

BOOK REVIEW**BIOTECHNOLOGY AND SOFTWARE PATENT LAW:
A COMPARATIVE REVIEW OF NEW DEVELOPMENTS**

Edited by Emanuela Arezzo and Gustavo Ghidini,

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This collection of essays comprises a topical and insightful selection of perspectives on trends in patent law, spanning various information technologies and biotechnology. The book is divided into three parts, the first of which broaches general subjects in patent law and the challenges that twenty-first century technologies present for patent legislators and adjudicators. Part II focuses on software patentability, covering this matter in Europe and the US, usefully reminding the reader of the history of its legal protection. The final part deals with the patentability of biotechnological inventions, looking at matters principally from a European perspective, most likely due to the controversy over the ongoing effort to draft the parameters of patents and morality exclusions. Some US cases are also covered. The collection firmly roots this area of intellectual property in context by grounding the opening part in industry concerns and concomitant tailoring of the law which allows for a keen critique of legal developments in this area. There are twelve essays in total. The first five essays make up Part I.

Chapter one considers the dichotomy between unitary patent systems and the diverse technologies governed by patent law. The one-size-fits-all model does not spur innovation predictably when applied in different technological fields. The chapter deals with patent theories, of which there are several due to the fact that multiple industries utilise the patent system. Tightly drafted laws tend to hamper flexibility and the authors believe that judicial interpretation within a statutory standard is preferable to other potential legal approaches. The second chapter deals with the need for access to knowledge which the patent system, if adequate licensing is not put in place, may hamper. An innovative model in which an impartial public body would be involved in this process is mooted. Unusually, this chapter contains much more footnote than text. The topic of chapter three is that of the definition of invention and the manner in which this has been developed. The author advocates that the ills of overprotection can be avoided by focusing on the promotion of innovation in the industrial arts, thereby narrowing somewhat any tendencies to concentrate solely on commercial significance. Chapter four handles the issue of permissible experimental uses of patented inventions and deems this to be essential for research activities. Examples are given where rules have been developed to allow for research, for instance in universities, but the point is also made that these institutions' orientation has changed and they are now more market-oriented and commercially focused. The importance of access to knowledge is reiterated in order to foster innovation and the differing priorities of patent holders and the public interest is explored. The fifth chapter examines the interface between patents and competition law and observes that the latter is coming to be applied to curtail the remit of the former, most especially in the area of drugs. Overlap between these two areas of law, however, tends to occur only where intellectual property rights are being used improperly and in contravention of competition law.

Part II comprises three chapters which focus on software patents in Europe and the US. Chapter six questions the usefulness of these patents and points out that their legal parameters

are unclear. It also highlights the fact that around the 1900s, several European countries did not grant patents, but that this did not have a negative effect on innovative activity. A lack of clarity in the law has led to semantic wrangling over the definition of terms and, indeed, demarcating the protectable from non-protectable has proven difficult. The next chapter in this section, chapter seven, traces interpretive developments of the European Patent Convention (EPC) in relation to exclusions from patentability which were intended to apply to computer programs. A historical refresher is given in relation to different legal coverage which has been considered over the past few decades, such as the World Intellectual Property Organization's (WIPO) *sui generis* model for computer programs. It also charts the extent to which the strictures of the EPC have been evaded so that the letter of the law has effectively been evacuated and now software patents are permissible in Europe, despite the apparent legislative restriction. This chapter also deals with the issue of low quality patents and the effect such patents have had on the open source software movement. The final chapter in this part critiques the relatively recent US Supreme Court decision of *Bilski v Kappos* in which the Court declined to render business methods unpatentable. The author questions whether the judiciary are best placed to effectuate reform of the patent system. Unlike the first essay, the conclusion of this author is that legislative reform is preferable to judicial, given the legislature's greater access to research resources and its democratic mandate.

The final part of this book encompasses four chapters and focuses on biotechnology industries. Chapter nine critiques the Biotech Directive 1996 and its interpretation, remarking that different, and sometimes conflicting judicial and legislative interpretations, have occurred in the jurisprudence in this area. The legislation leaves certain ethical areas uncovered, for instance human embryonic stem cells, and its scope in places is therefore vague. Moreover, there are parallel European patent regimes, both of which have morality exclusions and their case law is not aligned. Neither the EU nor the European Patent Office (EPO) are obliged to observe each other's precedents so divergent interpretations are inevitable. The tenth chapter compares practice in the US and Europe and the author takes the view that patents on genes are much narrower than is generally believed. Patents, though, are often disregarded, rights are not enforced and large companies often encourage non-commercially orientated research on their patents in order to increase their own bank of knowledge. Chapter eleven discusses the issue of the patentability of human stem cell and synthetic biology patents, acknowledging that the law relating to the latter is less complicated. Again, continuing a theme in this section, deficiencies in legislative definitions are identified. For example, medical descriptions of embryos concerning the temporal cut-off point are not universal, leading to uncertainty in a field where both science and law are unpredictable. The WARF case is explored in depth in the context of patentability and different scientific scenarios and their likely legal consequences are explored. In the author's view, biosafety issues will become more important in this field in due course. The twelfth and final chapter of the book advocates more harmonisation between different legal regimes which govern morality provisions. Whilst the EU and the EPO have experienced closer legislative alignment, two separate judicial systems still exist and this leads to diverging constructions of unclear provisions. This means that inventions may receive protection in one jurisdiction and not in the next. Furthermore, any amendments to provisions relating to morality are not, it is argued, best done in the patent realm.

The book was especially useful as the array of essays refreshes certain aspects of patent history which may have been forgotten and this is done in a succinct manner. Pointed critiques are also made and anomalies identified. On completing the collection, several heretofore shady aspects of patent law and practice were much clearer in my mind. There is a

unanimous critique of various aspects of the patent regimes examined but contributors differ in the remedies they recommend, which creates a welcome liveliness in this complex area. Some authors believe that patents are too broad whilst others argue that this is not the case and that there is a difference between the possession and the exercise of patent rights. It would have been useful to have a conclusion to the book, of which there was none, and the book contains many typographical and grammatical errors in places. More editorial rigour would not have gone amiss. Nonetheless, this does not detract overall from the quality of the critiques and this book provides a useful edition to my own library.

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