17 Some Observations on the Balancing of Intellectual Property Rights with Information Freedom from the Perspective of Constitutional Law: In Search of Basic Principles in Law Relating to Information Technology[*]

(This English document is a translation of the summary portion of a much longer report written in Japanese. Full details of works quoted and referenced can be obtained from the Japanese original.)

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What are the implications of treating certain forms of "information" as "property" and investing the "owner" of that property with legally recognized "intellectual property rights"? How can such "intellectual property rights" be grounded and theorized in legal terms? In recent times, in Japan, laws for the protection of "intellectual property" have come to be understood as legal instruments for the protection of "proprietary information". This is the dominant view underlying the current heightened consciousness of the importance of intellectual property rights in that country. The concept of "information", however, is open to numerous interpretations. It is also something that should, in principle, remain free. In this paper, I focus on the very heart of industrial property rights, namely patents, looking in particular at recent debates in the United Kingdom, with the addition of some comments, where appropriate, on the situation in the United States. Besides investigating the meaning and origins of basic concepts relating to intellectual property and intellectual property rights, their nature, theoretical foundations and justification, I will also consider specific issues surrounding the scope of "patentable inventions". On the basis of this discussion, I will conclude with some suggestions for the future of intellectual property law in Japan with a particular view to balancing intellectual property rights with the freedom of information. I give particular emphasis to the tension between private rights and the public interest (a tension which is inherent to the whole notion of intellectual property) and warn against the danger of falling too easily into tautological justifications for the protection of intellectual property rights.

I Introduction

What are the implications of treating certain forms of "information" as "property" and investing the "owner" of that property with legally recognized "intellectual property rights"? How can such "intellectual property rights" be grounded and theorized in legal terms? In recent times, in Japan, laws for the protection of "intellectual property" have come to be understood as legal instruments for the protection of "proprietary information" [*1]. This is the dominant view underlying the current heightened

(*) Published under the Industrial Property Research Promotion Project FY2007 entrusted by the Japan Patent Office.
(*1) *See* NOBUHIRO NAKAYAMA, MULTIMEDIA TO CHOSAKUKEN 5 (1996) [in Japanese]; *see also* NOBUHIRO NAKAYAMA, KOGYOSHOYUKENHO (JO) TOKKYOHO 5 (2d ed., rev. 2000) [in Japanese].

consciousness of the importance of intellectual property rights in that country. The concept of "information", however, is open to numerous interpretations(*2). It is also something that should, in principle, remain free(*3). This paper addresses the issue of how to reconcile "protection" with "freedom" bearing in mind the multiple senses of the term "information". It draws on the author's previous experience of researching issues of free expression, media law and cyber law from the perspective of constitutional law. Since the signing of the TRIPS Agreement in 1994, there has been the rapid establishment of an institutional framework for the effective and adequate protection of intellectual property rights in many countries including Japan. At the same time, the development of a society based on advanced information technology has given ever greater prominence to the demand for the free flow of information. My aim is to consider how these two sometimes directly opposing demands for "protection" and "freedom" might be reconciled, while also investigating the basic principles and values that need to be taken into account when solving legal issues related to information technology.

Recent events in legal history have focused increasing attention on the theoretical foundations for the exclusive rights conferred by patents. This has been accompanied by a closely related concern with how to balance the claims of copyrights with the freedom of expression. In the United States of America, for example, the Supreme Court ruled in 2003 on the Eldred v. Ashcroft Case(*4) which had challenged the constitutionality of the extension of the term of copyrights by the Sonny Bono Copyright Term Extension Act (CTEA). This has led to renewed debate about how to balance copyright with the freedom of expression enshrined in the First Amendment. In the same country, there has been a remarkable expansion in the scope of protection offered to intellectual property rights during the past twenty years. This has also given rise to intense debate especially since the Supreme Court ruling on the eBay v. MercExchange Case(*5) in 2006. Meanwhile, in the European Union, there has been much debate about potential conflicts between the freedom of expression under the European Convention on Human Rights and Fundamental Freedoms (ECHR) and the protection of copyrights and trade marks. In addition, there is much concern in Europe with how to approach patent protection in the computer software and Internet industries, especially in view of the growing trend toward open-source and free software.

In Japan, a new area of law known as "information law" (joho-ho) has developed over the past several decades(*6). This attempts to provide solutions to legal issues that have arisen as a result of numerous social changes known collectively as "informatization" (johoka) which have been underway since the 1960s. "Information law" crosscuts the previously existing divides between different areas of legal specialization and seeks to provide more comprehensive and systematic solutions to the disparate legal issues raised by

(*2) *See e.g.*, Shunya Yoshimi (Translated by David Buist), *Information*, Theory, Culture & Society, Vol. 23, No. 2-3, March-May 2006, at 271, 274-77.

(*3) *See e.g.*, NAKAYAMA, *KOGYOSHOYUKENHO (JO) TOKKYOHO*, *supra* note 1, at 6.

(*4) *See* Eldred v. Ashcroft, 537 U.S. 186 (2003). *See also* Itsuko Yamaguchi, *Hyogen no Jiyu to Chosakuken*, *in* CHITEKIZAISANHO NO RIRON TO GENDAITEKI KADAI [NAKAYAMA NOBUHIRO SENSEI KANREKI KINEN RONBUNSHU] 365 (Hidetaka Aizawa et al. eds., 2005) [in Japanese].

(*5) *See* eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).

(*6) *See e.g.*, JUNICHI HAMADA, JOHOHO (1993) [in Japanese]; JOHOHO NYUMON (Zenji Ishimura & Masao Horibe eds., 1999) [in Japanese]; Junichi Hamada, *Johoho*, *in* JOHOGAKU JITEN 473 (Takashi Kitagawa et al. eds., 2002) [in Japanese]; HOSYSTEM 3 JOHOHO (Katsuya Uga & Yasuo Hasebe eds., rev. 2006) [in Japanese]. *See also* Itsuko Yamaguchi, *Ubiquitous Jidai ni okeru "Cyberho" Gainen no Tenkai*, *in* TOKERU SAKAI KOERU HO 4 MEDIA TO SEIDO113 (Daniel Foote & Yasuo Hasebe eds., 2005)[in Japanese]; Itsuko Yamaguchi (Translated by David C. Buist), *Cyberlaw*, Theory, Culture & Society, Vol. 23, No. 2-3, March-May 2006, at 529; Itsuko Yamaguchi, *Beyond de facto Freedom: Digital Transformation of Free Speech Theory in Japan*, 38 Stanford Journal of International Law 109 (2002).

"informatization". Accordingly, it has been built on the broad foundation of values relating both to civil liberty/political freedom and to economic freedom as laid out in the Japanese constitution. The issue of how to approach the protection of "proprietary information" under intellectual property law therefore shares much of the same ground as information law as a whole. The investigation of the legal protection of information in this paper will be conducted from the basic understanding that the various institutions relating to the concept of "information" (as variously interpreted) are all founded on the same broad set of values.

This paper is the result of a year's research conducted at the Oxford Intellectual Property Research Centre which began on March 30th 2007. It draws together ideas considered particularly important to the formulation of future intellectual property law in Japan. I focus on the very heart of industrial property rights, namely patents, looking in particular at recent debates in the United Kingdom, with the addition of some comments, where appropriate, on the situation in the United States. Besides investigating the meaning and origins of basic concepts relating to intellectual property and intellectual property rights, their nature, theoretical foundations and justification, I will also consider specific issues surrounding the scope of "patentable inventions". On the basis of this discussion, I will conclude with some suggestions for the future of intellectual property law in Japan with a particular view to balancing intellectual property rights with the freedom of information. I give particular emphasis to the tension between private rights and the public interest (a tension which is inherent to the whole notion of intellectual property) and warn against the danger of falling too easily into tautological justifications for the protection of intellectual property rights.

II The Concept of "Intellectual Property Law": Problems and Definitions

Let us first consider how the term "intellectual property" is to be defined. A survey of recent general publications on the topic of intellectual property law does not necessarily reveal a very clear picture of this issue. While there certainly are some common themes running through the literature, there are also significant differences of approach among scholars in the field. For example, a recent British publication, Intellectual Property by William Cornish and David Llewelyn (first published in 1981 and now in its sixth edition published in 2007) begins with an excursus of patents, design rights, copyright and trade marks. The authors then identify one of the key issues emerging from the recent expansion in the scope of intellectual property (IP) protection as follows: "The ultimate art in shaping of IP policy lies in securing outcomes that are proportionate to the aim of that protection." (*7) For them, the point of intellectual property is that it "protects applications of ideas and information that are of commercial value" (*8). They note furthermore that "[o]ne characteristic shared by all types of IPR" is that "they are essentially negative: they are rights to stop others doing certain things" (*9). In particular, the "core conception" of patents is "to prevent all others — not just imitators, but even independent devisers of the same idea — from using the invention for the duration of the patent" (*10). Patents are not freely available for every single industrial improvement "but only for what is judged to qualify as a 'patentable invention' by comparison with what is already known in an industry" (*11). However, there are

(*7) WILLIAM CORNISH & DAVID LLEWELYN, INTELLECTUAL PROPERTY: PATENTS, COPYRIGHT, TRADE MARKS AND ALLIED RIGHTS 3 (6th ed. 2007).
(*8) *Id.* at 6.
(*9) *Id.*
(*10) *Id.* at 7.
(*11) *Id.* at 8.

significant problems in defining exactly what falls within the scope of a "patentable invention" (as is explained in more detail in Chapter 6 of the full Japanese version of this report).

A different approach is offered by Lionel Bently and Brad Sherman in a general work on intellectual propriety published (in its second edition) in 2004. This pays particular attention to the historical significance of "creativity", as is illustrated in the following quotation: "Intellectual property law regulates the creation, use, and exploitation of mental or creative labour" (*12). It is explained that the term "intellectual property" has been used for almost one hundred and fifty years in reference to the general area of law that includes such things as copyright, patents, designs and trade marks(*13). In a separate work, the same authors state explicitly that the modern concept of intellectual property law "did not emerge as a discrete and widely recognised category of law until midway through the nineteenth century" (*14).

A more critical approach to the issues of intellectual property is offered by Michael Spence in a book first published in 2007. This opens with the following statement: "The term 'intellectual property' is of nineteenth-century coinage" (*15). It then goes on to say that if an intellectual property lawyer were asked to describe her/his subject, the answer would consist of a "list of legal regimes" such as the law of copyright, patents and trade mark, rather than a single "concept giving them coherence". Even if she/he were able to give a detailed description of each of these separate areas of law, "the enquirer might be left with little notion of what, if anything, holds these legal regimes together" (*16). The main point of Spence's argument is to insist on the need "to examine both the concept of intellectual property and the reasons why a legal system might incorporate such a concept" regardless of any reluctance to do so among lawyers practicing in the field(*17). With this concern in mind, Spence embarks on his own attempt to clarify the "core concept of an intellectual property right" (*18).

As these general works illustrate, it is not necessarily easy to identify the basis for grouping together a number of different legal areas into the category of "intellectual property law". While it is possible to put one's finger on some common elements, further investigation is required in order to reveal the significance and origins of the concepts of "intellectual property" and "intellectual property rights". In the next section, I pursue this matter while including in my investigation the opinions of scholars in the United States, whose legal system has inherited the British common law tradition.

III Tensions Inherent in the Very Origins of "Intellectual Property"

One way of clarifying the meaning and function of a concept is to look at its origins. As has already been mentioned in reference to the works of Bently and Sherman, the origins of intellectual property are closely related to the origins of modernity itself. This theme has been developed further by Carla Hesse who notes that the "concept of intellectual property — the idea that an idea can be owned — is a child of the European Enlightenment" (*19). It was at this time that

(*12) *See* LIONEL BENTLY & BRAD SHERMAN, INTELLECTUAL PROPERTY LAW 1-2 (2d ed. 2004).
(*13) *Id.* at 1.
(*14) *See* BRAD SHERMAN & LIONEL BENTLY, THE MAKING OF MODERN INTELLECTUAL PROPERTY LAW 95 (1999).
(*15) MICHAEL SPENCE, INTELLECTUAL PROPERTY 1 (2007).
(*16) *Id.*
(*17) *Id.* at 1-2.
(*18) *Id.* at 12-35.
(*19) Carla Hesse, *The Rise of Intellectual Property, 700 B.C. — A.D. 2000: An Idea in the Balance*, Daedalus 26 (Spring 2002), *reprinted in* INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume I, 51 (David Vaver ed., 2006), at 51. This five-volume set is useful, and thus its reprinted articles will be cited in my paper by the page number of each volume.

human beings came to believe that "knowledge" was a product of the "human mind working upon the senses" rather than being simply transmitted to humans through "divine revelation", assisted by the study of ancient texts. For the first time, people came to see themselves as the creators of "new ideas" rather than as "mere transmitters of eternal verities". As a result, it also became possible for them to imagine themselves to be the "owners" of ideas[*20]. This was an integral part of the development of modern thought as it explored the significance of human existence in opposition to the absolute existence of God. On the basis of this insight, Hesse takes copyright to be "the core of the modern concept of intellectual property" [*21]. My emphasis here, however, is not on the historical development of copyright, but rather on the "philosophical tensions" that existed in "the balance between private rights and the public interest" [*22] right from the very beginnings of the modern concept of intellectual property.

As Hesse points out, "a rethinking of the basis and purpose of knowledge" [*23] occurred in Europe during the mid-eighteenth century, at a time when revolutionary changes were taking place in the institutions of printing and publishing. As a result of debate about the "origins and nature of ideas ... a series of philosophical (or, more specifically, epistemological) problems were shown to lie at the heart of what at first glance seemed merely to be questions of commercial policy"[*24]. In simple terms, the main point of contention was between two philosophical doctrines — "subjectivism" and "objectivism" — from which two different traditions of legal interpretation emerged with respect to the concept of intellectual property[*25]. The empiricist perspective of the objectivist camp saw the "public good" of or "public interest" in encouraging the production and transmission of new ideas as the highest aim of the law. This led eventually to the adoption of a utilitarian approach. Meanwhile, those who took the subjectivist position saw upholding "natural right" as the ultimate aim and believed that the guiding principle of legislation should be "the sanctity of the individual creator" [*26]. The opposition between these two different approaches can be traced up to the present day.

The patent system inaugurated in Venice in 1474 is generally recognized as being the first patent-related statute ever enacted[*27]. It is highly significant that the tension between private rights and the public interest existed even at this early stage. According to Christopher May, the Venetian legislators of that time "had a developed and practical view" of the balance between public and private benefits arising from the ownership of knowledge, which was linked to "the need to support innovation"[*28]. He goes on to state the following: "The balance between private rights to reward and the public good of dissemination of innovation has been crucial to the law of intellectual property and its legitimisation ever since." [*29]

(*20) Hesse, supra note 19, at 51.
(*21) *Id.*
(*22) *Id.* at 64.
(*23) *Id.* at 57.
(*24) *Id.* at 57-58.
(*25) *See id.* at 61.
(*26) *Id.*
(*27) *See, e.g.,* Frank .D. Prager, *A History of Intellectual Property from 1545 to 1787*, 26 Journal of the Patent Office Society 711 (1944); Giulio Mandich, *Venetian Patents (1450-1550)*, 30 Journal of the Patent Office Society 166 (F.D. Prager trans., 1948); F. D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 Journal of the Patent Office Society 106 (1952); *see also* Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (Part 1)*, 76 Journal of the Patent and Trademark Office Society 697, 705-06 (1994); DONALD S. CHISUM ET AL., PRINCIPLES OF PATENT LAW 10-11 (3d ed. 2004); ROBERT P. MERGES ET AL., INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 106 (3d ed. 2003).
(*28) Christopher May, *The Venetian Movement: New Technologies, Legal Innovation and the Institutional Origins of Intellectual Property*, 20 Prometheus 159 (2002), *reprinted in* INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume III, 7 (David Vaver ed., 2006), at 12.
(*29) *Id.*

I have only been able to cover a small part of the existing debate on the origins of intellectual property. It should be clear, nevertheless, that the concept of intellectual property contained from its very beginning a tension between private rights and the public interest or public good. Reconciling these two demands was seen as an important task from the earliest stages of the development of intellectual property law. Next, I will consider in more detail the contemporary debate about the essence of intellectual property, focusing particularly on commentary about current patent law in the United Kingdom.

IV The Position of "Intellectual Property" in Relation to the Framework of General Property Law

Let us consider the nature of intellectual property according to current English law. The first point to note is that patents, copyright and trade marks are all defined as being "personal property". Section 30(1) of the Patents Act 1977 (1977 c.37) states as follows: "Any patent or application for a patent is personal property (without being a thing in action)". What exactly does this mean? In particular, what does it mean to say that a patent is not a "thing in action"?

The legal definition of "property", as given for example by A Dictionary of Law published by Oxford University Press is "[a]nything that can be owned" [*30]. Property is then divided into subcategories. It can be defined as either "real property" or "personal property". Furthermore, it can be divided into "tangible property" and "intangible property". Intellectual property is categorized as being "personal" as opposed to "real" property, and as "intangible" as opposed to "tangible" property[*31].

According to one general text on property law, Personal Property Law by Michael Bridge, personal property is defined as follows: "It is a commonplace observation that personal property (or personalty) is all the property that is left once land, that is real property (or realty), has been subtracted" [*32]. As this definition clearly indicates, the category of "personal property" is residual and expandable in nature[*33]. In addition, it is evident that the category of "things in action" (to which many items of intellectual property belong) is an even more residual category within that of "personal property" [*34].

F.H. Lawson and Bernard Rudden, in their book The Law of Property, explain that "things in action" is "[t]he most general name which the common law gives to the class of intangibles"[*35]. They note furthermore that it was "coined to convey two notions". On the one hand, by employing the word "thing" it "catches the idea that, whatever it is, it is an asset", while on the other hand, the term "in action" implies that "this asset is not tangible and can be transformed into a tangible object only (if at all) by successfully suing someone" [*36].

According to the commentary on the aforementioned Section 30(1) of the Patents Act 1977 in Halsbury's Laws of England, patents had once been defined as "things in action", but this long established position at common law was reversed by the Patents Act 1977[*37]. As of 1st June 1978, all existing and new patents, and all patent applications, acquired the status of not being "things in action"[*38]. Copyrights, however, have continued to be "things in action" to the

(*30) A DICTIONARY OF LAW 419 (Elizabeth A. Martin & Jonathan Law eds., 6th. ed. 2006)..
(*31) *See id.* at 280, 419.
(*32) MICHAEL BRIDGE, PERSONAL PROPERTY LAW 1 (3d ed. 2002).
(*33) *See id.*
(*34) *Id.* at 4-5.
(*35) F.H. LAWSON & BERNARD RUDDEN, THE LAW OF PROPERTY 29 (3d ed. 2002).
(*36) *Id.*
(*37) LORD HAILSHAM OF ST. MARYLEBONE, HALSBURY'S LAWS OF ENGLAND, Vol. 35 (4th ed., reissue, 1994) at 150-51,152 n.15.
(*38) *Id. See also id.* at 220 n.6.

present day[*39]. As to the reasons for this peculiar status of patents, Cornish and Llewelyn make the following observations: "A patent is a right of personal property; so is an application" [*40], and "[t]hey are not however, things in action; though why not, is a mystery" [*41].

In a work called Property and Justice, J.W. Harris provides some clues as to the reasons for the peculiar status of patents in contemporary English law. In reference to the diverse applications of the term "property" in the present day, he poses the following question: "Is there anything, could there be anything, which constitutes an essence of propertiness underlying all these uses?" [*42] Harris points out the need to understand the nature of property institutions, to identify their "essentials" and typical "features", in order to investigate how those institutions are justified and to clarify some particular questions of institutional design and concrete questions of resource-allocation[*43]. According to Harris, "the essentials of a property institution are the twin notions of trespassory rules and the ownership spectrum" [*44]. For an item to be brought within a property institution, it must be subjected to "trespassory" protection and be the subject of "an ownership interest" [*45]. Furthermore, it must normally be "scarce" [*46]. Ideas, however, do not fulfil this condition of scarcity, since "as a totality" ideas are "potentially infinite" [*47]. Ideational entities only become the subject of ownership interests as a result of the establishment of laws relating to patents, copyrights and other forms of intellectual property. As Harris says, in the absence of any natural scarcity, "in the case of those ideational entities which are comprised within intellectual property, the law creates artificial scarcity" [*48]. This raises a question about why the term "property" is applied to such entities at all. In the next section, I will consider the justifications for the recognition of certain ideas as "intellectual property".

V Issues relating to the Justification of "Intellectual Property"

Debate about the theoretical grounding and justification of "intellectual property" has been particularly extensive in the United States, especially since the recent expansion in the scope of intellectual property protections in that country. There has also been a remarkable increase in concern for this topic in the United Kingdom, where much of the discussion makes explicit reference to the debate in the United States. Some of the debate in both countries has been directly critical of recent trends in the development of intellectual property rights. As noted, for example, in the aforementioned work by Bently and Sherman, "there are now many commentators who doubt that all intellectual property rights are justified in the form they currently take" [*49]. Since ideas and information are not naturally scarce and can be shared, the justification for the granting of exclusive rights to them has become a subject for intensive debate, even more so now than previously. Attempts to justify such rights have tended to focus on one of two types of argument: "ethical and moral arguments" and "instrumental justifications" [*50]. What is interesting about the recent debate is that it tends to employ the latter type of argument. In other words,

(*39) *See* LORD MACKAY OF CLASHFERN, HALSBURY'S LAWS OF ENGLAND, Vol. 6 (4th ed., reissue, 2003) at 6.
(*40) CORNISH & LLEWELYN, *supra* note 7, at 279.
(*41) *Id.* at 279 n.55.
(*42) J.W. HARRIS, PROPERTY AND JUSTICE 7 (1996).
(*43) *See id.* at 4.
(*44) *Id.* at 5.
(*45) *Id.* at 42.
(*46) *Id.* at 42-43.
(*47) *Id.* at 43.
(*48) *Id.*
(*49) *See* BENTLY & SHERMAN, *supra* note 12, at 3-5
(*50) *See id.* at 4-5.

it emphasizes “the fact that intellectual property induces or encourages desirable activities” [*51].

One of the primary sources cited by Bently and Sherman for an overview of “instrumental justifications” for intellectual property in the United States is a 1989 paper by Edwin Hettinger entitled “Justifying Intellectual Property” [*52]. Reading this paper, it becomes clear that there was already a clear awareness of the importance of establishing arguments for the existence of intellectual property in the face of widespread doubt about its justifiability. Two main sources of such doubt are identified[*53]. Firstly, intellectual objects are not exclusive by nature. This raises the question of why something that is capable of being possessed and used by everyone concurrently should become the subject of exclusive rights granting possession and use to only one person. Hettinger notes that the burden of justification lies with “those who would restrict the maximal use of intellectual objects” [*54]. He continues to identify a second source of doubt about the justifiability of intellectual property: “The fundamental value our society places on freedom of thought and expression creates another difficulty for the justification of intellectual property.” [*55] This is to say that private property has the effect of increasing one person’s freedom at the expense of everyone else’s. Private intellectual property, such as trade secrets, restricts the manner in which ideas can be obtained, and (in the case of patents) limits the use of ideas, or (in the case of copyrights) limits the expression of ideas. As Hettinger clearly states, such restrictions are “undesirable for a number of reasons” [*56]. This second area of doubt about the justifiability of intellectual property presents especially serious challenges, the more so in a society that places great value on the freedom of thought and expression.

Various arguments justifying the existence of intellectual property have been put forward. I will focus here on two particular arguments representing respectively the two types of arguments identified by Bently and Sherman. The category of “ethical and moral arguments” is represented by the “labour” argument, while “instrumental justifications” are represented by the “utilitarian” argument[*57].

There are two main ways of arguing that people should be granted property rights based on their own labour: (1) that people are “naturally entitled” to the fruits of their labour, and (2) that they “deserve” such rights[*58]. In both cases, justifications of intellectual property based on the “labour” argument have a strong foundation at the level of intuition. However, justifying a particular decision on a specific means or degree of protection inevitably involves complex arguments that stray deeply into the territory of value judgements, such as how to measure the structural elements of value arising from the process of intellectual creation, what kinds of action deserve the granting of intellectual property rights, and how the proportionality of rewards for acts of creation can be maintained.

Turning now to utilitarian arguments, Hettinger gives particular prominence to the way such arguments focus on the users, rather than producers, of intellectual products[*59]. In other words, the granting of intellectual property rights to producers is justified as a necessary means to allow users sufficient access to intellectual products. As Hettinger notes, this approach to the justification of intellectual property is

(*51) *Id.* at 4.
(*52) *See id.* at 4 n.14; Edwin C. Hettinger, *Justifying Intellectual Property*, 18 Philosophy & Public Affairs 31 (1989), *reprinted in* INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume I, 97, *supra* note 19.
(*53) Hettinger, *supra* note 52, at 99-100,110.
(*54) *Id.* at 99.
(*55) *Id.* at 100.
(*56) *Id.*
(*57) *See* BENTLY & SHERMAN, *supra* note 12, at 4-5; Hettinger, *supra* note 52, at 100-11.
(*58) *See* Hettinger, *supra* note 52, at 100-05.
(*59) *Id.* at 108.

"paradoxical"(*60). The current availability and use of intellectual products is restricted for the purpose of increasing the production of new intellectual products and promoting the future availability and use of such products(*61). This argument depends crucially on the question of whether copyrights, patents and trade secrets increase the availability and use of intellectual products more than they restrict them, and furthermore on the issue of whether such an increase is greater than would be achieved by "any alternative mechanism."(*62) Hettinger argues for the need to consider such "alternative" mechanisms, including amendments to the existing system, such as shortening the length of copyright and patent grants(*63). This points to the fact that utilitarian arguments for intellectual property require "substantial empirical evidence" in order to be justified(*64). Such evidence is hard to form, rendering the argument far more complex than initially seemed(*65). Economic analysis related to the justification of intellectual property bears this out(*66).

VI British Patent Law in the Context of European Harmonization (with particular reference to the issue of the scope of patentable inventions)

So far I have dealt mainly with fundamental concepts, principles and values related to intellectual property and intellectual property rights. Building on this general discussion, I would now like to consider the more specific issue of how the concept of "invention" is denoted in British patent law. This is to emphasize the particular importance of patents among the various different areas of intellectual property law(*67). As an entry point into the broader question of what criteria should be applied in the definition of an "invention", I will look at the case of the new technology of computer programmes, which has developed into a significant area of controversy in Europe, especially in the United Kingdom.

One interesting aspect of the history of patent law in the United Kingdom is that the phrase "any manner of new manufacture", first used in Section 6 of the Statute of Monopolies of 1624(*68), had been a constant feature of British patent law until the enactment of the current Patents Act 1977(*69). It was even used in the immediately preceding Patents Act 1949. The 1977 Act, however, implemented various measures in accordance with the European Patent Convention 1973 and the Patent Cooperation Treaty 1970. In the words of Cornish and Llewelyn, this caused the British patent system to receive "the largest culture shock in its history" (*70). In place of the established definition of "invention" inherited from the Statute of Monopolies, a new definition in accordance with the European Patent Convention was enforced under the 1977 Act.

The harmonization of both substantive and procedural law in Europe has given rise to major issues in a number of areas. Patent law is no exception. For example, David Vaver points out a general tendency toward a

(*60) *Id.*
(*61) *Id.*
(*62) *Id.* at 109.
(*63) *Id.*
(*64) *See id.* at 109-10.
(*65) *Id.* at 110.
(*66) *See, e.g.*, EDITH TILTON PENROSE, THE ECONOMICS OF THE INTERNATIONAL PATENT SYSTEM 34-35, 39 (1951); Richard A. Posner, *The Law and Economics of Intellectual Property*, Daedalus 5 (Spring 2002), *reprinted in* INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume I, 157, *supra* note 19, at 164-65.
(*67) *See e.g.*, CORNISH & LLEWELYN, *supra* note 7, at 7-8.
(*68) *See* Statute of Monopolies 1623 (c.3), http://www.statutelaw.gov.uk/ (Ministry of Justice, The UK Statute Law Database, last visited Jan. 27, 2008).
(*69) *See e.g.*, UK Intellectual Property Office, Manual of Patent Practice, Patents Act 1977 - Sections 1 to 132, Part 1: New domestic law, Patentability, 1. Patentable inventions (October 2007), Section 1, at 1.01, http://www.ipo.gov.uk/practice-sec-001.pdf (last visited Jan. 27, 2008); CORNISH & LLEWELYN, *supra* note 7, at 214.
(*70) CORNISH & LLEWELYN, *supra* note 7, at 113.

broadening of the interpretation of what is patentable and a narrowing of what is not patentable(*71). He notes the particular prevalence of this tendency in European patent law and is critical of the trend in interpretations of the scope of patentable invention under Articles 52 and 53 of the European Patent Convention(*72).

One particularly remarkable case is that which led to the Aerotel/Macrossan Judgment by the Court of Appeal of England and Wales on 27th October 2006 (Aerotel Ltd v Telco Holdings Ltd; Macrossant's Patent Application (No. 0314469.9), [2006] EWCA Civ 1371; [2007] RPC (7) 117). This suggests that decisions by the European Patent Office do not necessarily receive immediate compliance as regards interpretation of Article 52 of the European Patent Convention on the demarcation of the scope of patentable invention. Although Article 52(2) provides a non-exhaustive list of matters which are not to be regarded as inventions, doubt has arisen as to whether there is anything in common among the matters listed, or, in the words of the abovementioned judgement, "there is no evident underlying purpose lying behind the provisions as a group — a purpose to guide the construction." (*73) The Court of Appeal notes that Article 52(2) differs from Article 53 (whose exceptions have been interpreted restrictively) and then it formulated its own four-step approach to determine the patentability of an invention(*74).

VII In Place of a Conclusion: How to Strike a Balance between Intellectual Property Rights and the Free Flow of Information

In conclusion I would like to return to the question of how to define "intellectual property", which was posed at the beginning of Section 2. In the words of Vaver, intellectual property law "starts from the premise that ideas are free as the air — a common resource for all to use as they can and wish" (*75). Paradoxically, however, it "then proceeds systematically to undermine that premise" (*76). The history of British patent law, in which the "issuing patents" was viewed as "the exception, not the rule"(*77), should be seen in the light of this fundamental contradiction. The process of delimiting the scope of "exclusions" from patentability involves the search for some kind of principle for making further exceptions to what is already an exception. This has proven to be an inherently difficult task, especially in the United Kingdom, where a well established framework based on the Statute of Monopolies has had to be altered in accordance with the trend towards international harmonization.

Finally, I would like to note two important points that need to be born in mind when seeking to strike a balance between intellectual property rights and the free flow of information.

Firstly, the intellectual property system has the fundamental purpose of promoting the public interest and public good through the granting of private rights to intellectual property. However, as my account of the origins of intellectual property and the history of changes in the concept of "invention" has shown, there has always been an inherently tense relationship between these private rights and the public interest. In addition, the attempt to balance this relationship has sometimes involved radical changes to the system in order to adapt to the demands of the time and to suit the particular circumstances of the issues and contexts of application.

(*71) David Vaver, *Intellectual Property: The State of the Art*, 116 Law Quarterly Review 621 (2000), *reprinted in* INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume I, 33, *supra* note 19, at 44.
(*72) *See id.* at 44-46.
(*73) *Aerotel*, [2007] RPC (7) 117, at 126.
(*74) *Id.* at 127-28, 134-35.
(*75) David Vaver, *General Introduction*, INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume I, *supra* note 19, at 1.
(*76) *Id.*
(*77) *Id.*

Secondly, as my investigation of debates about the essence and justification of intellectual property has demonstrated, great care must be taken to avoid falling into tautology when discussing the "value" and "propertiness" of incorporeal entities. Justifications for the protection of intellectual property rights frequently resort to the argument that any incorporeal entity with "value" constitutes a form of "property" and therefore must receive protection as "intellectual property". However, as already pointed out by Legal Realists in the United States in the 1930s, the economic value of an incorporeal entity is dependent on the extent to which it is legally protected[*78]. The limitations of such justifications therefore require renewed attention, especially at a time when the sphere of intellectual property protection is undergoing such remarkable expansion.

I end by mentioning a few outstanding issues that relate to the fundamental questions posed at the very outset of this report. Firstly, we must be aware of the ever growing significance of the granting of property protection to information, notwithstanding the diversity of its meanings, in a society influenced by an incessantly developing information technology. In particular, we must pay attention to the existence of major problems in the justification of intellectual property and the very peculiar status of intellectual property within the broader framework of general property law, especially considering the view that information should in principle be allowed to flow freely. A fully and coherently developed "theoretical system" for the legal protection of information as property has yet to be formed. Developing such a system without seriously compromising the freedom of information will involve complex value judgements and much debate. This is a task to be shared not only by intellectual property law, but also by information law in general.

(*78) *See, e.g.*, Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 Columbia Law Review 809, 814-15 (1935); William W. Fisher III, *The Growth of Intellectual Property*, Eigentum im internationalen Vergleich 265 (1999), *reprinted in* INTELLECTUAL PROPERTY RIGHTS: CRITICAL CONCEPTS IN LAW, Volume I, 72, *supra* note 19, at 84-86.