

## On some Paradoxes of Intellectual Property

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### Abstract

Crucial to the economic and technological lives of communication industries, intellectual property rules are now doubly challenged. On the one hand, by a generalised tendency to extend their fields of application far beyond their original scope; on the other hand, by the difficulty or even the impossibility to adapt them to the present technical order. Among the many paradoxes of the intellectual property one of the most striking lies in the fact that, even though designed to protect innovations and novelties the relevant laws were conceived of in the Renaissance years, and from then on have been constantly adapted by way of analogy, generating in this way privileges, special interests, further contradictions ever more difficult to reconcile. Intellectual property is one of the most significant political problems of modern information economy: it is highly dangerous to go on by way of analogies and adaptations, on the other hand one should not dream of a technically perfect solution. It is time to open a large public and international debate that is able to make transparent the underlying struggle between different legitimate interests, and to allow the expression of all stakeholders.

### 1. Old foundations for modernity

Few realms of modern life are as rich in paradoxes as that most sensitive area of modern law and economics, intellectual property with its twin pillars: copyright and the patenting system.

Some of these paradoxes, as we can read in the pages, or more often in the footnotes, of history books, might seem merely anecdotal, were they not imbued of an ironic, mundane sort of wisdom. So is the fact that the invention of the archenemy of book publishers and sellers, photocopying, was done in an office created to defend the patent rights, and the inventor, Chester Carlson, felt he was led to it by the needs of his profession, since the amount of paper copying for every patent being processed went beyond the possibilities of the few clerks who had to perform it. So is the fact that as late as the mid-Nineteenth Century, the most dreaded infringer of the intellectual property of European authors, the "international pirate" of the day, was the country itself that is now the most prominent advocate of intellectual property the world over, the U.S.A. So much so, that the most famous and popular of English writers, Charles Dickens, crossed the Ocean twice in order to try and get at least a part of the money he felt he had been robbed of, never to become an admirer of American institutions and character.

Even more striking is the contradiction between the role intellectual property has in protecting the *novelties* and the *innovations*, and in supporting the most "modern" of markets, the very foundation of information

economics, the selling and buying of ideas; and the pre-modern foundations of its legal institutions. Both patent and copyright releases are bound to be applicable, in fact, only to something *new*. Be it a process or a product, a novel or a song, a videogame or a computer program, it has to be original, never before published; and it has to be recent: intellectual property has always been accompanied by expiring terms, even though one of the strongest tendencies of our time is toward the prolonging, and even the *ad libitum* perpetuation, of their life. And the lobbies and pressure groups now at work for extension and stricter enforcement of these rules always insist, with some good reason, that they are absolutely vital for a "post-industrial" economy. But a very simple look to history demonstrates that their birth largely antedates the Industrial Revolution itself, and that the areas they now cover were not just unthought of by their conceivers: they were literally undreamable.

## **2. Born in the Renaissance: the patenting system**

The oldest decree in the area of patenting rights goes as far back as 1474: a norm of the Venetian Republic, created in order to stimulate technological innovation particularly in the area of ship and weapon building. The Arsenale or Arzanà was defined in old statutes as "il cuore dello Stato Veneto", the very heart of the Serenissima or, as it better loved to be called, "la Dominante". The decree defined the rules whereby the inventor could obtain an "open letter" attesting his right to be paid for the use of his ideas by those who intended to imitate him. *Patens*, hence the English *patent* is the Latin word for public, open to all looks; *brevis*, whence the Italian *brevetto*, the French *brevet*, is a Latin word for letter. Patent is an old system, born in what was probably at the time the most advanced technical center of the West, but born much before proper industrialism anyway, and gradually extended to the Western states under the pressure not so much of single inventors, as of the Guilds.

Traditionally, the power of the artisan societies in European cities had been granted for centuries by a system of secrecy, whereby every Guild could ask the apprentice being initiated to become a full craftsman an oath of silence on the techniques of the trade. Violators were punished with the expulsion from the society (equivalent to barring them from any qualified work) and in many cases in harsher ways, up to flogging and even death. With the gradual erosion of the *ancien régime* and its system of quasi-castal social strata, the Guilds lost part of their power on their members, due also to the diffusion of the press and of technical literature. Secrets were now largely divulged and undefensible, and patent laws could become a good way for an artisan group to preserve at least for a period of time the property of the processes and improvements it had introduced upon tradition. The case of Germany, a largely urbanized

country, and a relative latecomer in industrialisation, where the power of Guilds was still strong at mid-Nineteenth Century, when industrialism was just starting, is a good illustration of this passage.

So pre-modern was considered, in fact, the patenting system, that at the time not a few liberal economists, supporters of the new industrialist class, felt its time was past, that it was a pure relic of the *ancien régime*.

*At the time of the movement toward the German unification, the then prevailing free trade lobby considered all patent law a remainder of old and obsolete privileges, therefore as a brake to the expansion of an open market. Therefore, the Prussian Ministry of Trade circulated a document, which invited the Chamber of Commerce of the country to consider the possibility of a total abolition of patents. The Prussian law was in fact inadequate, since it provided a protection of only three years, and left it totally to the will of the political and bureaucratic powers whether to acknowledge it or not. /It took me and those who shared my positions more than ten years and a lot of discussions to convince the free-traders that a modern patent law is in the best interest of an open market. The temporary monopoly it gives to the inventor is an award for immediate publication of the invention, which in turn permits new ideas to be born from it, to benefit the general public and to be applicable in different areas.*

The terse prose of Werner von Siemens autobiography (*Lebenserinnerungen*, originally written between 1889 and 1891) explains well the dilemma facing the founding fathers, not so much of the original industrial era, but of the Second Industrial Revolution of the late Nineteenth Century, founded on science and technical innovation more than on the simple use of machines plus underpaid labor: was an old legal system, based on temporary monopoly, still adequate to the new stage in economy? Siemens' answer was positive, based partly on his own personal interest and partly on sound economic reasons; but it was not obvious, nor without less luminous sides than he conceded.

The developments of the "science based industries" a few years later, in Germany like in the United States, would demonstrate that trusts founded on patent control could easily control prices and at least in some cases use their patents and their superior economic power as an obstacle to real innovation. To quote just one well-known American example, this was the case of the opposition of the established radio industry to FM invented by Edwin Armstrong. For more than a decade the development of the new (and in many ways superior) technology was retarded, later the rights of its inventor were contested with long and costly legal controversies, until Armstrong committed suicide.

Born as an "award" to the inventor, the patent was becoming an instrument of the corporation. Does the "Third Industrial Revolution" of the computer age still require the use of the classic patent system, which in the meantime has been extended to fields as far from von Siemens' mind (not to speak of the Venetian

Republic) as human genome? Or do we need a new legal way to reward (or to award, in Siemens' words) the inventor?

### 3. Property right or personal right? Authors, publishers and copying

The origins of the other pillar of intellectual property, the author's and publisher's right to control the exploitation of his texts or music, go also back to the pre-industrial era, even though they are less easy to trace than those of the patenting system. In fact we tend to refer to *copyright* and to *authors' rights* as if they were one and the same thing; but they belong to distinct traditions and different conceptual frameworks; even though they have progressively tended to converge, this never happened entirely.

The *copyright*, as the word itself would make clear if we cared to think of it, is the exclusive right to making copies, or having copies made, of a text. It is the power to control a very material process, whereby a single manuscript becomes a saleable commodity, and its origins even predate the printing press, going back to the first book revolution in the XII century, when the establishment of the Universities in places like Paris and Oxford, Bologna and Padova, brought along the birth of the new profession of the *stationarii*, whence the English "stationers", small establishment dedicated to the manual copying of handbooks and lecture transcripts. In this condition, between the author and the copier-stationarius it was relatively easy to resolve every question in the terms of a pure private transaction. With the development of the press, the problem became more serious and more complicated: the new technology made the diffusion of texts easier and less expensive, and this implied both political and economic consequences. Private negotiation was no more sufficient, and a public regulation was felt to be imperative. Let us follow the developments in the English Kingdom, whose influence was bound to be enormous also thanks to its extension to the United States.

The first stage was the definition of the "copy right", that is, the sole right of copying books, as a privilege of the Stationers, who were then becoming the forerunners of the modern publishing industry: no more sheer printers, more and more entrepreneurs of the book. By a provision of 1556, any author or citizen wanting to publish a book had to address a member of their guild, the London Company of Stationers (acting in fact all over Britain), who were in turn responsible to the King of the non-blasphemous and non-seditious content of their publications. The Protestants' battle for the freedom of the press, famously advocated by John Milton in *Aeropagitica* (1648), led to the termination of any legal control of publishing, including the guild's monopoly. Modern copyright was then introduced in 1710, as part of the laws known as the Statute of Anne: it was now defined as a privilege of the author, who could transfer it by way of contract to whomever he thought fit: a peculiar form of property, since it invested more a potential than a

real object (a book waiting to be published), but property nevertheless. In fact it was the ground of the negotiation between the two subjects involved, the author and the publisher. And it became the private complement to that most public of all citizens' rights, the freedom of the press.

The Anglo-Saxon paradigm of author's right is not the only one, however. A different model emerged gradually in Continental Europe, for the rewarding of theatrical authors, literates and musicians: an authors' right implying the control of the publishing, but also of the staging, of their work. The forerunner was once again a Venetian statute (1603), Venice being among other things *the* printing center of Southern Europe and easily the city richest in theatres and musical institutions all over the continent. But it was in the French Revolution, in 1791, that *le droit d'auteur* was born in its modern form: not as a monopoly or a property, but as one of the *droits de l'homme et du citoyen*. The author was proclaimed to have the exclusive control over his (or her, since the *droits des femmes* found at the time their earliest advocates) creation: a control including not only the economic entitlement to sell the publishing rights but also the "moral" and unsellable right to the integrity of his/her recognition as author, and to the integrity of the text. The *depot legal*, the duty of the author and publisher to deposit a copy free of charge of their work in the Public Library system, which developed from Napoleonic laws, was to become the counterpart of the author's right, making the book open to consulting for the benefit of the general public and setting a secure precedent for any future controversies over plagiarism.

As we have seen, during the Eighteenth Century two different paradigms were born. The later developments of the publishing industry, born of the printers but even more of the booksellers, would ensure a *de facto* convergence. The real control of the work would depend both in the area influenced by Napoleonic legislation (that is, continental Western Europe) and in the Anglo-Saxon world, on the negotiating power of the author and of the publisher. Everywhere, only the best selling, and/or the politically powerful, authors would be able to impose their terms. Otherwise they would remain "slaves of the booksellers", in Voltaire's drastic definition, as great novelists like Balzac or Thackeray would implacably show in mid-Nineteenth century. But the difference was there: on the one hand a property, a purely economic right; on the other a citizen's, and even a human, right.

This difference has relevant consequences at least in two different areas:

- a. continental laws tie the legal life of the author's right to the material life of the author, setting a fixed term after his/her death (in order to extend the benefits to the immediate heirs) after which the right is extinguished and the text becomes part of "public domain". The duration of copyright in Anglo-Saxon systems is tied instead to a voluntary act, that of establishing and extending ("renewing") the right itself through an onerous legal procedure.
- b. continental laws, following the revolutionary principle, consider the author's right as a Janus-like,

double-faced asset, with a freely saleable and buyable property right and a *droit moral* which is always tied to the person of the author, or heirs. Anglo-Saxon laws as we have seen only speak of the economic right.

#### 4. Years of challenges

For two centuries, in a world where the book economic life was tied to national languages and therefore was largely fragmented along state borders, the coexistence of the two paradigms did not produce terrible problems. But then, three different processes came about that are an unending source of political legal problems (as a friend of mine says, deregulation and globalisation may have reduced the power of national legislators, but they have never impoverished lawyers):

- the progressive extension of copyright and author's right to new areas, including film, fashion styles and computer software, that are in technological and also in cultural terms quite far away from the original fields of application;
- the globalisation of cultural markets, including the ones for which author's right was originally conceived;
- the convergence of different European countries, previously based on different models of intellectual property, into one unified political and legal system.

The last problem may seem relatively simpler, since the European Union is accustomed to complex negotiations in order to homogenize different, and in some cases diverging, legal traditions. In the case of intellectual property, though, the convergence is not at all simple, and is conditioned by powerful lobbies. This is demonstrated for instance by the general agreement on the German proposal on extending the duration of author's rights to the seventieth year after his/her death. In principle, it is a reinforcement of the continental tradition, albeit somewhat paradoxical, since after seventy years the benefits will probably go to second or even third generation "heirs". In fact, it has been strongly argued for by publishers and producers, who wanted a system more similar to the American one. The same goes for the passive acceptance in Western Europe of the American system of software copyright, which has introduced a previously unheard of "user's license". The negotiation between two different legal traditions is made more difficult by the variety and power of subjects who participate.

Moreover, in the new European Union we have to confront now *three* different paradigms: the continental and Anglo-Saxon ones we discussed at length, and a third one, governing the former Soviet Union and the Soviet area of influence since 1945: whereby copyright, of national or foreign authors, was not recognized, and the national authors were paid by the public in the form of a salary coming from national associations

("Unions") of writers, musicians, and so on. This alternative to the market system, which in fact not even the most Marxist-oriented of anti-copyright advocates care to support, has proved totally unviable. Instead of providing for a better and larger circulation of culture, as was its original, or at least its declared goal, it has brought about a tool of control on writers as the London stationers never would have dreamed of. The national unions of authors, their sole means of survival, have obviously become an arm of political hierarchies, dominated by people only nominally defined as writers or artists, and endowed with the power to include or exclude whomever they decide. With the death of the Soviet system, western laws have in fact been imported, more often from America than from Western Europe, but many problems still remain, generated by the resistance of entrenched interests, and by the general confusion of the new legal frames particularly in the Balkanic region.

The difficult choices confronting the European Union in the matter of intellectual property should be seen in a larger context. The pure speed of circulation of digitized "contents", be they words or sounds, graphics or applications, is at the same time a spur and a challenge to the big multinational multimedia enterprises. A spur, because they have become the dominant force in the cultural markets of almost all countries, and the need for an adaptation to local differences has been progressively reduced. But also a challenge, since copyright "infringements" in such a large and rapid market are becoming more and more difficult to prosecute. The consequence is as we have seen a strong pressure, on the part of American multinationals (that is, the only ones that really count, with the exceptions of Sony and of the nominally British News Corporation), for the generalization of American legal principles and even for concentrating the deciding power into the hands of American courts. A pressure that is difficult to resist, given not only the general supremacy of these corporations but also the large demand for their products, a demand that no theory of "cultural imperialism" can explain. The pure and simple extension of American principles by show of muscle, though, may not be as shrewd a move as it may seem. It certainly works in terms of immediate profits, but it fails to create the base for a solid and shared system of international intellectual property. This, in a situation dominated by growing contradictions: between national traditions and globalization; between old institutes and new processes; between the demand for deregulation and the need of artificial legal systems (like intellectual property rights) to let the market work. And between the growing reliance on intellectual property as *the* tool for a viable information economics and the more and more shaking material foundation for its enforcement, worse, for its existence.

### 5. Some problems with patenting

We have so arrived to the most complicated of all paradoxes of intellectual properties: the tendency to extend their use to newer and newer areas, their duration to a longer and longer time, their application to a larger and larger geographical area, does not completely hide the rapid obsolescence of the concepts themselves on which they stand.

Let us start from the patenting system, which may seem, in the light of Siemens' enlightening words, the more solid of the twin pillars of intellectual property. The acceleration of scientific and technological innovation, so the prevailing argument goes, has not been obstructed in the last two centuries by patenting; one may argue about some strange cases (famously, the six hours delay of Elisha Gray's patent demand for telephone changed the history of telecommunications, favoring Alexander G. Bell's ideas over his plan for an American telegraph-telephone system), but in general patents have been a tool for spreading innovation while preserving the inventor's rights. Is it completely true? And is it *still* true?

As I said before, patents were conceived in order to reward the inventor, but they later became more generally a part of the power of corporations. This may have been in some cases beneficial, along the Twentieth Century, for instance with companies like, once again, the old Bell system encouraging high level research in order to ensure control not only over single inventions but also whole fields of potential innovations. In other cases it has been more controversial, favoring the resistance, through courts, to innovations the old-patent-holding corporations felt not ready to adopt, and/or their battle to ensure the control over innovations they had done little or nothing to promote. Radical critics like the Indian essayist Vandana Shiva even argue that patents, in the hands of profit thirsty pharmaceutical firms, may result in barring whole areas of the world from vital medicaments, an argument shared by less ideologically inclined writers like the noted spy-story master, John Le Carré, in a recent novel of his, *The Constant Gardener*, which has also become a successful motion picture.

We do not need to go into ethical issues, though, to raise issues about the patenting system and its long-term perspectives. In the last two decades, changes have come that are challenging the whole idea of the patenting. Many of them have to do with a crucial factor, time. Patents work on the long, or at least in the middle, run: the process of paper (or computer) work required for patenting itself is time consuming, it may take weeks, months, and in case of legal controversies even years; the whole system is based on the idea that the economic results of an invention or innovation should come not all together, but in time, in the decades of duration of the patent.

We now confront a general acceleration in all relevant fields. The (pathological, in my opinion) turn toward "turbo-capitalism" is de-evaluating all long-term investments as opposed to more immediate, and immediately measurable, rewards. This may be just a stage in history, but even after the end of the

dot.com bubble we do not see many signs of an end. What is more, the consumption of technological innovations *per se* has been enormously accelerated in the "Moore law" age of duplication of computing power every two years or less. In this situation, nobody can afford to wait years or decades to get the revenues of a (generally costly) innovation: they have to be visible in the earliest possible balance. So, even big companies that could shoulder relatively high risks and endure relatively long waiting periods, tend to exploit the inventions they have produced, or bought, as soon as possible, and are lead to patent them only when their real innovating values has been completely incorporated in their processes and products. They avoid making the inventions they own public, as the patenting system requires, until they are sure that this will not trouble the campaigns planned by their press-hawks and advertisers; and before they get ready to "go public", they tend to use that old and shady tool: secrecy, with its twin companions of spying and counter-spying. The large use of former Cold War professionals by "civilian" corporations, that in many cases is "legitimated" by their Defense contracts, is a clear sign, of a shift (a backward shift, in historical terms) from the public knowledge/private gains rule on which patenting is based to pure privatization of knowledge.

Patenting is not dying, though, nor becoming irrelevant. Only, its function is partially changing: from a legal defense of innovations to an *ex post* protection of those already introduced, and at least partially exploited. On the other hand, patenting is being extended beyond all boundaries that might have been conceived of even two generations ago, including strings of genetic code. Since frontiers between scientific "discoveries" and technical "applications", always shaky, are now totally porous, patenting is becoming a way of creating temporary monopolies on scientific breakthroughs, which in turn may obstacle, more than favor, innovation. To put it bluntly, the patenting system has become a mirror of the general contradictions of modern capitalism, with the unchecked power of worldwide corporations but at the same time the shortsightedness of a managerial class measuring its successes in terms of months. A more general attention to the long-term interests of the economy would require probably a reorganising of the system, in order to distinguish different layers of innovations (basic breakthroughs, innovations of generalized value, local ones), and to reward them differently in terms of duration of rights, of entitlements, of duties on the part of the patenters. It is not easy, also considering the intrinsic difficulty of distinguishing these levels even in principle; but the growing social concern over the use of research and patenting by the pharmaceutical industry may be just an early warning of the political problems, which will arise from a thoughtless continuation of the present system.

### 6. Copying, from a commercial enterprise to a daily activity of everybody

In the field of authors' rights we are confronted with even more complicated challenges. The biggest contradiction, as we have seen, arises from their growing application to newer and newer areas, as the act of "copying" (not just of imitating, but of technical reproducing, and now of "simulating") is being extended by computer related breakthroughs, and the fact that the same machine, the computer, is making the idea of controlling copying an obsolete idea from a technical point of view, however hard entertainment corporations may work to create "uncopiable" objects.

As the late I. De Sola Pool wrote more than two decades ago, the classic principle of copyright is founded on a basic technological assumption, typical of the printing press age: that a text may acquire an economic value, in general, only by the act of mechanically making a series of identical reproductions. The printing press so became an essential passage in the commercial life of culture, as in its political life, the moment in which the printer had to submit the book for authorization (*imprimatur* was the Latin formula, "let it be pressed"), or -later- for reading in public libraries, and had to ensure the consent of the writer by way of a contract. In the second half of the Twentieth Century the mechanical process of making copies has been first trivialized, by Xerox machines (the initial unwitting invention of an intellectual property clerk, as we saw) than literally made senseless.

Computing, wrote De Sola Pool, annihilates all difference between a supposedly unique "original" and copies: a computer file as we may know it by reading it even while we are writing, is in fact a copy of an unintelligible original, a string of code that we punch in while believing we are typing letters. Every time we "open" our file a new copy is born, every time anyone, including the author, puts in on paper, he/she is *printing*. The unceasing process of digitization is making it impossible, in fact, to define as crucial a passage, in the circulation of messages as printing (be it the printing of words on paper, of photos or movies on film, of sounds on disc) had been for ensuring the publisher's rights, and the authors' share of gain. One should figure out new ways.

The debate is now pretty confusing: some extreme liberal positions, disguised as radical or anarchic, tend to imagine a total suppression of copyright, but have never offered a credible alternative way to reward intellectual work; many more moderate authors prefer to find viable alternatives in the software market, with its relatively old idea of "shareware" (in fact, a form of voluntary payment), and the relatively new one of open source.

The trouble is,

- a. that software is only a part, albeit the fastest growing, of the goods protected by copyright, and the very fact it may be copyrighted is, as we shall see in a second, an anomaly; is it *really* possible to think of open source for books or for records?

- b. that open source has been a success essentially because of the introduction of a very powerful system, Linux, that many big companies have adopted, and that may pay itself not through the selling of copies" but through the selling of related services: which, after all, is not so different from the old, pre-PC, IBM way;
- c. that basing a new institutional system on good feelings and volunteering is putting it on very shaky foundations: volunteering is free and personal, an act of donation; societies live on freedoms *and* duties, on rules applicable to everybody *and* fields of personal choice.

### 7. Copying...what? Some very modest suggestions

We are back to our paradox. The idea itself of a copyright has lost much of its original meaning, and may not count on a very long future. On the other hands, its illness is not comparable to a consuming disease; on the contrary, copyright is growing and being extended, to many new fields. And it is often invoked not (as in the original idea) to protect the immaterial content of a material support, but to protect the immaterial good *per se*, an idea, a style, even a fictional character. Grateful as they might be to copyright, that made their living and freed them from the exclusive power of rich patrons, writers like Henry Fielding would be shocked to discover that their heirs are barred from writing new novels about already novelized characters. Before writing *Tom Jones*, Fielding had become a fashionable and a well-to-do man by writing *Shamela*, an outspoken send up of the archetypal best seller, *Pamela*...

But probably, it is in the field of software that copyright has been most violently forced beyond its original limits. Software, particularly the basic applications included in "operating system", is not a contents, it is a technical instrument, however creatively conceived. In fact, the choice of copyright over patenting to protect the property of computer software codes was a suggestion that some able lawyers gave the first programmers, in order for them to dodge the long time, and the rigors, of the exams involved in patenting. In fact, the so called licensing now involved in the commercialization of software has nothing to do with the original idea of copyright: a further evidence of how unnatural this legal solution remains, however strong the lobbying power of big software firms may be.

I am not suggesting to suppress intellectual property in the field of software; rather that we should find a specific alternative for it, based on the peculiar type of intellectual work and of information circulation connector. More in general, we should "unbundle" copyright, dividing the different fields to which it is applied, to find specific solutions for each. A difficult task, sure, but less difficult than finding a "general solution" which may never come, since the generalization of copyright was probably a way of putting pears and apples together in the first place.

I am also suggesting that we should acknowledge a big change that has taken place all along the Twentieth Century, even though few have completely understood it. Intellectual production is more and more rarely an individual act, it is a in general social process, that requires the cooperation of many different subjects often unknown personally to each other. The fact of having understood this, more than the commercial and legal solutions offered, is the great step forward implied in the birth of open source: an idea conceived for a form of intellectual cooperative endeavor that no single individual, nor even a single corporation, can perform. The same may be said about *Creative Commons* forms of licensing. Any modern law for the rewarding of intellectual property can only be considered equitable inasmuch as it considers the plurality of potential beneficiaries. Open source and Creative Commons are important steps in this direction, event though they are far from being a satisfactory solution.

Last, in an information society and in an information economy, the rewarding and the circulation of ideas and knowledge are no more a *private business*, totally regulated by the law of commercial contracts and by purely private institutions: they are a sensitive *political problem*, concerning everybody as a citizen, and many distinct economic and social categories, with their different interests involved.

A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations, and divide them into different classes, actuated by different sentiments and views. The regulation of these various and interfering interests forms the principal task of modern legislation, and involves the spirit of party and faction in the necessary and ordinary operations of the government.

The words of James Madison, in *The Federalist* no.10, throw light on the future of intellectual property as they do on the past of democracy:

*Only a full representation of the different social groups and interests involved in the economics of knowledge and of messages, that are necessarily different from those typical of the industrial age, and an open discussion between them, can help us in finding a way to ensure the people at large the freest circulation of ideas, and each category involved the gains for their past work and the will to produce new creations and inventions.*

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