright law.

I think that the Copyright Office has always, in theory, been cognizant of the fact that such performances could be constitutional "writings." In fact, several court decisions, including the Second Circuit's 1955 opinion in *Capital Records, Inc. v. Mercury Records Corp.*, have recognized that performances are constitutionally capable of being the writings of authors within the meaning of the copyright clause of the Constitution; but, they have not definitely been recognized as such under the present 1909 legislation.

In its fullest form, Section 114 would create performance rights

in sound recordings by means of a compulsory license, and then divide the royalties equally between the owner of the copyright in the sound recording and the performer. So, the two of them would share in the proceeds of the compulsory licensing revenue. The Section has engendered some opposition, mainly from radio broadcasters and juke box operators, on the grounds that it would create a new economic hardship, and that it would restrict the use of the underlying copyrighted material. Such a compulsory license would not be applicable either to CATV or to juke boxes, which are covered exclusively by their respective sections of the Bill.

The proposed compulsory licensing system would invoke a statutory royalty rate which may, at the user's option, be computed either on a blanket rate, as provided by the statute, or on a pro-rated basis to be determined by the Register of Copyrights. A special rate, I should add, is set up for radio and T.V. usage, for background music service usage, and for all other users unless they have been specifically exempted. The rate under present proposals would be 2% of the net receipts received from advertising in the case of radio and T.V. stations. Again, the provision would specifically exempt educational users such as educational broadcasters under Section 110. It would also add an exemption, which some people feel should be included in the CATV section, for broadcast stations with annual advertising receipts of less than \$25,000, and likewise for the background music services with smaller subscriber receipts.

The Register of Copyrights would distribute the royalty under this Section and a Royalty Tribunal under chapter 8 would be responsible for reviewing and revising statutory royalty rates and for settling any disputes.

In sum, I echo the sentiments of legislators, administrators, industry, authors, and users that copyright revision is sorely needed. The legislation of 66 years past has been stretched to its bounds; it can no longer accommodate the issues raised by new and rapidly advancing technologies. New solutions and new compromises are long overdue. We, in the Copyright Office, are hopeful, and cautiously optimistic, that this session of Congress will enact the Copyright Revision Bill. I have tried today to point out some of the problems and proposed resolutions in three of the areas of prominent concern: cable television, educational uses, and performance rights for sound recordings.

Perspectives on Copyright and Cable Television

STUART F. FELDSTEIN*

Introduction

Cable television, as many of you know, serves a number of different functions. The one function where the issue of copyright has been so hot for so many years is the function that we perform by relaying existing broadcast signals. In these cases we bring broadcast signals to homes where they are difficult or impossible to receive—the reception is poor, the distance is great or what have you.

In addition, cable is beginning now, as it has in a small way for many years, to perform its own programming; that is, the local city council meeting, high school basketball game, perhaps even a news or stock ticker or the weather scan. Increasingly today, especially in the East, we are instituting a pay operation; that is, programming which you do not see on commercial television is brought to you on either a per-program or per-channel basis.

Insofar as copyright is concerned, we always have paid copyright on materials which we use on our origination channels. Thus, in the case of pay cable or program originations, we are liable for copyright and we do pay. The issue has always been whether we

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should pay, and how much we should pay for the broadcast signals which we relay to a subscriber's home.

In the early days of cable television, it was the view of the CATV industry that it was, as it began, simply a master antenna service. It was a receiver; it wasn't much different in character than a hotel receiving signals on an antenna and relaying pictures to the rooms or for that matter the type of thing that you see in a mobile home park where antennas are not permitted but one is off in the trees at the edge of the park. Here, the mobile park operator puts up a tower and runs a wire to all of the trailers in his park. So the cable industry long took the view that it should not have to pay copyright because it was simply providing a reception service for the people.

Court Decisions

But the copyright owners disputed that view as the cable industry began to grow from a few thousand to more than a million homes by 1960. Two suits were initiated: the *Fortnightly* case and the *Teleprompter* case. We lost the *Fortnightly* case in the lower courts. The *CBS v Teleprompter* case was held up as a matter of tactics so that the *Fortnightly* case would go forward first. In the *Fortnightly* case we lost in the Court of Appeals and in 1967, we were thus faced with disaster. I should explain what I mean by that. The broadcast industry does not like cable television. For understandable, competitive reasons they consider cable television a real economic threat to them. They feel the moving about of signals and the provision of other services is competition for the advertising dollar and for the audience which is the basis of that dollar. The 1909 copyright law was a weapon they found at their disposal. Had cable T.V. been thrust under the 1909 law without a compulsory license, without any kind of compulsion on the copyright owner as represented through the broadcaster to use those signals, we would not have been able to survive. The prices would have been prohibitive; we would have been priced out of the market.

When the FCC tried to come up with a new scheme for signal carriage, they had something called a retransmission consent. That is, if we could obtain the consent of the affected broadcasters, we could bring a signal from City A to City B. This retransmission consent system was in force on interim proposal from 1968 through 1972, and in only two isolated instances did we receive permission to move a signal from one community to another—just two in the whole United States.

After 1972, the cable operators attempted to negotiate with the copyright owners. We talked with a group called a Committee of Copyright Owners, made up principally of the film companies and the big syndicators. It did not include the networks, the music people or any of the other copyright holders. In those negotiations, the copyright owners' minimum offer was 16% of our gross. A year or two earlier the networks had indicated that they thought that 20 to 24% would be a fair take. If any of you have been reading the newspaper recently and know the economic state of the cable television industry, 20% of the gross is an infinite percentage of our net. These developments confirmed that in 1967 we were right to worry about the possibility of our being wiped out. So in 1967, we went to the Congress, to Chairman Kastenmaier of the House Subcommittee on Copyrights and to Senator McClellan, his Senate counterpart, and stated that disaster was imminent for us if we lost the court cases. We agreed that as part of the Copyright Revision we would pay a fee for the carriage of broadcast stations. Thus was born the change of position and the commitment to pay copyright. So, in 1967 we said we would agree to be included and thus began the long efforts to find some kind of a resolution to the problem of cable payment of copyright within the framework of a Copyright Revision Bill.

We, of course, won the *Fortnightly* case, which involved the carriage of local signals. Then in 1974, in a rerun, we won the *CBS v. Teleprompter* case which involved a different factual setting, namely the carriage of distant signals. The CBS attorneys tried mightily to distinguish *Fortnightly* from *Teleprompter* but were unable to do so.

As students of the law, I'm sure many of you have read comments on these cases. The Supreme Court never really faced the fact that there was an old 1930's case, *Buck v. Jewell-Lasalle Realty*, noted by Justice Fortas in his lone dissent in the *Fortnightly* case, which was seemingly on all fours with the factual situation in *Fortnightly* and again in *Teleprompter*. The Supreme Court said, "Oh, well, it's different, the facts were different." And that's like saying that the case names were spelled differently. However, the principles of law were the same.

Basis for Copyright Liability

What is the logic of copyright if we look at it in terms of provisions in a bill which includes a compulsory license? One point is that if you are carrying local signals perhaps you ought not to

have to pay anything, because a local signal is carried to precisely where the FCC said it should go as part of the allocation scheme and where the broadcaster expects it will go within his assigned local service area. For some reason, it's either not receivable at all or it's not receivable well, or people choose to subscribe to the cable to watch it because they also get distant signals on another channel. But the fact is that the cable system in those situations is only doing what a person could do with his antenna on the roof. The local advertiser is paying for that viewer, the regional advertiser is paying for that viewer, the compensation formula back and forth from the network or to the syndicator already takes into consideration the people who subscribe to that particular cable television system. So logic would say that local signals ought not to be paid for.

Using this same logic, you could say that a distant signal is something which you ought to pay for because you're carrying it from Community A, where everyone assumes it is to be received, into Community B, far, far away where no one assumes it is to be received. It gets a little complicated there, because the local Ford dealer doesn't care one fig that his ad is seen in a community 300 miles away. So that advertiser hasn't paid to get into the distant community. But insofar as Ford Motor Company is concerned, distant signal carriage is clearly okay with them. In other words, regional and national advertisers do benefit by the carriage of distant signals to a certain extent. Furthermore, the broadcaster gets his advertising rate increased insofar as he includes this extended cable viewing in his audience.

Many broadcast stations, especially independents, do count cable audiences for advertising purposes. Thus, their advertising income is higher; the rates that are charged for the kind of syndicated programming they buy are therefore higher; and the copyright owner is duly compensated.

Thus, you have compensatory forces running in both directions when you look at the distant signals. So the logic of it does seem to call for some payment for distant signals, although if you really sat down to figure it out, it might be close to a wash. The difficulty in setting all of this out in a copyright bill, that is, paying nothing for local and paying something for distant, is obvious. We've tried to figure it out. It's an impossibility for us and thus we have stuck with the concept in the Senate Bill of a compulsory license based on a percentage of our revenues for all signals that are carried.

I go through this exercise with you because you will hear in the

future a significant portion of the cable industry saying that if we have to pay copyright, it ought to be on a distant/local basis; that is, nothing for local and a fixed fee of some sort or percentage for each distant signal carried. The difficulty with such an approach, as it works out statistically for the cable industry, is that it is the location of the system which dictates what is paid.

There are obviously inequities, within the industry based on where you're located. The decision to stick with the concept of a compulsory license is based on gross revenues irrespective of a system's location, the number of signals carried, and that from a point of pure logic that may not square exactly with the conceptual idea of copyright and use of copyrighted material. Because of our economic difficulties, a significant portion of the industry has always felt that we ought not to pay copyright. That is to say, cable television should not pay copyright because it is simply a receiver. If we pay copyright, why shouldn't a set manufacturer pay copyright, or a manufacturer and installer of a rooftop antenna? After all, aren't we just receivers and after all isn't that what the Court said in the *Fortnightly* and *Teleprompter* cases?

Current Legislation

Well, that's my battle, I guess, and not yours. As a trade association, purporting to represent the cable industry in the city of Washington, this is a tough battle for us. There are people not only outside my trade association, but within the trade association, who feel that we ought not to pay copyright, that it simply is not just. But, NCTA has a commitment dating from 1967. We have a Federal Communications Commission, all seven of whose members feel that we ought to be paying copyright, and there are 535 members of Congress, only a handful of whom would vote to totally exclude CATV from the copyright bill. The impetus behind the copyright bill, which includes cable television, is such that it would be virtually impossible to remove CATV from liability. Furthermore, to attempt to do so would be tantamount to suicide for us because we would probably still be included in a copyright bill, but under considerably worse terms than will be true if we roll with the punch and attempt to modify the bill so that the provisions relating to cable television are reasonable and livable for us, now and in the future.

This brings us down first to S. 1361 (93d Congress) and S. 22 (94th Congress). Senate bill 1361 was a tremendous improvement

for cable television over earlier bills going back to the days of S. 543 and Rep. Kastenmaier's work in 1967, et cetera.

We succeeded with the help of several Senators in accomplishing some things in S. 1361 which are of benefit to the cable television industry. First, the initial fee schedule was cut in half. It was based on gross revenues from subscriber sources and it was set at one to five percent depending on gross quarterly revenues. The bill now stipulates a fee of one half of a percent to two and half percent.

The second thing of importance was a regulatory provision imposing a sports blackout on cable television. Well, the sports blackout that was in the bill was of such a major proportion that it would have been a disaster for CATV. Consider, for example, the state of Connecticut where cable television should do well because of its ability to carry the signals from Boston and New York City. Because of the presence of certain minor league baseball teams, World Hockey League teams, et cetera, most of the time the imported games of the Knicks, Rangers, Bruins, Red Sox and what-have-you into Connecticut would have been blacked out. A significant portion of the major league sporting events carried on the independent stations which cable television systems carry would have had to go. This is true especially in the populated eastern corridor and the rough rectangle bounded by Minneapolis and St. Louis and running from Boston to Washington. The impact would and could spell the dividing line between a viable cable television system and a cable television system which could not survive. So we fought the sports blackout very hard. There were some compromises which were attempted by the sports interests as they saw themselves losing and ultimately a reference to the F.C.C. was the last attempt; it was tried on the floor and it too was defeated in a cliffhanger, 36 to 34. Further attempts will, I'm sure, again be made on this particular issue although not in the Sub-Committee or the full Judiciary Committee.

The third major issue was referred to by Mr. Peer. We did succeed in knocking out an exemption for the payment of copyright by non-profit and government-owned cable television systems. That was eliminated from Section 111.

Mr. Peer also talked about the concept of compulsory licenses. Perhaps it's different when a music publisher wants his piece of music published, recorded and sold. Maybe that should be left to the free marketplace because if he wants to, he can sell it to lots of people to record. The marketplace will take care of getting that music as widely circulated as possible. In our case I would submit

that there is a distinction. If left to the marketplace, we will not have the broadcast programming to relay which is today the staple of our service. The broadcasters don't want us to have it. While they are not the copyright holder, they are the chief customers of the music and the motion picture copyright business.

The House of Representatives is the next scene of action. Our commitment to copyright does not mean buying exactly what a particular bill says. As I stated to you a moment ago, we did succeed in obtaining some changes in S. 1361. More changes are needed. The principal change I believe that we need in the copyright bill lies in the concept of the tribunal. Quite frankly, I don't like the tribunal, and I'll tell you why. It sounds eminently fair, but the cable television industry needs much more in the way of a structured and definitely predictable situation. There is a nice low set of percentage fees in the bill. One could argue that they ought to be a bit higher. There is obviously some latitude there. But under the tribunal concept, our fees would begin to be assessed six months out with a review to be completed eighteen months after the effective date of the copyright bill. And then every five years thereafter these fees could be readjusted. Theoretically, that means that they could go down, or they could go up. With minor exceptions, however, there has been a constant inflation and a constant rise in prices over the trend line of our economic history, certainly since the Second World War. This fact leads me to believe that the tribunal concept, which is another way of saying arbitration, would lead to the raising of our fees. Now this, if it was justified, would not be the worst thing in the world. But, CATV is a very front-end, capital-intensive industry. It is a risk industry. A percentage on equity must be seen and it must be predicted on a 15-year pay-out basis. CATV borrows a lot of money and is very highly leveraged. The greatest difficulties we have today are in analogous situations to a copyright tribunal-type of situation where costs which should be fixed and should be predictable on a 15-year basis are not fixed and predictable. This throws us into a panic. It creates havoc with our financing which has begun to dry up directly because of this factor.

We are not talking about a juke box at a fixed number of dollars per year. I agree with Mr. Peer that a percentage of sale price, a percentage of revenue, is a fair way of assessing a fee, much like a tax rate. So we seek the elimination of the tribunal concept and the fixing of a percentage of our revenues so that if and when the cable television industry prospers, and we are no longer grossing \$500

million a year but grossing \$5 billion a year, the copyright owners will reap their reward from our success in terms of the gross revenue. Thus, we are unable to see our way clear to accepting a revision of our fee concept other than through future legislative adjustments.

Another problem occurs in Section 501 (c) of the Bill which interestingly enough gives the broadcasters the right to sue a cable operator for a copyright violation. When a broadcaster is indeed a copyright owner he should, and does, have the right. Where he makes his own programs, where he owns the program, he is the copyright holder and he should be the one to go after us if there is a violation.

But the bulk of the programming on a typical broadcasting station is not that way. Most of the copyright material is owned by the network, a syndicator a movie company, a music society, or by the makers of commercials. Section 501(c) has a tremendous nuisance value. There are, as many of you know, some incredible FCC regulations which allow us to carry certain signals but then make us blackout certain programs on that signal. This is separate from the sports proposal; we're talking about network nonduplication, syndicated exclusivity and other wonderfully baroque inventions of the Federal Communications Commission. Mistakes are made every day, usually inadvertantly, because of some kind of inadequate notice or equipment malfunction.

This Section opens up the possibility of nuisance suits by a broadcaster, and to be sure under the Copyright Act you would have to have an intentional violation and the standard of proof would be such that we could perhaps win such a suit. But there are some broadcasters out there who hate cable television so much that they file on everything we do. They sue us at every step of the way and we have some incredible battles. Give them a weapon in 501(c) and they'll use it. It costs attorney's fees and time in court. A cable television system with 2,000 subscribers grossing, perhaps, \$120,000 or \$150,000 a year, really doesn't have the time and money to spend in federal court defending a copyright suit. Section 501 (b) and other remedies are sufficient to enforce a copyright violation.

Another matter, and this is more difficult to put into statutory language, is the fact that the FCC has been long convinced that cable television ought to be paying copyright. I've said that we agreed, and I'm hopeful that the revision will pass in the 94th Congress so that we can get out from under this cloud that the

FCC has put us under—that somehow or other we are unfairly using program material. Since we don't pay copyright, the FCC has actually tried to legislate copyright. They've done it in several ways. At one point, under the retransmission concept, they were going to require a signal payment scheme which was tantamount to copyright.

Today, there are still copyright-related regulations at the FCC. Specifically, I refer to the syndicated exclusivity rules. In a word, syndicated exclusivity means that when a CATV system is bringing a New York City signal into Manchester, New Hampshire, and it's got a film on it, if the television station in Manchester has this movie under contract, the CATV system must black it out. The Manchester station may not have shown it in three years, and they may not show it for another two years, if ever.

Over half the programming is lost based on syndicated exclusivity. That is a copyright-related matter. The industry's feeling is that if you are going to pay for those signals, you ought to get what you pay for. We will be searching for some kind of statutory language or guidance or even hortatory language instructing the FCC that since we are paying for these signals we ought to get what we pay for. In other words, a readjustment in these copyright-related regulations.

There are some other changes in S. 22 NCTA will seek but these are the major ones. Thank you.

The Troublesome Concept of Publication: A Look at Some of the "Forgotten" Provisions of the Copyright Revision Bill

GEORGE D. CARY*

Last fall, when the Senate was debating the Copyright Revision Bill,¹ most of the rhetoric was directed to four sections of the bill, which incidentally has a total of 58 sections and covers some 64 pages of printed matter. Thus, the disputations have related to less than 7 percent of the total sections in the bill. Much the same result occurred in 1967 when the House first passed its version of the bill.² So when the Revision Bill is discussed at conferences like this one, it is these controversial matters that take the limelight, namely, cable television, juke boxes, performance rights in sound recordings, educational exemptions and library photocopying. You have been hearing about these matters this week, so it is not my function to gild the lily.

Instead, I should like to direct your attention to the generally "forgotten" portions of the bill, which have attained such apparent

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¹ S. 1361, 93d Cong. 2d Session. See *Daily Congressional Record*, Sept. 6, 1974, pp. S 16064-S 16075, and Sept. 9, 1974 pp. S 16146-S 16167.

² H.R. 2512, 90th Cong. 1st Sess., passed by the House on April 11, 1967.

acceptance that they tend to be overlooked. And yet some of the most meaningful concepts of copyright revision is contained in those portions of the bill which lie in the penumbra of the presently controversial problems. Perhaps this seeming obscurity is due to the extensive study that went into the preparatory work before the bill was drafted, and to a reconciliation of most issues before the bill reached the floor of either House. Thus the House Judiciary Committee was able to say in its report on the Bill:

Although they have differed on various issues, the interests affected by copyright law revision are in general agreement as to the inadequacy of the present law. . . The bill now reported reflects the intricate network of relationships among the many groups and industries dependent for their existence upon works created by authors, and represents an effort to reconcile conflicting interests as fairly and constructively as possible. Despite the complexity and particularization of some of its provisions, however, the basic aim of the bill is very simple: to insure that authors receive the encouragement they need to create and the remuneration they fairly deserve for their creations.³

At any rate, whatever the reason for the general acceptance of most provisions of the bill, there has been little public discussion of those matters covered by the "forgotten" provisions previously mentioned. Therefore, I believe it will be both informative and of interest to focus the spotlight upon one area of the bill which drastically modifies a long existing concept that many feel has outlived its usefulness.

Origin Of The Publication Concept

The *bête noire* to which I refer is the concept of publication, the notion that has served to determine when common law rights were terminated, generally called "divestitive publication" and the extent of dissemination required to obtain statutory copyright, or "investitive publication." Such a concept, which dates back to the Statute of Anne in 1710,⁴ has been embodied in our law since 1790.⁵ In recent years one has heard some serious and intelligent criticism of this principle. For example, Professor Kaplan, then of the Harvard Law School, now of the Massachusetts bench, wrote some 20 years ago that the publication doctrine has been "seriously distorted and now bedevils much of the law of copyright." He

³ H.R. Rept. 83, on H.R. 5212, 90th Cong., 1st Sess. at 3.

⁴ 8 Anne, c. 19. For an explanation of discrepancies in citing the statute's dates, see Ransom, *The First Copyright Statute*, 6 (1956).

⁵ Act of May 31, 1790, ch. 15, 1 Stat. 124.

thought further that the doctrine "as now conceived has outlived its usefulness as a governing concept in our domestic copyright law of copyrights."⁶ Some ten years ago, Professor Nimmer of U.C.L.A. Law School, the author of today's most comprehensive treatise on the law of copyright, termed it "a highly complex doctrine, replete with issues of historical analysis, decisions in direct conflict with industry practices, and even problems involving constitutional law and the effect of treaties on domestic law."⁷

The House Judiciary Committee in 1967 went even further. While terming publication the most important single concept under the present law, it also considered that concept to represent the law's "most serious defect" (underscoring supplied). It expanded by stating:

Although at one time, when works were disseminated almost exclusively through printed copies, 'publication' could serve as a practical dividing line between common law and statutory protection, this is no longer true. With the development of the 20th-century communications revolution, the concept of publication has become increasingly artificial and obscure. To cope with the legal consequences of an established concept that has lost much of its meaning and justification, the courts have given 'publication' a number of diverse interpretations, some of them radically different. Not unexpectedly, the results in individual cases have become unpredictable and often unfair.⁸

So let us, for a short period of time, examine the historical origin and growth of the concept against which the foregoing criticisms were directed, and then refer in brief compass to the results of judicial decisions which have molded and sometimes distorted that concept.

Prior to the invention of the printing press, there was little, if any, motivation for the protection of what we call "writings of an author." The literacy rate was low—we are reminded that even kings wore signet rings to affix their mark—and in general "reading and writing" was confined to a few scholars and various representatives of the Church. But the introduction by Caxton of the first printing press into England in 1476 signalled the beginning of a monumental revolution in the field of communications. Following the growing proliferation of printing presses, the Crown soon became aware that licensing printers would result in a new and always welcome form of additional revenue.

⁶ Kaplan, "Publication in Copyright Law: The Question of Phonograph Records," 103 U.Pa.L.Rev. 469, 480, 489-90 (1955).

⁷ Nimmer, *Nimmer on Copyright* (1963, rev. ed. 1973) at § 46.

⁸ Note 3, *supra* at 8.

The Stationer's Company, established in 1556 to concentrate the control of printers, was principally utilized as a means of the suppression of heretical treatises.⁹ The King's Star Chamber was the principal overseer of enforcing this control, but when it was abolished in 1640, Parliament itself took over the task of control by enacting a series of Licensing Acts. When the last of such Acts lapsed in 1689, unlicensed printers sprung forth and flourished to such an extent that the established printers of Stationer's Hall petitioned Parliament for protection from these newcomers.¹⁰ Parliament's answer was the famous Statute of 1710¹¹ which gave to authors the sole right and liberty of printing their works, requiring as a condition that the titles be registered in the books of the Stationer's Company and that specified copies be deposited in certain designated libraries.

There is reason to believe that the established printers thought that the Statute of Anne did not affect their previous monopoly powers, but merely afforded them additional remedies. In fact, some 59 years after the enactment of that Statute, the Court of the King's Bench ruled that common law rights were not lost by the Statute of Anne.¹² It was not until 1774 that the House of Lords, in the celebrated case of *Donaldson v. Beckett*¹³ ruled by a 6-5 division that the Statute extinguished common law protection when a work was published, but left unaffected the common law rights in unpublished works. This rationale was adopted by our own Supreme Court in 1834 in *Wheaton v. Peters*.¹⁴ Having decided that once a work was "published" all common law rights were extinguished, the Court further declared that the unwary author would also lose the statutory benefits if he failed to comply with the statutory requirements.

With the passage of time, the courts tempered the utter finality of such a holding when it could be established that the dissemination was limited to a specific group for a specific purpose. This rationalization came to be known as the doctrine of "limited publication" and undoubtedly saved the rights of many authors down through the years. Nevertheless the saving grace of the doctrine depended to a large degree on how the court viewed the facts. A good example of this difference of view occurred in a case

⁹ Copinger & Skone James, *Law of Copyright*, 5 (9th ed. 1958).

¹⁰ *Id.* at 9.

¹¹ See note 4, *supra*.

¹² *Millar v. Taylor*, 4 Burr. 2303, 98 Eng. Rep. 201 (K.B. 1769).

¹³ *II Brown* 129, 1 Eng. Rep. 837 (H.L. 1774).

¹⁴ 33 U.S. (8 Pet.) 223 (1834).

where the lower court's reading of the facts led to its determination that some 75 copies of a mimeographed writing distributed over a period of several years had been restricted to a definitely selected group for a limited purpose, and thus no divestitive publication was held to have occurred. The Court of Appeals, however, looking at the same record and expressing its approval of the lower court's statement of the rule of limited publication, determined, however, that the facts failed to establish any restrictive distribution, and its ruling effectively placed the writing in the public domain.¹⁵

Performance As Publication

Whatever one may think of the merits of the doctrine of limited publication, it at least concerned itself with the type of works which emanated from the printing press, for which the Statute of Anne was designed. But let us now consider how the courts have dealt with an unpublished dramatic work which saw the light of day only by means of dissemination to the public by public performances. In the early part of this century, the Supreme Court, in an oft-discussed *ipse dixit* declared that a performance of a play was not to be equated with a publication, and that since it had never been printed or otherwise published the performance did not result in the loss of any common law rights, citing some rather questionable authority.¹⁶ This decision leaves us with the rather startling result that the writer of a play which was reproduced only in sufficient copies for the play production, could thus claim common law rights in perpetuity, while the same dramatists, if he had obtained statutory copyright for his play, could have secured protection for no longer than the statutory term. Sad to relate, if the same author, who in attempting to obtain statutory copyright found that the copyright notice was omitted from all the published copies of the play, would have lost all rights in his work at the time of publication.

The doctrine of this decision has been applied to the performance of musical compositions over radio and television¹⁷ and not long ago to a famous speech delivered on the Washington

¹⁵ *White v. Kimmel*, 193 F.2d 744 (9th Cir. 1952).

¹⁶ *Ferris v. Frohman*, 223 U.S. 424 (1912).

¹⁷ *Uproar Co. v. National Broadcasting Co.*, 8 F. Supp. 358 (D.Mass. 1936) mod., 81 F.2d 373 (1st Cir. 1936), *cert. denied*, 298 U.S. 670 (1936); *Columbia Broadcasting System, Inc. v. Documentaries Unlimited*, 42 Misc. 2d 723, 248 N.Y.S. 2d 809 (1964).

Monument grounds, which was broadcast and televised by satellite to untold millions of people around the globe.¹⁸ So a mere performance alone, regardless of the number of persons in the audience does not constitute "publication" which divests any rights, common law or statutory. On the other hand, the unrestricted sale of a single copy of a work with a defective copyright will undoubtedly constitute such a "divestitive publication" that serves to effectively result in a loss of all rights in the work.¹⁹

Exhibition As Publication

Consider now the plight of a sculptor or artist who is asked to permit his *magnum opus* to be placed on exhibit in an art gallery, museum or other public place. Does such action constitute such "publication" as to destroy all common law rights, or because of the absence of a copyright notice, effectively prevent the investiture of a statutory copyright? The cases are not consistent on this point but if there are no rules of the gallery or museum which effectively prevent copies or photographs being made by the public, many courts have ruled that the unrestricted exhibition does in effect constitute a "publication" which results in the loss of all rights.²⁰ Other courts hold that if there are rules preventing copying, and if these rules are rigidly enforced, then no "publication" occurs, and consequently no rights are lost.²¹

Copyright Notice

It has been judicially stated that "publication with notice of copyright is the essence of compliance with the statute, and publication without such notice amounts to a dedication to the public sufficient to defeat all subsequent efforts at copyright protection."²² Although the purpose of the notice in theory is merely to advise interested parties of the existence of a copyright

¹⁸ *King v. Mister Maestro, Inc.* 224 F. Supp. 101 (S.D.N.Y. 1963).

¹⁹ This would follow unless of course the provisions of 17 U.S.C. 21 became operative.

²⁰ *Letter Edged in Black Press, Inc. v. Public Buildings Commission of Chicago*, 320 F. Supp. 1303 (N.D. Ill. 1970); *Crimi v. Rutgers Presbyterian Church*, 194 Misc. 570, 89 N.Y.S. 2d 813 (Sup. Ct. 1949); *Morton v. Raphael*, 334 Ill. App. 399, 79 N.E. 2d 522 (1948).

²¹ *E.g. American Tobacco Co. v. Werckmeister*, 207 U.S. 284 (1907); *Werckmeister v. American Lithographic Co.* 134 Fed. 321 (2d Cir. 1904); *Werckmeister v. Springer Lithographic Co.* 63 Fed. 808 (S.D.N.Y. 1894).

²² *Universal Film Mfg. Co. v. Copperman*, 212 Fed. 301, 302 (S.D.N.Y. 1914) *aff'd.*, 218 Fed. 577 (2d Cir. 1914).

claim, it has in fact become a part of the concept of "publication," and in practice the statutory requirement has been interpreted in many different and confusing ways.

Consider the unhappy artist who obtained a statutory copyright on a painting which was later utilized in a wrapping paper reproduction consisting of many repetitions of the same painting. The Supreme Court determined that a copyright notice on each strip of reproductions was not enough to meet the requirements of the law, pointing out that a notice must appear on each repetition of the copyrighted work.²³

One of the most common notice problems involves the question of "What is the title page?" This is so because with respect to a book, the law requires the notice to be affixed to the title page or the page immediately following.²⁴ In one case²⁵ a paper bound booklet of county maps had a title on the outside cover. The first page inside contained only a map of the county. The back of that page was blank. What would be considered as page 3 contained text matter and a copyright notice. It also contained a designation which closely, but not exactly, approximated the title appearing on the cover. The court upheld a finding that the title page was the outside cover, not page 3, and since the copyright notice did not appear on that page or the page immediately following, the copyright was invalid.

Another notice case is interesting because the court appeared to reach its conclusion for the reason that it felt the defendant was a "bare-faced infringer" and should not be permitted to excuse its action by a mere technicality. In that case²⁶ the title appeared on the outside paper cover of an instruction manual. The inside of the cover was blank. The first page inside the cover contained the copyright notice. The court concluded that the cover was the "title page" and that the first page on which the notice appeared was to the average citizen the "page immediately following." The court however, limited its opinion "to the peculiar circumstances of this case in which the title appears only on the cover and in which the cover is of a harder and less malleable material than the leaves within."

We must not overlook the fact that if the name appearing in the notice is not in fact that of the person legally entitled, the result is

²³ *DeJonge & Co. v. Breuker & Kessler Co.*, 235 U.S. 33, 36 (1914).

²⁴ 17 U.S.C. 20.

²⁵ *Booth v. Haggard*, 184 F.2d 470 (8th Cir. 1950).

²⁶ *Neal v. Thomas Organ Co.* 325 F.2d 978 (9th Cir. 1964).

the same as though no notice appeared at all, and so all rights in such a work are lost upon publication. In the days when we read much of newspaper "tycoons," there arose a case which must have taken one such tycoon off his pedestal. In that case²⁷ a newspaper owner, who possessed 95 percent of the corporate stock of the newspaper publishing company, contracted in his own name with a former ambassador to write his diplomatic memoirs for exclusive publication in his paper. When the memoirs were published in the paper, the copyright notice of the newspaper company appeared as usual. The court held that there was no evidence showing that the newspaper corporation ever received the right to obtain the copyright from the owner, with the result that the publication of the newspaper absent the name of the copyright owner effectively placed the memoirs in the public domain.

Even an incorrect year date in the notice has been held defective, causing a loss of all rights. An early case involved a book published in the year 1846.²⁸ The year date in the copyright notice was postdated, *i.e.* it read 1847. The court held that this created a "fatal defect," and plaintiff's contention that it was a simple mistake did not save his copyright. Generally, the courts will invalidate the copyright in a work having a postdated notice on the theory that such a notice implies an attempt to claim longer protection than the law provides. However, a court in the late 50's took cognizance of the manifest injustice to the author where the mistake was "an innocent misstatement" which was "unaccompanied by fraud or intent to extend the statutory period of copyright protection," and declined to invalidate the copyright.²⁹ In fact, the court was aware that the decided cases, including the Supreme Court, went the contrary route, and it specifically invited a review by the Supreme Court of its decision. The invitation however, was not accepted.

Where the year date is antedated, *i.e.* is of a year prior to the publication, the courts now hold there is no forfeiture of rights—the only loss to the copyright proprietor being that the term is calculated from the year date appearing in the notice.³⁰

²⁷ *Public Ledger Co. v. Post Printing & Publishing Co.* 294 Fed. 430 (8th Cir. 1923).

²⁸ *Baker v. Taylor*, 2 Fed. Cas. 478 (C.C.S.D.N.Y. 1848).

²⁹ *Advertisers, Inc. v. Wiesen-Hart Inc.* 238 F.2d 706, 708 (8th Cir. 1956); *cert. denied* 353 U.S. 949 (1957).

³⁰ *E.g. Frederick Chusid & Co. v. Marshall Leeman & Co.* 279 F. Supp. 913 (S.D.N.Y. 1968); *Leigh v. Gerber*, 86 F. Supp. 320 (S.D.N.Y. 1949); *American Code Co. Inc. v. Bensinger*, 282 Fed. 829 (2d Cir. 1922).

Sale Of Records As Publication

Another aspect of the publication problem involves the sale of phonograph records. This may be stated as a question: "If the printing and sale of copies of a book constitutes such publication as results in the loss of all rights where the statutory copyright notice is defective, does the same conclusion follow where no copyright notice appears on phonograph records embodying a previously unpublished musical composition, and where these records are widely sold and distributed?" As a purely conceptual and logical exercise one might expect the answer to be in the affirmative. But not so. Here is a case where one must recall the wisdom of Mr. Justice Holmes: "The life of the law has not been logic; it has been experience."³¹

In brief, that experience tells us that in 1909 the Supreme Court held that a player-piano music roll was not a "copy" of the sheet music of the musical composition embodied therein for the reason that a "copy" had to be a "written or printed record of a musical composition in intelligible notation."³² Not being a "copy," the manufacture and sale of the player-piano roll did not constitute infringement. As a result of that opinion, it came to be well accepted in the music industry and by the members of the bar that since a phonograph record was not a "written or printed record of a musical composition in intelligible notation," it was unnecessary to place a copyright notice on any records manufactured and distributed to the public.³³ One can imagine the shock which reverberated through the music industry and the bar when in 1950 a court in a dictum expressed the belief that "when phonograph records of a musical composition are available for purchase in every city, town and hamlet, certainly the dissemination of the composition to the public is complete and is as complete as by sale of a sheet music reproduction of the composition," and accordingly viewed the sale of those records as a dedication of the composition to the public.³⁴ This shock abated somewhat when in later cases the courts considered that no rights would be lost if the unpublished

³¹ Holmes, *The Common Law*, 1 (1881).

³² *White-Smith Publishing Co. v. Apollo Co.*, 209 U.S. 1 (1908).

³³ See McDonald, "The Law of Broadcasting," in *Seven Copyright Problems Analyzed*, 31, 44-46 (C.C.H. 1952); Schulman, "Author's Rights," in *id.* at 19, 23-25; Tannenbaum, "Practical Problems in Copyright," in *id.* at 7, 17.

³⁴ *Shapiro Bernstein & Co. v. Miracle Record Co.* 91 F. Supp. 473 (N.D. Ill. 1950).

musical composition were registered under the statute prior to the sale and distribution of the records.³⁵ The problem never really disappeared and arose again in a recent case where there had been no registration prior to distribution of the records.³⁶ In that case the court devised an ingenious solution. In an attempt to give effect to the *Sears* and *Compco* pre-emption philosophy, and at the same time not ignore the provision of § 2 of the copyright law that nothing in that law is to be construed as annulling the right of the proprietor of an unpublished work at common law to prevent the copying of his work, the court held that the sale of records of an unpublished musical composition did not constitute a publication which annulled common law rights, but it denied enforcement of those rights until the composition was registered under the statute, and a notice of use, required thereby, had been filed.

The Revision Bill

Having had a brief glimpse of the complexities, obfuscations, and inequities of the publication concept, I hasten to assure you that these few examples represent but the tip of the iceberg. However, I trust they may be sufficient to understand the basis for the House Judiciary Committee's conclusion that the "publication" concept represents the "most serious defect" in our present copyright law.³⁷

That having been said, let us now ascertain just how the new Revision Bill would alter the present state of affairs. In brief, the probability is that not a single one of the situations described earlier would have arisen had those factual circumstances been encompassed by the new bill.

This amazing and definitely beneficial result would have been accomplished principally by two provisions of the bill, §§ 301(a)³⁸ and 302(a).³⁹ The first of these sections provides for a federal

³⁵ *E.g.* McIntyre v. Double-A Music Corp. 166 F. Supp. 681 (S.D. Cal. 1958); Mills Music Inc. v. Cromwell Music Inc. 126 F. Supp. 54 (S.D.N.Y. 1954).

³⁶ *Rosette v. Rainbo Record Mfg. Co.* 354 F. Supp. 1183 (S.D.N.Y. 1973).

³⁷ See note 3, *supra*, and accompanying text.

³⁸ "On and after January 1, 1975, all rights in the nature of copyright in works that come within the subject matter of copyright as specified by sections 102 and 103, whether created before or after that date and whether published or unpublished, are governed exclusively by this title. Thereafter, no person is entitled to copyright, literary property rights, or any equivalent legal or equitable right in any such work under the common law or statutes of any State."

³⁹ "Copyright in a work created on or after January 1, 1975, subsists from its creation and, except as provided by the following subsections, endures for a term consisting of the life of the author and fifty years after his death."

pre-emption of most common law rights while the latter affords statutory protection to works from their "creation," which word is defined in § 101 as being the fixation of a work in a copy or phonorecord for the first time. The word "copy" in turn is defined as being a material object, other than a phonorecord, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device. Section 302(a) also tells us that the period of duration under the bill is a term of the life of the author and 50 years after his death.

Applying these concepts to those cases in which the doctrine of "limited publication" was decisive, we find that there would be no reason to ascertain whether the distribution of the material had been limited to a given group, for a specific purpose, or whether the group members had been given the right to reproduce in multiple copies the particular work in question. Whether "publication" was limited or unrestricted would be totally irrelevant. And the question whether common law or statutory rights would be applicable would of course be unnecessary.

First of all, under the pre-emption doctrine, the author would no longer be able to rely on his perpetual common law rights. Secondly, when the work was first fixed in a material object, statutory copyright protection came into being from that moment for the life of the author and 50 years after his death. This is so whether or not the newly created work bore the required statutory copyright notice. Although the copyright notice is a requirement, its absence no longer would cause the loss of all rights, since under §§ 405(a)⁴⁰ and 408(a)⁴¹ registration could be effected at any time

⁴⁰ "The omission of the copyright notice described by sections 401 through 403 from copies or phonorecords publicly distributed by authority of the copyright owner does not invalidate the copyright in a work if:

- (1) the notice has been omitted from no more than a relatively small number of copies of phonorecords distributed to the public; or
- (2) registration for the work has been made before or is made within five years after the publication without notice, and a reasonable effort is made to add notice to all copies or phonorecords that are distributed to the public in the United States after the omission has been discovered; or
- (3) the notice has been omitted in violation of an express requirement in writing that, as a condition of the copyright owner's authorization of the public distribution of copies or phonorecords, they bear the prescribed notice."

⁴¹ "At any time during the subsistence of copyright in any published or

within five years after publication and no rights would be lost so long as a reasonable effort is made to add the copyright notice to all copies distributed after the discovery of the omission. Put another way, it is almost impossible to lose a copyright under the new bill for at least five years.

There are, however, side effects to this new concept. Most importantly, all of us will have to readjust our thinking processes to the extent that we will no longer be able to assume that a work is in the public domain if it fails to bear the copyright notice; it will be advisable to check the records of the Copyright Office before undertaking any replication activity. While this admittedly does constitute a change in our thinking about copyright, it is in reality no departure from our present thinking processes with respect to the ownership of tangible personal property. If, for example, someone purloins a neighbor's TV set or makes off with someone's automobile, the culprit does not base his decision on the existence of some form of statement of ownership. Under our concept of private property we assume it belongs to the owner until it be proved otherwise. The new bill will not make works of intellectual effort fair game for plagiarism simply because a copyright notice is omitted; instead, for all practical purposes, it equates literary property with all other tangible property in this respect—at least for five years.

Another side effect results from the statutory protection of an innocent infringer. Section 405(b)⁴² of the revision bill constitutes a shield to the person who in good faith thinks that the absence of a copyright notice gives him the right to copy the work, by preventing the copyright proprietor from recovering actual or statutory damages from him before the innocent infringer receives

unpublished work, the owner of copyright or of any exclusive right in the work may obtain registration of the copyright claim by delivering to the Copyright Office the deposit specified by this section, together with the application and fee specified by sections 409 and 708. Subject to the provisions of section 405(a), such registration is not a condition of copyright protection."

⁴² "Any person who innocently infringes a copyright, in reliance upon an authorized copy or phonorecord from which the copyright notice has been omitted, incurs no liability for actual or statutory damages under section 504 for any infringing acts committed before receiving actual notice that registration for the work has been made under section 408, if he proves that he was misled by the omission of notice. In a suit for infringement in such a case the court may allow or disallow recovery of any of the infringer's profits attributable to the infringement, and may enjoin the continuation of the infringing undertaking or may require, as a condition for permitting the infringer to continue his undertaking, that he pay the copyright owner a reasonable license fee in an amount and on terms fixed by the court."

from the proprietor actual notice of registration. As a matter of equity, however, the bill does permit the copyright proprietor to recover any profits of the innocent infringer, attributable to the copying. As the House Judiciary Committee report points out:

Thus, where the infringement is completed before actual notice has been served—as would be the usual case with respect to relatively minor infringements by teachers, librarians, journalists and the like—liability if any, would be limited to the profits the infringer realized from his act.⁴³

Parenthetically, in such minor cases of infringement mentioned by the report, one may seriously doubt whether any infringement action would have been instituted in the first place. Further, it seems unlikely in those types of cases that it could be established that the innocent infringer made any “profits.”

On the other hand, where the infringing enterprise is one which runs over a period of time, the copyright owner, following the giving of actual notice of registration, would be entitled to enjoin further infringing acts, and to obtain full monetary recovery for all infringing acts committed after he served the notice of registration.

With respect to the cases which held that “performance” of a work did not constitute a publication with the resultant loss of rights, the bill would apply much as described previously. The fixation of the dramatic work, for example, in a written form, or even dictated to a tape recorder, would be sufficient to make it eligible for statutory protection from that moment. The duration would of course be counted for 50 years from the author’s death.

Those sculptors and artists who have lost all rights to their works because they were publicly exhibited in a gallery or otherwise without the copyright notice, will be happy to note that the bill grants to them for the first time, a statutory right to display the work publicly.⁴⁴ No rights would be lost even if no notice appeared on the displayed work, because a notice is not required on a work not “publicly distributed.”⁴⁵

⁴³ Note 3, *supra* at 116.

⁴⁴ “Subject to sections 107 through 117, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

(5) in the case of literary, musical, dramatic and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly.”

⁴⁵ “Whenever a work protected under this title is published in the United States or elsewhere by authority of the copyright owner, a notice of copyright as provided by this section shall be placed on all publicly distributed copies from

Mention has already been made of the manner in which the bill will affect those cases where the copyright notice was completely omitted. So let us note the effect where the notice does appear on the work, but not in the location prescribed under present law. In such cases, the bill departs from the specificity required by our present law and merely requires the notice to be affixed "in such manner and location as to give reasonable notice of copyright."⁴⁶ This provision would, for example, have saved the copyright in that painting applied to the wrapping paper in repetitive designs, to that map booklet which had the notice on the page following the title page, and countless other works which have fallen victim to a rather strict technicality. The language of the bill, it should be noted, is almost identical to the notice requirements of the Universal Copyright Convention.⁴⁷ Although the bill, in § 401(c),⁴⁸ authorizes the Register of Copyrights to prescribe examples of affixations that will satisfy this requirement, they are not to be considered exhaustive.

Reverting to the plight of our newspaper tycoon who lost all rights in the ambassador's memoirs, because the name of the copyright proprietor did not appear in the newspaper, there is good news for others like him. Section 406(a)⁴⁹ states that in such

which the work can be visually perceived, either directly or with the aid of a machine or device."

⁴⁶ "The notice shall be affixed to the copies in such manner and location as to give reasonable notice of the claim of copyright. The Register of Copyrights shall prescribe by regulations, as examples, specific methods of affixation and positions of the notice on various types of works that will satisfy this requirement, but these specifications shall not be considered exhaustive."

⁴⁷ Article III-1 of the Convention provides in pertinent part that certain formalities which are conditions of copyright may be regarded by a Contracting State as satisfied "... if from the time of the first publication all copies of the work published with the authority of the author or other copyright proprietor bear the symbol © accompanied by the name of the copyright proprietor and the year of first publication *placed in such manner and location as to give reasonable notice of claim of copyright.*" (Underscoring supplied).

⁴⁸ See note 46, *supra*.

⁴⁹ "Where the person named in the copyright notice on copies or phonorecords publicly distributed by authority of the copyright owner is not the owner of copyright, the validity and ownership of the copyright are not affected. In such a case, however, any person who innocently begins an undertaking that infringes the copyright has a complete defense to any action for such infringement if he proves that he was misled by the notice and began the undertaking in good faith under a purported transfer or license from the person named therein, unless before the undertaking was begun:

- (1) registration for the work had been made in the name of the owner of copyright; or

cases, "the validity and ownership of the copyright are not affected." In order to prevail in an infringement action, however, the trueowner must show a registration in his name, or that "a document executed by the person named in the notice and showing the ownership of the copyright has been recorded."

With respect to the cases involving an antedated notice, in most cases no problem will arise, because as has been mentioned, the period of copyright duration under the bill is not determined from a date of publication; consequently no loss of rights become involved. The term of copyright will of course be determined by the year of the author's death.

If, however, the publication involves an anonymous or pseudonymous work, or a work made for hire, § 302(c)⁵⁰ informs us that the term of copyright endures for 75 years from the year of first publication or 100 years from creation, whichever expires first. In these special cases, the period of duration is to be computed from the antedated publication date stated in the notice, if in fact the work was published.

Should the year date be postdated in the notice, *i.e.* is later than the year in which first publication actually occurred, the situation is treated as if no notice appeared at all; and as we have seen, § 405(a) provides that registration within five years of publication will save the copyright.

The interesting and perplexing problem whether the sale or distribution of phonograph records amounts to publication will no longer be a problem under the bill. Works that are fixed in a phonograph record for the first time, are by definition in §101 said to be "created"; thus an unpublished musical composition embodied in a phonograph record obtains statutory copyright from the moment of fixation. It should be noted that no copyright notice relating to the rights in the musical composition is required to be affixed to the record, since under § 401(a) notices are required only on works that can be "visually perceived." We should not overlook the fact however, that the proprietor of the sound recording, as distinguished from the proprietor of the musical

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- (2) a document executed by the person named in the notice and showing the ownership of the copyright had been recorded.

The person named in the notice is liable to account to the copyright owner for all receipts from purported transfers or licenses made by him under the copyright."

⁵⁰ "In the case of an anonymous work, a pseudonymous work or a work made for hire, the copyright endures for a term of seventy-five years from the year of its first publication, or a term of one hundred years from the year of its creation, whichever expires first. . ."

composition may of course elect to obtain the "anti-dubbing" protection afforded by § 402, in which case it will insert the P-in-a-circle notice on the phonograph record.

The foregoing examples illustrate what appears to me to be an attempt by the two Committees of Congress which have been most involved in the copyright revision project, to resolve the greater part at least, of the inconsistencies, obfuscations, and inequities of the concept of publication. The resolution of this matter, as the examples illustrate, foretells the death knell of the doctrine as we now know it. This should go a long way to make more effective the economic philosophy behind copyright, which, as the Supreme Court has expressed it,

. . . is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in "Science and useful Arts."

The Court underscored this conviction by concluding that:

Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.⁵¹

The foregoing discussion relating to the troublesome and sometimes frustrating concept of "publication" and the manner in which the many problems arising therefrom are resolved by a few of the provisions of the revision bill, is only one example of the beneficial example of what I have chosen to call the "forgotten" provisions of that bill. I trust that it will serve as an indication of the merit of the overall provisions of that bill, and with all of you I share a devout hope that the few controversial provisions will not serve as a target to permit the torpedoing of the much needed provisions to bring out horse-and-buggy copyright law into the 20th century. Since there is renewed interest in the present bills,⁵² it may not be too optimistic to hope that perhaps by next year we shall learn for whom the bells have tolled.

⁵¹ *Mazer v. Stein*, 347 U.S. 201 (1954).

⁵² S.22, 94th Cong. 1st Session was introduced by Senator McClellan on Jan. 15, 1975. Except for technical and perfecting amendments, and changes required by the enactment of P.L. 93-573, the interim copyright bill, the text of S. 22 is identical with the measure passed by the Senate on Sept. 9, 1974. H.R. 2223, 94th Cong. 1st Session, was introduced by Mr. Kastenmeier on Jan. 28, 1975, and is identical with S. 22.

Conferences: (1) *Policy Alternatives For Rekindling American Free-Enterprise Innovation*
(2) *Computer Access to Secondary Legal Materials*

The PTC, in conjunction with the Law Center and Academy of Applied Science, will hold its annual conference on March 30, 31 and April 1. This year the topics for discussion will be divided into two parts: 1) policy alternatives for rekindling American free-enterprise invention and innovation to meet the current national emergency in job-making, energy development, positive technology transfer, utilization of government-developed technology, and reducing private sector-government hostility; and 2) development of a method for abstracting legal periodicals for computer storage and retrieval.

Innovation Policy Alternatives:

Over the last three years information has been obtained and tabulated on the inventors and patentees using the American and British patent systems, including attitudes and opinions regarding their inventive environments and incentives and deterrents, the patent systems and the courts. One of the purposes of this conference is to present to the innovative community, as well as to our government, this information gathered by the PTC Research Foundation and students and faculty of the Franklin Pierce Law Center in collaboration with the Academy of Applied Science, students and faculty at the Massachusetts Institute of Technology, and the British Institute of Patentees and Inventors. Upon this base of real facts, the conference will also offer contributions by noted experts from the private and public sectors of the current state of incentives and deterrents to our achieving our national purposes in innovation generally, job-making, energy development, re-creating a positive technology transfer posture, possible commercial utilization of government-developed patents and technology, and generally reducing hostility and promoting cooperation between the government and the private sector.

Abstracting:

The generally poor retrieval systems available for research in legal periodicals, coupled with time and financial limitations upon the practicing lawyer, have resulted in minimal usage of these

important secondary sources of information (see Notes on PTC Progress, *IDEA*, Vol. 17, No. 1, 1975). Thus, on March 31 and April 1 a working conference is planned to include persons in the multidisciplinary areas involved in designing and implementing a system of computerized access to secondary legal materials. Problems to be discussed by the participants include methods of abstracting, formulation of a data base, cost factors, copyright protection, and the like. This conference, supported in part by the Council on Library Resources (Washington, D.C.), will better define the specific needs of the legal profession in such a system and will explore generally the soundness of the project.

Republication of IDEA Articles

An article appearing in *IDEA* (Vol. 17, No. 1) by William O. Quesenberry, "Government Patent Policy: Time for Compromise," is to be reprinted by the National Technical Information Service (Department of Commerce) for publication in bibliographic announcement bulletins.

Also appearing in the same issue of *IDEA*, the article by Harry M. Saragovitz, "The Law of Intellectual Property in Outer Space," will be reprinted by the Max Planck Institute and appear in *Gewerblicher Rechtsschutz und Urheberrecht Internationaler Teil* for distribution among the German speaking community.

Employed Inventors: The Case for the Moss Bill

JOHN P. SUTTON AND
CARRIE WALTHOUR WILLIAMS

Summary

There is pending in Congress a bill (the Moss Bill) designed to provide incentive to employed inventors by requiring that the employer compensate the inventor in relation to the value of the invention. The economic reality is that only the employed inventor, of all those who participate in the innovation process, does not have sufficient bargaining power to receive fair compensation for his contribution to the process. He must contract away whatever inherent rights he has in the fruits of his inventions. The giving of extra compensation to employed inventors according to the worth of their invention would seem to be directly in keeping with the intent of the Constitution; there has, however, been widespread opposition to the Moss Bill, primarily among the patent bar. By guaranteeing to the employed inventor a fair share of the profits derived from his invention, the Moss Bill would restore the incentive to create as originally embodied in our patent system.

Words and Phrases

Inventor

Employee

Denmark

Japan

Soviet Union

Sweden

United States

West Germany

Moss Bill

H.R. 5605, 94th Cong., 1st Sess. (1975).

Patent

President's Commission on the Patent System (1963)

Supreme Court (U.S.)

Patent Office

Mediation Board

Citations

United States Constitution, Art. I, § 8, cl. 8

28 U.S.C. § 1338(a) (1971)

35 U.S.C. §§ 101, 103 (1971)

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Employed Inventors: The Case for the Moss Bill†

JOHN P. SUTTON* AND
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Introduction

As the cost of doing research has risen, inventors have, of economic necessity, been subsidized by corporations. As a result, the inventor is losing his identity as a favored person for creating and making known his invention.¹ The Constitution says that Congress may secure to "Inventors the exclusive Right to their . . .

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¹ Stedman, "The Employed-Inventor, The Public Interest and Horse and Buggy Law in the Space Age," 45 N.Y.U.L. Rev. 1 (1970).

Discoveries.”² Today, the almost universal practice for the employed inventor is to require that he assign to his employer, as a condition of employment, any rights in future inventions he might discover.³

Recently, there has been legislative concern that such a policy might stifle the incentive to invent which has served this country so well. For example, in the 89th Congress, California Congressman Brown introduced House Resolution 5918 in an attempt to keep employers from totally usurping the rights of inventors in their discoveries. Today, as in the last three sessions of Congress, there is pending a bill designed to provide incentive to inventors by requiring that the employer compensate the inventor in relation to the value of the invention. The current bill is House Resolution 5605 introduced by California Congressman John R. Moss (Moss Bill).⁴

At first blush, the principle of giving extra compensation to employed inventors according to the worth of their invention would seem to be directly in keeping with the intent of the Constitution, but there has been widespread opposition to the bill, primarily among the patent bar.⁵ Indeed, we have found no lawyer unabashedly in favor of the Moss Bill, at least on record, even though it has been pending in Congress during the past 3-1/2 years.⁶ This article will review the bill and the need for it and seek to answer some of the opposition expressed by patent lawyers and corporate executives.

The Problem

The problem is that employed inventors are not being fairly rewarded today. They are rewarded as are all other employees,

² United States Const., Art. I, § 8, cl. 8.

³ Nat'l Indus. Conference Bd., *Employee Patent and Secrecy Agreements, Studies in Personnel Policy*, 199 (1965).

⁴ H.R. 5605, 94th Cong., 1st Sess. (1975).

⁵ Harter, "Statutorily Decreed Awards for Employed Inventors: Will They Spur Advancement of the Useful Arts," 15 *IDEA* 575 (1972); Hamann, "Invention in the Corporate Environment," 1 *Am. Patent L. Ass'n Q.J.* 102 (1972); Bowes, "Corporate Invention Award Plans," 1 *Am. Patent L. Ass'n Q.J.* 118 (1972); Tyrrell, "Inventor Awards: Incentive or Impediment," 1 *Am. Patent L. Ass'n Q.J.* 124 (1972); Henriques, "Inventors' Reward: Myth and Reality," 1 *Am. Patent L. Ass'n Q.J.* 166 (1972).

⁶ An author and principal advocate for the bill is Robert J. Kuntz, an engineer who has written widely about the bill, although not as a legal brief in rebuttal to the opposition. A plea for legislation in this area is made by Neal Orkin in "The Legal Rights of the Employed Inventor: New Approaches to Old Problems," 56 *JPOS* 648 and 719 (1974). Mr. Orkin's thoughtful article was written concurrently with this paper, and therefore not considered in its preparation.

which is appropriate when they behave like all other employees in performing assigned tasks, but inappropriate when an inventor creates an invention having great value to his employer. In that case, the creator should receive extra compensation according to the worth of the invention. If the invention has little value, the inventor should get nothing beyond his salary. But if the invention is valuable, the creator of it should get his fair share. He usually does not today. This failure contradicts the purpose of the patent system, to be discussed presently, and the Moss Bill is a means of assuring that inventors receive fair compensation for their creations.

The law as it applies to employed inventors has fallen far behind economic reality and present day life. Professor Stedman calls this area of the law "Horse and Buggy law in the Space Age."⁷ The economic reality is that only the employed inventor, of all those who participate in the invention process, does not have sufficient bargaining power to receive fair compensation for his contribution to the process. He has neither union support nor collective bargaining power. He must contract away whatever inherent rights he has in the fruits of his inventions. As Professor Stedman has said, "[t]here remains strong reliance upon contractual agreements between employer and employee—contracts that tend to be skewed in favor of the employer, leaving the employee with even fewer rights than under the none-too-generous common law."⁸ The relative bargaining power and the inventor's contribution vis-à-vis other contributions in the innovative process will be examined later.

Not only is our law of employed inventors outdated with respect to fundamental principles applicable under the United States law, it is also outdated in relation to foreign law. As this country and its industrial property law have emerged into the community of nations, it has become evident that substantial changes in our domestic law must be made.⁹

There is support for the proposition that the United States is falling behind some of the other countries in producing the maximum number of inventions for the dollars invested in re-

⁷ See Stedman, *supra*, note 1, at 1.

⁸ *Id.* at 12.

⁹ For example, the Trademark Registration Treaty will require fundamental changes in our trademark law. Pattishall, "The Proposed Trademark Registration Treaty and Its Domestic Import," 62 T.M.R. 125 (1972). Similarly, the Patent Cooperation Treaty alters current patent procedure to fit those of other nations. Robbins, "The PCT Situation in 1969," 13 IDEA 123 (1969).

search and development.¹⁰ Professor Stedman has observed that:

Inventive activity does, of course, continue at a high level in the United States, but *not* anywhere in proportion to the money and manpower that is expended on research and development. Such research today is over twenty-five times greater than it was in 1940. There is nothing to indicate that inventive results have increased at anywhere near this rate, granting that the latter cannot be measured accurately. We do know, however, that patenting has increased only slightly during this period (emphasis in original).¹¹

A recent report to Congress prepared by the National Science Board, the policy-making unit of the National Science Foundation, notes that the United States has a declining "patent balance."¹² This is the number of patents issued for United States inventions contrasted to those based on foreign research.

One reason for the lack of creativity of engineering staffs is the pervasive attitude that the patent system does not benefit employed inventors as individuals. This attitude was well expressed by the Vice President for Research Laboratories of General Motors who said, "I personally have preferred to work as a problem solver on a salary, with invention being incidental, rather than as a free lancer seeking riches from a single invention."¹³ Given that narrow choice, most engineers today would agree. But that is not a choice imposed by the patent system. The patent system should reward invention even by those on a salary so that it is not "incidental" but a genuine goal of all potential inventors.¹⁴ We need more of the single-mindedness of earlier inventors in our history and less of the routine "problem solvers on a salary" if we are to continue the inventiveness for which this country is famous.

Hafstad, the true organization man, had no regrets that the individual has no direct incentive from the patent system. He said, "So long as the patent system provides the incentive for management to encourage its employees to invent, what has been lost?"¹⁵ The answer is that the Constitution does not provide that General Motors shall have the power to promote progress by encouraging invention, but that *Congress* shall. The individual's right to the

¹⁰ Stedman, "The Employed Inventor: Issue But No Answers," 1 Am. Patent L. Ass'n Q.J. 144, 145 (1972); Lassagne, "Legal Rights of Employed Inventors," 51 A.B.A.J. 835 (1965).

¹¹ See Stedman, *supra*, note 1, at 22.

¹² N.Y. Times, Sept. 6, 1973, at 13, col. 1.

¹³ "Kettering Award Address," 11 IDEA 161, 169 (1967).

¹⁴ Rines, "A Plea for a Proper Balance of Proprietary Rights," I.E.E.E. Spectrum, April 1970, at 41.

¹⁵ See note 13, *supra* at 170.

government grant of a patent upon meeting certain requirements, a congressional "guarantee [of] . . . a reward . . .,"¹⁶ has been superseded by a program whereby General Motors, if in its sole discretion it deems appropriate, may award the individual a bonus.¹⁷ No wonder the fervor and zeal to invent have given way to nine-to-five drudgery!

We need more inventors who share the enthusiasm of Jacob Rabinow:

In spite of all the heartaches, nothing can match the spiritual rewards of invention. I am referring to the excitement of a new idea, the exhilaration of seeing a brilliant light at the end of a dark tunnel while working on a technical problem. It must be very much like that felt by authors or composers when things go well. The thing that is most interesting about the process is that it is most unpredictable, I don't know when it will happen, what I myself will think of, whether it will remain as beautiful as it appears at first sight, whether it will be new to the world, and, finally, whether anybody else will admire it. While the final development and use of my inventions are important to me, the conception of the idea is the exciting, the thrilling thing.¹⁸

It seems obvious, even though opponents of the Moss Bill apparently do not accept it, that the inventor most likely to devote the effort and extra concentration in pursuit of an invention is the one who stands to derive substantial monetary return for his efforts. In our experience, the individual who has a significant ownership in the equity of the organization holding the invention is most relentless in pursuing his invention. Large research organizations are good at testing a large number of possible solutions presented by the employer to a given problem, but they are not, in our experience, best for the major new invention giving a different direction to the development of an art. One reason is that the opportunities for taking the new direction are not as readily available in the large research laboratory. Another is that the employed inventor has no assurance that his brilliant invention will return anything more than nominal compensation.

The present system does not reward employed inventors because the employed inventor has no guarantee of any compensation

¹⁶ *Goldstein v. California*, 412 U.S. 546, 555 (1973).

¹⁷ F. Neumeyer, *The Employed Inventor in the United States*, 104 (1971). The General Motors Bonus Plan permits awards for inventors, although it is ". . . not open to all employees but [is] restricted exclusively to a small group of high-level personnel." (*Id.* at 106).

¹⁸ The quotation was attributed to Rabinow in a press release of the National Bureau of Standards dated April 30, 1973, announcing the 1973 award of the Jefferson Medal to Rabinow by the N.J. Patent Law Association.

whatsoever if he makes an invention,¹⁹ even though the patent system is intended to guarantee a reward.²⁰ He may collect a salary, but he receives no promise of any extra compensation should he make an invention. The need for some guaranteed extra compensation upon invention was recognized over a century ago.²¹

Under the present system in the United States the windfall of enormous savings from a new invention or enormous income from licensing or sale of an invention goes wholly to the employer and none of it goes to the employed inventor in most cases.²² The more enlightened corporations give a small amount of compensation to inventors who disclose inventions or who obtain patents, but there is almost never any right to such compensation.²³ As presently administered, the employed inventor does not get a fair shake.

What is the Moss Bill?

The Moss Bill provides a system for determining the ownership of and amount of compensation to be paid for patentable inventions made by employed persons. The two most important features of the Moss Bill are: 1) the abolition of pre-employment assignments,²⁴ and 2) the employer and the employee-inventor agreement made on the fair market value of the invention at the time it is assigned to the employer.²⁵

The compensation for the employee's invention will "represent the fair market value of the employer's exclusive right to the invention, adjusted to reflect the following factors: 1) the position and duties of the employee, and 2) the degree to which the operations of the employer contributed to the making of the invention."²⁶ If agreement between the employer and employee cannot be reached the matter can be referred to a Mediation Board in the Patent Office.²⁷

Other provisions of the Moss Bill include:

- (a) The duty of the employee to notify the employer of the existence of an invention without delay.²⁸

¹⁹ Stedman, "Rights and Responsibilities of the Employed Inventor," 45 Ind. L.J. 254 (1970).

²⁰ Goldstein v. California, 412 U.S. 546, 555 (1973). See also "The Patent System Rewards Inventors for Disclosing Inventions," *infra*.

²¹ W. Robinson, *The Law of Patents*, Little, Brown, and Co., Boston, § 34 (1890).

²² See Stedman, *supra*, note 1, at 4-5.

²³ *Id.* at 7.

²⁴ H.R. 5605, 94th Cong., 1st Sess., § 432 (1975).

²⁵ *Id.* § 414.

²⁶ *Id.*

²⁷ *Id.* § 435.

²⁸ *Id.* § 414.

- (b) The right of the employer to refuse to claim rights to the invention and to retain the right of first refusal to acquire a license to practice the invention.²⁹
- (c) The procedure necessary to protect the rights of the parties in United States and foreign filings and upon the abandonment of the application.³⁰
- (d) The right of an employee to receive additional compensation inasmuch as no protective right was secured when the patentable invention was kept as a trade secret.³¹
- (e) The proviso that the bill cannot be altered by any agreement to the detriment of the employee.³²

The bill provides that regulations shall be prescribed to implement the provisions of the bill.³³ It may be useful to examine the regulations in effect under the German law, after which the Moss Bill is patterned. In Germany, calculation of the compensation is based on: 1) the economic exploitability of the invention; 2) the employee's duties and position in the company; and 3) the contribution of the company to the making of the invention.³⁴

Economic exploitability (also called "invention value") is determined in one of three ways: (a) analogy to a license to determine a reasonable rate; (b) determining actual profit attributable to the invention by balancing costs and proceeds under accounting principles; or (c) estimating the value based on the price the employer would have spent if he had purchased the invention from an independent inventor.³⁵

The employee's duties and position, along with the employer's contribution are all considered in determining what is called a Proportional Factor in Germany.³⁶ The more the employee contributed to the setting of the problem which is solved by the invention, the greater his compensation. If, on the other hand, the employer presented the problem with a direct indication of the method of solving it, the employee gets less. Similarly, if the employer gives substantial technical assistance, the Proportional Factor is less for the employee. Finally, under German regulations, the share of the employee diminishes proportionally as his position

²⁹ *Id.* § 412.

³⁰ *Id.* §§ 421-24.

³¹ *Id.* § 425.

³² *Id.* § 432.

³³ *Id.* § 414.

³⁴ H. Cartright and J. van Uexkull, *German Laws Relating to Inventions of Employees and Directives Issued Thereunder* 26 (2d ed. 1971).

³⁵ *Id.* at 27-33.

³⁶ *Id.* at 42-49.

and salary increase, because it is more readily expected that he will participate in the technical developments. In other words, unskilled workers, temporary help, and apprentices get a larger proportional factor than the director of research.

The German regulations form no part of the Moss Bill, but the experience in that country in developing the regulations shows that a rational system has been in effect since 1957 and that determination of compensation under a law substantially similar to the Moss Bill is equitable and capable of reasoned determination.

The Moss Bill Would Update Our Law to Correspond to That of Other Industrialized Nations

The Moss Bill is not a radically new idea, although it is a departure from the antiquated law and practice presently followed in this country. Other nations have for years provided for fair compensation to employed inventors, recognizing the growth of corporate research.³⁷ The problem is similar in all industrialized nations. As Senator McClellan noted in 1962 in the Foreward to the Neumeyer study: "As a result of striking increases in corporation research, however, the employer has interposed himself between the individual inventor and the patent system. . . ."³⁸ That study was an exhaustive review by Dr. Fredrik Neumeyer of the law in six European countries with comparisons to eight others. In 1973, Dr. Neumeyer reported that employees are entitled to extra compensation in Sweden, Denmark, Finland, Norway, Germany, Holland, Austria, Switzerland, Italy, Portugal, Japan, Soviet Union, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Yugoslavia.³⁹ Can we learn from their experience?

The German Act, in effect since 1957, first gives the employer and employee a chance to arrive at a reasonable compensation for the employee's invention. In the event that such reasonable sum is not agreed upon an arbitration board is set up in the patent office to offer settlement proposals. This board's decisions are not binding on the parties. The proceedings before the board are entirely free from cost to the parties.⁴⁰ The Moss Bill has the same provisions.⁴¹

³⁷ Senate Subcommittee on Patents, *The Law of Employed Inventors in Europe*, 87th Cong., 2d Sess. (1963).

³⁸ *Id.* at II.

³⁹ Speech to Conference on the Public Need and the Role of the Inventor, Monterey, California, June 13, 1973.

⁴⁰ Schade, "The Working of the Law on Employees' Inventions in the Federal Republic of Germany," 1 Am. Patent L. Ass'n Q.J. 159, 165 (1973).

⁴¹ H.R. 5605, 94th Cong., 1st Sess. § 435 (1975).

On a whole, the Germans engaged in industry and labor unions seem to think that the law has worked well. The law's effectiveness can be seen in the fact that during its 15 years of existence only about 1,000 cases have gone before the Arbitration Board in Munich. "[T]his is only a small fraction of the thousands of instances of compensation paid employees year after year."⁴²

Other countries' laws have antedated, as well as followed, the German example. Before the enactment of the German law, Sweden and Denmark had laws that provided for mandatory compensation to inventors for their inventions.⁴³ Unlike the Swedish and German law, the Danish law does not provide for any special board to handle disputes between the employer and his employee.⁴⁴

In 1959 when the Soviet Union issued its basic statute on "Discoveries, Invention and Innovation Proposals," it also put into effect an extensive regulation with regard to compensation for three respective categories: scientific discoveries, inventions, and innovation proposals.⁴⁵ The Soviet law has the amounts of compensation listed in a schedule which provides for minimum compensation.

Japan has been familiar with the concept of payment of reasonable monetary compensation to employed inventors since the enactment of its Patent Act in 1921. Japanese law provides that when federal civil servants make inventions the government shall pay compensation if the government either acquired the right to obtain a patent for the invention or obtained the granted patent for such invention. If the Japanese government receives income from the utilization or disposal of a patented invention, the employee shall receive additional compensation per calendar year according to a table.⁴⁶

The significance of the foreign laws is that most industrialized nations whose law is not derived from British common law do recognize a need for extra compensation to employed inventors.

The Moss Bill Helps Humanize Patents

The first objective of the President's Commission on the Patent System was: "To raise the quality and reliability of the United States patent."⁴⁷ Efforts to reach that goal have been presented to

⁴² See Schade, *supra*, note 40, at 165.

⁴³ Neumeyer, "Employees' Rights in Their Invention," 44 J. Pat. Off. Soc'y 674, 698 (1962).

⁴⁴ *Id.* at 697.

⁴⁵ See note 39 *supra*.

⁴⁶ See note 39 *supra*.

⁴⁷ Report of President's Commission on the Patent System, at 3 (1963).

