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OWNERSHIP OF UNIVERSITY FACULTY INVENTIONS

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A. INTRODUCTION

1. Globally, the exploding frontiers of science and technology are rapidly transforming societies, economies and political cultures. The role of the universities in precipitating and sustaining this scientific and technological progress in tandem with the industry is monumental. Whether it is in robotic engineering or molecular technology or super-conductivity the lead characters are the universities. It is in light of these developments that the question of ownership of university invention acquires unique importance, because of its implication on the creative potential of the universities in particular and on basic research in general.

B. THE COMMON LAW PRINCIPLES

2. In the U.S., long established common law legal principles grant to the employees such as the faculty the inherent right of ownership to their inventions. However, this inherent right is abrogated if an express contract to that effect exists.

3. The seminal case enunciating the law on the point is the U.S. Supreme Court decision in *U.S. v. Dubilier Condenser Corp., 289 U.S. 178 (1933)*. The applicable common law principles to determine the status of employee-generated inventions, which was enunciated by the court in this case, has been applied to a wide spectrum of employment settings. This case involved the rights of two employees of the Bureau of Standards of the U.S. Department of Commerce. Francis Dunmore and Percival Lowell were two full-time researchers in the Bureau's airplane radio group of the radio section of the electrical division. During the course of their work the researchers invented three products in a area they had been working on out of scientific curiosity. Their work in this area was voluntary. However, they pursued their research while on duty using Bureau

resources and time and with the full knowledge of their supervisors. *Dubilier* asserted that the proprietary rights in the invention are vested in the employer only if the employee is specifically "hired to invent". It is interesting to note that the doctrine of hired-to-invent has generally been circumscribed by the courts' reluctance to read it too broadly. As a rule an employee is considered as hired to invent only if the invention falls clearly within the scope of the contract. In fact, the burden is on the employer to prove that the employee was hired to create a specific invention.

4. This attitude of the courts is reflected in the decision of the Superior Court of Florida in *State Board of Education v. Bourne, 150 Fla. 323 (1942)*. The court upheld the rights of the inventor to his invention on the grounds that the employee was a part of the research team as a plant pathologist and was not hired as a geneticist. In brief, if the individual is hired for the purpose of conducting research, he does not loose the right to his inventive idea unless he is assigned to the specific area in question. Dissenting with this general trend the Supreme Court of North Carolina in *Speck v. N.C. Dairy Found., 307 S.E. 2d 785 (N.C. 1983)*, held that university faculty employed as "teachers and researchers" fall within the category of persons "hired to invent" and thus do not have a right or interest in inventions arising from university research. This opinion is significant to the extent that it is the first case where the issue directly addressed involved the respective rights of the faculty inventor and the university.

5. If in the creation of the invention the time and resource expended was that of the employer, a non-exclusive license or a shopright in the invention arises in favor of the employer. Thus, as far as the common law is concerned the question of employee invention turns on two critical factors:

a) whether the research/invention falls within the scope of the work responsibilities of the employee and

b) whether in the creation of the invention the time or resources of the employer

was used.

As is apparent the crux of the matter resides in the contract of employment governing the relationship between the inventor and the institution concerned. In this context it should be pointed out that since state property law and contract principles generally govern issues dealing with ownership, the states are not bound to follow *Dubilier*.

C. THE PRACTICE FOR NON-GOVERNMENT-SPONSORED INVENTIONS

6. The contractual agreements that characterize the employment relationship between universities/research institutions and the faculty, are increasingly molded by the general policies of the universities/research institutions, which presume institutional ownership of faculty-generated invention/research. This trend is predicated upon three factors which seem to be pushing the universities towards entrepreneurial activities. These factors are:

a) government incentive for creating innovative technology in collaboration with industry,
b) cooperation and enticement by industry, and
c) the self-interest of the institution.

These entrepreneurial opportunities are compelling universities to formulate policies in order to resolve the perplexing issues surrounding faculty ownership rights in inventions and research results.

7. A brief survey of the policies followed by different universities reveals that while the language may differ, the basic considerations behind these policies is the presumption of ownership by the universities. The basis on which ownership is claimed can be classified into three basic approaches:

a) ownership claims based on utilization of university resources or facilities,
b) ownership claims if the invention is developed in the course of

employment, and

c) ownership claims which are made irrespective of whether the invention was made by the faculty using university resources or during the course of employment.

D. THE POLICY CLAIMS FOR UNIVERSITY VERSUS FACULTY OWNERSHIP

8. The policy invoked by the universities to substantiate their claim to ownership of faculty-generated inventions cover a broad range of arguments involving issues of competitive business practice, federal government requirements, legality of the policies, existence of infrastructure for useful exploitation of the inventions in questions, etc. At the heart of the matter is the question of the revenue-generating possibilities of the inventions, the issue of entrepreneurial opportunities which may arise from inventions, and their broader implications on the financial health, reputation, ability to attract talent, and resources in a highly competitive marketplace of the universities.

9. Faculty ownership of university-created invention, on the other hand, it is argued, rests on the assumption that ownership will act as a catalyst to enhance the faculty's creative genius. The policy claim for faculty ownership of invention is predicated primarily on the argument that university ownership of faculty inventions will eventually endanger the academic mission of the university concerned, namely, that it would jeopardize university emphasis on basic research by countenancing allocation of resources towards applied research. To illustrate, in 1989 a majority of the approximate $18.6 billion of basic research done in the U.S. was performed in academia. In contrast, of the approximate $27.3 billion spent on applied research, only 13% was performed in universities. Reallocation of resources, in favor of applied research may infringe upon the mission of universities of promoting basic research.

10. Another argument against university ownership of faculty-created invention articulates the change that a university may undergo in the direction of entrepreneurial activities, in addition to their present role of venture capitalists and equity holders. This may expose the financial health of the university to the vagaries of the marketplace, create corporate, tax, and torts liability problems, affecting its ability to carry out its academic commitments. Ownership arguments on either side have their own strength and weakness. Though the scales are presently tilted in favor of university ownership, this should not be taken to imply that the faculty does not or should not have any right in their inventions.

E. THE PRACTICE FOR FEDERAL GOVERNMENT-SPONSORED INVENTIONS

11. Before the enactment of The Patent and Trademark Amendment Act of 1980 (35 U.S.C.A. ss 200-211, ch. 18 (west 1980); 37 C.F.R. ch. 4 pt. 401 (1989); 45 C.F.R. ch. 6 pt. 650.) no uniform regulations governed ownership rights between a sponsoring government agency and the university contractor receiving the funds. The Amendment Act, popularly known as the Bayh-Dole Act, envisages that in the eventuality of an invention flowing from the research sponsored by the government agency, the university elects title to the invention while the government acquires a non-exclusive, nontransferable, irrevocable, paid-up license. If the university does not elect to take title, the government may claim title. If the government does not claim title, then the inventor may petition the government agency for ownership, which is usually granted. The law applies to all federal agencies and virtually to all federal funding agreements with universities.

F. THE SITUATION IN COUNTRIES OF THE EUROPEAN COMMUNITY

12. The U.S. perspective on the question of ownership in

university-generated inventions can be better appreciated if contrasted with the position taken in Europe on the same issue. The European position on the question of ownership of university inventions is characterized by a lack of uniformity. In Denmark, Germany, Norway and Sweden, ownership of university research results and inventions is vested in the faculty, unless contractual agreement to the contrary exist or is allowed by the government. A rather interesting fallout of this legal regime is the near complete absence of infrastructure for the exploitation of such kind of inventions. In Germany, this position must be distinguished from that of the employees of research institutions, such as, the Max Planck Society for the Advancement of Science. Researchers in such an institution are classified as employees and their inventions are designated as either being part of their "service" or as "free inventions". In case of a service invention, depending on whether it resulted from the employees genius or was based upon the institution's expertise and experience, the institution can make limited or partial claim to the invention. The claim entitles the institution to the ownership of the invention in question. The German law stipulates a number of caveats to protect the employee's interests in the context of contractual clauses in labor agreements and on the matter of adequacy of the compensation owed to the employee. In Spain, though the ownership is vested in the university, the law provides for the faculty to share in the earnings of the university from the exploitation of the invention in question.

13. It is interesting to note that in the case of almost all EC member states there exists no special law to determine the faculty ownership issue. Without going into too much detail, it may be pointed out that if the invention is classified as falling within the scope of the inventor's "task or mission", then the university acquires complete title barring any contract to the contrary. If the invention does not come within this classification, even though it is claimed by the university, the faculty is entitled to additional remuneration. As a consequence of this position,

large institutions exist in the UK and in France like the British Technology Group and ANVAR (in France), which exploit such university-generated inventions and research results.

H. CONCLUSION

14. It is clear from the above discussion that the troublesome problematic of ownership of faculty inventions is not only very complex, but also has tremendous impact on the technological development and consequent economic growth and social welfare of a country. This becomes apparent when the contribution of universities to the scientific and technological base of an economy is taken into account. Any legislation on the matter must take cognizance of the delicate balance that must be achieved so as to accommodate the interests of the faculty as well as that of the university. The question of ownership must thus be addressed within the broader framework of the socio-economic and legal backdrop which surrounds the academic environment.

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