'The current phase of capitalist development', says Gareth Locksley, 'is one characterized by the elevation of information and its associated technology into the first division of key resources and commodities. Information is a new form of capital',¹ and as such it undergoes a change of form: rather than being deposited primarily in an interlocking ensemble of open ‘library’ systems with minimal entry requirements, it is increasingly managed within a system of private ownership where access is regulated by the payment of rent.² One point at which it is possible to see this change crystallizing is in the protocols relating to intellectual property in the recently concluded GATT round.³

An unlikely embodiment of the world-historical spirit, the GATT treaty nevertheless marks a clear historical demarcation in the global control of information. I shall argue that it imposes a definition of intellectual-property rights directly disadvantageous to Third World countries which, holding few patents themselves, have been brought within the scope of a regime where they will be held strictly accountable for their state of exponentially increasing indebtedness.⁴ One commentator—no less convinced of the righteousness of the cause of Western property rights than the majority of Western analysts—sets up the narrative of conflicting interests between the developed countries and the Lesser Developed Countries (LDCs) in the following way:

Many LDCs have a different philosophy about the protection of intellectual property. There are some politicians and economists who assert that intellectual property protection laws simply perpetuate a system of economic imperialism which allows countries such as the United States to maintain a position of world dominance. These dissenters believe that ideas should flow freely as part of [the] common heritage of mankind. Brazil does not give

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² Ibid., p. 89.
³ The Uruguay Round of the General Agreement on Tariffs and Trade was concluded on 15 December 1993 and ratified by over 120 countries in Marrakesh on 12 April 1994.
drugs any patent protection within its borders because the government does not believe its people should have to pay what is to them a very high price, for a basic health care commodity. Argentina takes a similar position on pharmaceuticals. One can sympathize with the plight of LDCs in their effort to make products affordable for their citizens whose per capita income is significantly lower than that of the developed countries. But an argument which does not allow for an adequate return on investment in research and development is ultimately short-sighted. Mexico is an example of a country which threatened to force pharmaceutical companies to hand over production of their drugs to local firms and accept significantly reduced royalties. But the drug companies countered with a threat to abandon the Mexican market entirely, and the government backed down. As a result of the threat, American drug firms are still leery of exposing too much of their technology in Mexico.\(^5\)

What begins here as an argument about the ethics and the long-term inefficiencies of refusing to accept the advanced world’s definition of appropriate patent rights becomes, by the end of this passage, an object lesson in realpolitik: Mexico’s ‘short-sightedness’ has nothing to do with the morality of its philosophical position, and everything to do with its miscalculation of the power of international drug companies. This shift is characteristic, I think, of the logic within which the argument has been conducted.

Much of the commentary on the GATT round is cast in terms of calculations of the losses incurred by the Western information industries as a result of ‘piracy’ and ‘theft’;\(^6\) but these calculations rarely attempt to get to grips with the conflict of definitions of what should count as ‘property’ in the first place—should patents run for five years or for twenty? Should pharmaceutical products be subject to special conditions such as local licensing? Their bland assurances that subscription to an international intellectual-property regime will in the long term bring about technology transfer and thus a decreased dependency of the ‘developing’ on the ‘developed’ nations\(^7\) ring hollow in the light of the way the GATT regime has ‘neatly and disturbingly divided developed countries, who are major net exporters of intellectual-property rights, from the LDCs which are net importers’.\(^8\) There is no ‘accumulation of knowledge capital’ when access to that capital is carefully controlled by monopoly rents.

\(^6\) Hoffman and Marcou cite an estimate by the Congressional Office of Technology Assessment that world trade in intellectual property affects ‘more than 2.2 per cent of the US labour force and 5 per cent of our gross national product’ (Gary M. Hoffman and George T. Marcou, ‘The Costs and Complications of Piracy’, Society, September–October 1990, p. 25); another study cites an International Trade Commission Report’s conclusion that ‘United States firms lose an estimated $43 to $61 billion annually from foreign piracy’ (Mark Modak-Truran, ‘Section 337 and GATT in the Akzo Controversy: A Pre- and Post-Omnibus Trade Competitiveness Act Analysis’, Intellectual Property Law Review, 1990, p. 189), although other commentators tend to be somewhat more conservative in their estimates.
\(^7\) Hoffman and Marcou, ‘Costs and Complications’, p. 28: ‘Failure to invest in “knowledge capital” fosters the same kind of dependency on the outside world as failure to accumulate other forms of productive capital’.
A New World Information Order

One of the main objectives of the Uruguay Round of the GATT was the extension of patent enforcement to certain key industries such as pharmaceuticals and agrochemicals which in many countries were exempt from patent protection.\(^9\) These are industries whose products—medicine and food—embode in a particularly direct manner the issue of a conflict between ‘social’ and ‘private’ interests. Indira Gandhi put the différend starkly when she told the World Health Assembly in 1982: ‘The idea of a better-ordered world is one in which medical discoveries will be free of patents and there will be no profiteering from life and death’.\(^10\) Now, such an argument is vulnerable to attack within a framework in which research and development are primarily funded by private, profit-oriented investment. In such a context, the argument mistakes a commodity for a gift, and the consequences of this mistake are ethically dubious. But this is of course by no means the only thinkable framework. If knowledge and the information component of its products are conceived as public rather than private goods, then there are at least two possible alternatives: the direct sponsorship of knowledge production by government, for public use and by means of a subsidy from the taxation system; or public subsidy for the private production of knowledge, again for public use. Historically, as Carlos Braga argues, these alternative frameworks have been propounded in international forums\(^11\) by Third World bureaucracies, whose attitudes reflect the predominance of a scientific ethos which has at its basis the norm of complete disclosure. This “culture”...is hostile to the view of knowledge as a private capital good that is the foundation of the so-called mature intellectual-property systems of the industrialized economies.\(^12\)

It is perhaps in this broad sense, and with a full recognition that this gift is in no way ‘free’, since it must be subsidized by the state, that the opposition between gift and commodity may become clearer. The condition for this move, however, is the ‘norm of complete disclosure’ which was the historical condition of possibility for scientific thought to break with a culture and a politics of the secret,\(^13\) and which retains its power as a challenge to the increasingly pervasive ethos of private appropriation and control both of scientific and of ‘cultural’ knowledges.

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\(^12\) Braga, ‘The Economics of Intellectual Property Rights’, p. 263.

\(^13\) But the gift may of course be just as closely aligned with the secret and the sacred as with disclosure; Mauss’s essay on the gift (*The Gift: Forms and Functions of Exchange in Archaic Societies*, trans. Ian Cunnison, New York 1967) constantly returns to this conjuncture, and it is the focus as well of much of Derrida’s recent work, in particular *The Gift of Death*, trans. David Wills, Chicago 1995. Conversely, even the most irreproachably open of scientific practices may lend itself to unjust uses.
The Ownership of Nature

The norm of disclosure is of course a component of patent law, which requires a full and publicly available description of the ‘invention’ as the price for allowing its private appropriation for a limited term.\textsuperscript{14} The requirement is one of those mechanisms by which Western intellectual-property regimes seek to balance a component of information that resides permanently in the public domain (the ‘idea’ or ‘method’ in copyright law; the ‘primary’ meanings of language in trademark law; reproducible scientific inventions in patent law) and a component which is temporarily withdrawn from it (the ‘expression’ in copyright law; ‘secondary’ meanings in trademark law—at least until these become so much a part of the language as to return to their ‘primary’ status; and monopoly rights of exploitation of inventions for the life of the patent).\textsuperscript{15} Patent law, to simplify drastically, is a way of locking up commercially valuable information, under rather strict conditions, for exclusive use for a limited term. I turn now to an exploration of a series of recent developments which have extended the possibility of locking up aspects of ‘nature’ itself.

Nature, like language, has traditionally been classified as a \textit{res communis} which can have no human author.\textsuperscript{16} Just as I cannot lay claim to exclusive ownership of the basic materials of the English language, so I cannot patent a natural species or a particular use of a substance found in nature. Natural products like the cellulose surrounding the external fibres of coconuts cannot be patented because they exist independently of human-kind; neither can the discovery of new properties of natural or patented objects (such as the recently discovered efficacy of aspirin in controlling heart disease), since these properties are contained in the structure of matter itself, and ‘neither the structure of nature nor the effects which flow from it are subject to patent’.\textsuperscript{17} Patent applies to \textit{inventions} of industrial processes, but not to \textit{discoveries} of the natural laws on which they are based.

The revolution in biotechnology of the last twenty years has, however, brought great pressure to bear on the way in which that line between invention and discovery has been drawn. Greenfield notes that the trend in contemporary law ‘is to allow patents for “products of nature” so long

\textsuperscript{14} The ‘letters patent’ granting rights of exclusion in an invention which they simultaneously describe are by definition instruments of publicity—as opposed to the ‘letters close’ or \textit{lettres de cachet} which fold their message within the sealed parchment; patent law requires a surrender of secrecy in exchange for the right to exploit the invention, and like all intellectual property it carries no exclusive rights in abstract ideas—only in the ‘concrete, tangible, or physical embodiment of an abstraction’. Peter D. Rosenber, \textit{Patent Law Fundamentals}, vol. 1, second ed., New York 1995, §1.01, §1.03.

\textsuperscript{15} My examples are all taken from US law, which is in many respects the most fully developed body of doctrine relating to intellectual-property law. With the signing of the Berne Convention in 1988, US copyright law is now broadly in line with most other Western legal systems, although the integration of moral rights law has been more taken for granted than actually implemented in appropriate legislation.


as the inventor has changed the product to conform to the utility, novelty, and non-obviousness requirements of the patent statute. Correa elaborates:

In countries that are members of the European Patent Convention, a patent can be granted when a substance found in nature can be characterized by its structure, by its process of obtention or by other criteria, if it is new in the sense that it was not previously available to the public. In the United States an isolated and purified form of a natural product can be patented if it is found in nature only in an unpurified form. As a result, a very thin line separates ‘invention’ from ‘discovery’ in those countries.

This is to say that patent law has been shifting towards a more expansive definition of its proper subject matter, and in particular towards a rather different understanding of that ‘common’ realm of ‘nature’.

For Bernard Edelman, the move from a strict prohibition on the patenting of nature towards a range of recent decisions allowing the patenting of living matter is made possible by a fundamental split in the way Western modernity has defined nature itself. The distinction between industrial processes (which are invented) and the natural laws on which they are based (which are discovered) works to exclude from patentability whatever is independent of human intervention. Thus the model of nature that operates in Western legal systems is one that is defined with respect to human activity. The natural realm appears here not only as an object of knowledge but as a domain with its own finality distinct from and irreducible to human ends. The underlying distinction is therefore between ‘human activity, which modifies the laws of nature and gives them a different meaning, and nature itself which is limited to responding to its own programme [qui se borne à répondre à son programme].

Artificial Nature

What this distinction makes possible, however, is a further demarcation between ‘natural’ and ‘artificial’ forms of ‘nature’. Edelman traces the evolution of this opposition through two key moments in US legislation. The first is the 1930 Plant Act, which distinguished between ‘products of nature’ and ‘human-made inventions’—the latter including ‘invented’ plant varieties. The effect of this distinction is that the category of life [le vivant] is split in such a way that the solidarity of the human species with other living things is lost; the human, expelled from the domain of nature, then becomes a rival to it, producing fabricated simulacra such as hybrid plant varieties which count as ‘inventions’. The 1970 Plant Variety Protection Act further extended the category of an ‘artificial’ nature which, being humanly authored, is potentially patentable, to the reproducibility of plants (rather than merely single exemplars); private rights could now be held in the infinite genetic chain that is the essence of live-

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The most spectacular theatre of patent law is currently the human genetic system itself, together with the recombinant engineering of drugs and human tissues. In 1991 the United States National Institute of Health (NIH) announced a programme of patent applications on human gene fragments; early in 1992 they announced a further application on 2,375 fragments representing 5 per cent of all human genes. Control of these fragments—or ‘express sequence tags’—would effectively block any use of the corresponding full gene, even if the identity of these genes were unknown. At first sight, this move looks like an inappropriate privatization of material which ought to be openly available for scientific research. A story in the New York Times quotes James Watson, then the head of the Human Genome Project, as saying that ‘it would be a total mess for industry...if someone has been working on a particular gene for several years, but somebody else has patented it before they even know what they have’; the consequence of such a preemptive patent would be that ‘companies that uncovered the role of a particular gene could be forced to pay royalties to those that had merely isolated it’. The Times’ perspective is purely industrial, of course, and does not really raise the question of the private ownership of the genetic commons. There is also another way of reading this story.

22 Ex parte Hibbert (227 USPQ 443 [PTO Board of Patent Appeals and Interferences, 1985]).
23 Ex parte Allen (2 USPQ 2d 1425 [PTO Board of Patent Appeals and Interferences, 1987]).
25 Bernard Edelman, ‘Entre personne humaine et matériau humain: le sujet de droit’, in Edelman and Hermitte, L’Homme, la nature et le droit, p. 142. Edelman’s description of this process as one of desacralization of the human, however, reveals the weakness of the normative basis of any critique that takes ‘the human’ or ‘the person’ as an inviolable given.
26 Greenfield, ‘Recombinant DNA Technology’, p. 174; Wilkie notes that ‘the issue was made more piquant by the fact that the sequences being patented are of genes expressed in the brain, so not only would the US Government own part of the human genome, it would also have succeeded in patenting part of the human brain’. Tom Wilkie, Perilous Knowledge: The Human Genome Project and its Implications, London 1994, p. 93.
Richard Lewontin says flatly that ‘No prominent molecular biologist of my acquaintance is without a financial stake in the biotechnology business’,\textsuperscript{28} and the Director of the NIH has said that she ‘wants the NIH to patent the human genome to prevent private entrepreneurs, and especially foreign capital, from controlling what has been created with American public funding’.\textsuperscript{29} Patent rights would here be working in defence of the public domain—or at least that part of it that resides in the United States.

What is clear, in any case, is the extent of the profits at stake. ‘If human DNA sequences are to be the basis of future therapy’, writes Lewontin, ‘then the exclusive ownership of such DNA sequences would be money in the bank’.\textsuperscript{30} Certainly this expectation of profit, which ‘discourages open discussion of technical detail during the crucial R&D phase before patent filing’\textsuperscript{31} has undermined that culture of shared information which the patent system supposedly fosters. Part of the problem with assessing these developments, however, is their sheer recentness, and, to develop a clearer perspective on the patenting of living matter, I want to turn now to the longer and more fully constructed history of the private appropriation of plant varieties.

**The Commodification of Plants**

The particular clarity provided by this history consists in its ability to relate changes in the legal and technological frameworks of development of plant varieties to changes in farming as a global industry and a way of life. My major source here is Jack Kloppenburg’s *First the Seed*, which argues that farming in the United States, as elsewhere in the advanced capitalist world, has been transformed over the last century ‘from a largely self-sufficient production process into one in which purchased inputs account for the bulk of the resources employed’.\textsuperscript{32} No longer do farmers produce most of their own means of production—such as seed, feed, fuel and motive power. For the most part, these have moved ‘off-farm and into circumstances in which fully developed capitalist relations of production can be developed’.\textsuperscript{33}


\textsuperscript{29} Ibid., p. 8.

\textsuperscript{30} Greenfield quotes estimates that US sales of biotechnologically-derived products will reach \$40 billion in the year 2000, with worldwide sales of \$100 billion (‘Recombinant DNA Technology’, p. 35). The trade in genetically produced body tissue was estimated to be worth \$2.2 billion in 1990 (Sean Johnston, ‘Patent Protection for the Protein Products of Recombinant DNA’, *Intellectual Property Law Review*, 1991, p. 190), and, as long ago as September 1988, there were between 15,000 and 16,000 biotechnology-related patents pending in the US Patent and Trademark Office.


\textsuperscript{32} Jack Kloppenburg, Jr., *First the Seed: The Political Economy of Plant Biotechnology, 1492–2000*, Cambridge 1988, p. 10; Kloppenburg quotes Richard Lewontin to this effect (‘Agricultural Research and the Penetration of Capital’, *Science for the People*, vol. 14, no. 1 (1982), p. 13): ‘Farming has changed from a productive process that originated most of its own inputs and converted them into outputs, to a process that passes materials and energy through from an external supplier to an external buyer’.

\textsuperscript{33} Ibid., p. 31.
A crucial factor in this process has been the transformation of seed from an infinitely reproducible public good to a scarce commodity, and at the heart of this radical transformation lay the development, through systematic scientific breeding, of hybrid plant varieties. The socio-economic logic of hybridization is this: unlike open-pollinated varieties, seed from hybrid grain varieties produces a diminished yield when it is saved and replanted. Hybridization thus ‘uncouples seed as “seed” from seed as “grain” and thereby facilitates the transformation of seed from a use-value to an exchange-value. The farmer choosing to use hybrid varieties must purchase a fresh supply of seed each year’, with the result that seed-corn ‘now accounts for about half of the $6.4 billion in annual seed sales generated by American companies’.  

If the use of scientific breeding methods and, especially in recent years, of recombinant technologies has made seed more amenable to commodification, this process has equally been facilitated by the extension of exclusive property rights in plant germplasm in the two major pieces of US legislation this century—the 1930 Plant Act and the 1970 Plant Variety Protection Act. Critics of the latter have argued that it ‘enhances economic concentration in the seed industry, facilitates non-competitive pricing, contains the free exchange of germplasm, contributes to genetic erosion and uniformity, and encourages the de-emphasis of public breeding’. Certainly one of the major effects of the combination of new breeding technologies with extended property rights has been a complete restructuring of the industry. Public research has ceased to be the major source of new plant varieties and, in being relegated to ‘basic’ and thus non-profitable activities, it has ceased to exercise a disciplinary effect on commercial breeders. The traditional seed companies have largely been taken over by transnational petrochemical and pharmaceutical companies like ICI, BP, Shell, Upjohn, Ciba-Geigy, Monsanto, and Sandoz. Profit in this sector is not based simply on sales of seed, but rather on the symbiosis between crops and chemicals, since most strains are now bred for their compatibility with—and thus their dependence on—chemical fertilizers and pesticides.

But the goal of bringing ‘all farmers and all crops into the seed-market every year’ has not been restricted to domestic markets—transnationals have global strategies. Jeremy Seabrook sees the new agricultural biotechnologies as in part an exacerbation of ‘the damaging technologies of the Green Revolution—the loss of the soil’s productive capacity, the forfeit of genetic diversity, the spread of monocultures and the dependency of farmers on increasingly expensive inputs’. With its capital-intensive reliance on high-bred and high-yielding grain varieties and on

34 Ibid., p. 93.
36 Christie cites estimates that these companies spent around $10 billion during the 1980s on buying up seed companies or entering into joint ventures with them, and the ten biggest seed companies were reputed to have sales of more than $2.5 billion in 1987. Andrew Christie, ‘Patents for Plant Innovation’, EIPR, vol. 11, no. 11 (1989), p. 394; the figures cited are from The Economist, 15 August 1987, p. 56.
37 Kloppenburg, First the Seed, p. 265.
massive chemical inputs, the Green Revolution was a product of the same logic of commodification that has so dramatically restructured agriculture in the developed world. At the same time, the relation between First and Third World agricultures is asymmetrical. Apart from Japan, the regions of greatest biotic diversity (the so-called 'Havilov centres') are concentrated in the tropical and sub-tropical countries of the Third World, and—in Kloppenburg’s summary of a complex argument—the development of the advanced capitalist nations has been predicated on transfers of plant germplasm from the periphery. This is not in itself the problem, however; what is, is that the new global reach of the legal regimes governing plant varieties has made it possible for Third World plant varieties, in some cases the result of millennia of breeding, to become, with minor genetic modifications, the property of financially powerful corporations, which can then exact royalties for their use in their countries of origin.

Pat Mooney cites the isolation and patenting of a gene from the West African cowpea, which conferred resistance to pests: the African farmers who developed the peas to have this resistance were left without legal entitlement. A similar appropriation occurred with the Indian neem tree, seeds from which are used by farming communities as an insecticide; Western scientists, drawing on traditional knowledge and local practices, extracted compounds from the tree which are now patented and marketed worldwide.

The asymmetry of such transactions lies in the exchange of a gift against a non-gift:

The germplasm resources of the Third World have historically been considered a free good—the ‘common heritage of mankind’... Germplasm ultimately contributing billions of dollars to the economies of the core nations has been appropriated at little cost from—and with no direct remuneration to—the periphery. On the other hand, as the seed industry of the advanced industrial nations has matured, it has reached out for global markets. Plant varieties incorporating genetic material originally obtained from the Third World now appear there not as free goods but as commodities.

What is involved in these transactions is in part the relation between traditional forms of peasant knowledge which have gone into the development of diverse land races over many generations, and ‘expert’ knowledge which has assumed the right to appropriate its products to itself: the right to rent out resources of knowledge without itself paying rent either on the biological resources or the knowledge-capital it has acquired ‘for free’.

39 Kloppenburg, First the Seed, p. 49.
40 And which can thereby reinforce the competitive advantage of the agriculture of the developed nations. At the beginning of the Uruguay Round of GATT the then US Agriculture Secretary, John Block, said: ‘The idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural products, which are available, in most cases, at lower cost’. Cited in Kevin Watkins, ‘GATT and the Third World: Fixing the Rules’, Race and Class, vol. 34, no. 1 (1992), p. 34.
43 Kloppenburg, First the Seed, p. 15.
Commodity and Gift

The issue is one of subsidy. The genetic uniformity that has resulted from hybridization and crop-standardization has left First-World agriculture heavily dependent on importations from the Third World as a source of genetic variation. Yet this flow, which has enriched the corporate producers of hybrid varieties, has been almost entirely free of charge, since the model of knowledge as private intellectual property works to the disadvantage of the ‘almost invisible, informal and collective innovation’ characteristic of peasant communities. Patent law, which has no hold on ‘products of nature’, favours innovations deriving from high-tech research rather than innovation by long-term breeding for genetic variety. And, as James Boyle points out, the implicit metaphor of authorship plays a strongly determinant role in structuring the pattern of distribution: ‘The chemical companies’ scientists fit the paradigm of authorship. The [Third World] farmers are everything that authors should not be: their contribution comes from a community rather than an individual, tradition rather than an innovation, evolution rather than transformation. Guess who gets the intellectual property right?’

My interest here is in the way that this asymmetry is organized by the interplay of ‘gift’ and ‘commodity’ relations. What emerges from it is not a simple argument for a return to a gift economy, since one way of answering the question of justice for the world’s poorer nations would be in terms of the exaction of a fair rent for the use of their resources. Yet what is striking is the recurrent lack of commensurability between a gift relation on one side and a commodity relation on the other. Often there is an open contradiction in the arguments made on behalf of the current market order, with a demand that ‘elite’ commercial germplasm be a privately owned and exploited commodity, but that ‘primitive’ germplasm be treated as a public good—a commons open to use by all. Yet the case for an essential difference between the two is difficult to sustain. In particular, it cannot be made through an opposition of elaborated to unelaborated varieties, since the land races are not wild: they are the result of centuries and sometimes millennia of selection.

Some plant breeders in the developed world have argued that the ‘mining’ of Third World plant germplasm results in no loss of the resource, since only minute samples are physically taken. But what is taken is never simply the tangible biological matter, but rather the genetic coding it contains. This argument goes to the heart of the question of information as property. Information is in principle infinitely transferable.

47 The contradiction came to a head with a resolution—the ‘Undertaking on Plant Genetic Resources’—passed at the 1983 meeting of the Food and Agricultural Organization which attempted to extend the principles of common heritage and free exchange to all categories of germplasm; the developed nations have refused to comply with the resolution. See Kloppenburg, First the Seed, pp. 172–3; Correa, ‘Biological Resources’, p. 154.
without depletion of the resource; only access to it can be controlled. At once intangible and diffuse, it is thus different in kind from other commodities: if I tell you something, I still ‘possess’ it myself, and ‘the more [knowledge] is shared, the more it grows’. Yet the argument that information is not in itself a scarce resource comes precisely from those groups that have sought to make it so. The commodification of the genetic commons has been effected by means of an investment of work, knowledge and capital in a public good so that it may then be treated as a scarce private good. It has been an act of enclosure rather than an opening of the public domain.

The Public Domain

The concept of a commons provides no straightforward answers, however, to the question of the equitable distribution of resources. Indeed, in the contemporary political imaginary it tends to work as a figure of the over-use of scarce resources—a figure of waste rather than equity. In a sense, this meaning of the term is already prefigured in Locke’s equation of the commons with the ‘wast’, the area of uncultivated manorial land outside the fields. Locke’s notion of the commons is predicated, however, on abundance, and any encroachment on it by means of property rights developed out of productive labour—which are based in turn on the property right in one’s own person—is always qualified by the caveat that there must be ‘enough, and as good left in common for others’. The contemporary understanding of the commons, by contrast, is largely built upon a Malthusian predicate of scarcity. The key text here is Garrett Hardin’s 1968 article ‘The Tragedy of the Commons’. A version of the ‘prisoner’s dilemma’ paradox, Hardin’s argument can be stated as a fable: given a piece of common pasture, each herdsman who grazes his cattle on it will, ‘as a rational being’, seek ‘to maximize his gain’; thus ‘each man is locked into a system that compels him to increase his herd without limits—in a world that is limited. Ruin is the destination toward which all men rush, pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all’. Hardin then extrapolates from this fable to a number of areas in which the commons has had to be abandoned under pressure: the gathering of food, the unregulated disposal of waste, the unlicensed use of the airwaves, and—inevitably—the uncontrolled expansion of the population.

The model is that of an unrestrained competition between individuals without common interests or the capacity to negotiate shared rights of access. Set up in these terms, however, the model misses the historically

50 John Locke, ‘The Second Treatise of Government’, Two Treatises of Government, ed. Peter Laslett, Cambridge 1960, p. 315; as the editor notes, however, this was often a grazing area of some value.
51 Ibid., p. 306.
interesting questions of the social regulation of the commons—in the specific and plural use of that word: the ways in which scarce resources were allocated by means of complex manorial customs governing rights and limitations on rights. In his discussion of the English enclosure movements of the seventeenth and eighteenth centuries, E.P. Thompson points to the derivation of Hardin’s argument from the propagandists of parliamentary enclosure; what it overlooks, he says, ‘is that the commoners themselves were not without commonsense. Over time and over space the users of the commons have developed a rich variety of institutions and community sanctions which have effected restraints and stints upon use’. The commons were a governed space, and their destruction had to do with the pressures of capitalist agriculture upon coincident use-rights, together with the sheer political power of the landholding class, rather than with competition on an equal footing between isolated individuals.

In an essay explicitly directed against Hardin’s pessimism, Carole Rose similarly seeks to reclaim the logic of the public good by which the commons was governed. Reading three lines of precedent in US case law for an ‘inherently public property’ in such things as roadways and waterfront (the land between low and high tides), she finds a continuance of customary rights—neither state property nor an exclusive private-property right—in certain areas of modern law. ‘Custom’, she writes, ‘is the method through which an otherwise unorganized public can order its affairs authoritatively’, and the concept thus suggests a way of managing a commons ‘differently from exclusive ownership by either individuals or governments. The intriguing aspect of customary rights is that they vest property rights in groups that are indefinite and informal, yet nevertheless capable of self-management’. Although the enclosure of the manorial commons had by the nineteenth century largely eradicated customary claims for uses such as pasturing and wood-gathering, those traditional rights nevertheless gave evidence that, even in a situation of scarcity, a commons need not be a chaos of conflicting property claims. In the vestigial existence of the category of customary rights in doctrine concerning roadways and waterfronts, ‘the “unorganized public” begins to seem more like a civilized and self-policing group. Custom, in short, can tame and moderate the dreaded rule of capture that supposedly turns every commons into a waste’. It has, moreover, a specifically economic rationale as well in that the expansive and open-ended use it encourages may actually enhance the value of certain kinds of property: increase of scale may produce positive rather than negative externalities. The example Rose gives is the customary right to hold maypole dances on private land, where ‘the more persons who participate in a dance, the higher its value to each participant’; far from an increase of use having here a tragic outcome, this is the ‘comedy of the commons’.

The pleasure of the dance is a kind of information—and this model of

56 Ibid., p. 746.
57 Ibid., p. 767.
the enhancement of the value of a commons through an increase in use works particularly well in the case of shared information, which is not depleted by use. Earlier I used the notion of a ‘library model’ in order to set up a counterpart to the regime of commodified information. The metaphor is a useful one both logically and historically, although it does not by any means entail a straightforward dichotomy of gift and commodity forms.

Public Libraries Under Threat

A library is a collection of informational materials, traditionally but not necessarily printed matter, which have typically been bought in the market but which, in most public library systems, do not circulate as commodities. But neither do these materials circulate as gifts; they are, rather—to pick up Marcel Mauss’s term—prestations, ‘gifts’ that return without conferring any rights of ownership or permanent use. At the same time, loaned library materials create no personal ties of obligation and lack the coerciveness of the various forms of prestation that Mauss describes. In this sense, they partake of the impersonality and the abstractness of the commodity form, but unlike commodities they have also been largely free of the forms of coercion—the constraints on access and use—that tend to flow from the price mechanism. While the ‘library model’ thus tends to collapse rather than to dichotomize the categories of gift and commodity, it does nevertheless represent a genuine alternative to the privatization of the commons in information.

Public libraries as we know them came into being as part of that massive expansion of state institutions in mid-nineteenth century Europe and North America that also produced the public schooling system, post offices, railways, and public hospitals, and which set an ethos of public service against the monopolistic tendencies of the uncontrolled market. Their present existence is framed by a tension between that expanded model of the state and its role in the provision of free—that is, subsidized—public services, and a more restrictive view of the state which seeks to open the provision of information to market forces. To put it crudely, a model centred on informing citizens has been replaced, at least in part, by a model in which choices are made by consumers. The causes of this shift are many and complex, but important, in the case of the public library system, has been the change in the status of information itself, from being ‘economically valueless, mainly government produced and largely public, to being value added, commercially sensitive and high cost’. Thus, to take a specific example, the attempt by some governments to ensure that libraries are able to rent out computer software and to make it available for use on the premises has been bitterly fought by the software industry.

Herbert and Anita Schiller identify a 1982 US Government report as a

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turning point in the progressive weakening of the ‘library model’.61
Announcing an end to the principle of cooperation between the public
and private information sectors, the report represents ‘the private industry’s challenge to the right of the public sector—government, libraries, universities, and so on—to engage in any activities the industry regards as its own province’.62 (Similar positions have been enunciated in recent years in relation to the Internet, seen as a “subsidized” threat to commercial service providers.)63 The screws are thenceforth on the public library system, perhaps the most genuinely popular of all cultural institutions,64 not only to implement various local forms of commercial practice—‘charging users for information, relying on private vendors for databases, contracting out functions to private firms, and so on’65—but more generally to relinquish its primary role in the provision of information.

The tension between free public provision and the pressures to treat information as a commodity with a price is an aspect of the aporia that organizes all liberal and neo-liberal theories of the market. In order to work efficiently and fairly, any market relies on ‘perfect information’—information that is ‘free, complete, instantaneous, and universally available’;66 at the same time, as Boyle argues, ‘the actual market structure of contemporary society depends on information itself being a commodity—costly, partial, and deliberately restricted in its availability’.67 The profit structure of markets directly undermines the basis of the market system itself. If structural breakdown is nevertheless avoided, it is because this tension is displaced into an endlessly deferred promise of the overcoming of information scarcity: on the one hand, in the dynamic of production of new information, and, on the other, in an increasing mining of the commons in information through the ongoing privatization of the public domain.

The concept of the public domain has a precise application in modern legal systems, where it forms the cornerstone of copyright law and indeed of intellectual-property doctrine generally. Yet the concept is a purely residual one: rather than being itself a set of specific rights, the public domain is that space, that possibility of access, which is left over after all other rights have been defined and distributed.68 It has had a shadowy legal presence through common-law principles such as fair use, through administrative measures such as freedom-of-information

64 This argument is made in the Comedia Research Paper Borrowed Time: The Future of Public Libraries in the UK, ICPS, Brisbane 1993, p. iv.
67 Ibid.
regulations or through statutory protection of free speech, but its lack of positive doctrinal elaboration leaves it vulnerable to erosion. It is a concept which is in many ways in crisis.

The Rationale of Copyright

Copyright law divides the ‘work’ between one part which can be held as private property, and another in which no property right can inhere. This division developed, towards the end of the eighteenth century and in close proximity to the romantic paradigm of authorship, as a distinction between ‘idea’ and ‘expression’, where the ‘idea’ remains a common good and it is the ‘expressive’ dimension of texts that is able to give rise to a property claim. This claim is limited in extent; although it is modelled on property rights in land, it gives no right of total exclusion—it merely restricts the making of copies—or of prohibition on use. Unlike real property rights, the copyright expires after a certain term, and once lost cannot be appropriated—as an unowned good—by later comers.\(^{69}\)

The dichotomy of idea and expression, a logically problematic distinction insofar as these are relational rather than fixed and identifiable categories,\(^{70}\) corresponds, historically and theoretically, to the attempt to reconcile two contradictory interests: on the one hand, the provision of a financial incentive to authors and, through them, an incentive for the production of new knowledge; on the other, the protection of public access to knowledge including, quite crucially, protection of the raw materials on which later authors will draw.\(^{71}\) It is this aspect that Jessica Litman stresses in her defence of the concept of public domain—and her argument that it provides a stronger doctrinal foundation for copyright law than the concept of ‘originality’: the public domain is ‘a device that permits the rest of the system to work by leaving the raw material of authorship available for authors to use’,\(^{72}\) whereas a rigorously enforced notion of originality would quickly make plagiarists of all authors.

At the same time, Litman is concerned by the fact that the public domain is defined negatively and without any precise conceptual rationale. US copyright law denies protection to ‘ideas, methods, systems, facts, utilitarian objects, titles, themes, plots, scènes à faire, words, short phrases and idioms, literary characters, style, or works of the federal

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government’, and this ‘hodgepodge of unprotectible matter’ has been assembled without overarching justification. 73 Most of the doctrine defining the extent of the public domain characterizes these elements of textuality as exceptions, and most of the definitive cases have involved a defensive reaction on the part of the courts against far-ranging claims based on the supposition that authorial ‘originality’ carries with it inherent property rights.

The encroachment of property claims on previously reserved areas of the public domain has been facilitated by the incoherence and negativity of the concept, and by the more general weakening over the past two decades of the notion of a common weal. Copyright protection now extends to ‘an extraordinary variety of products that saturate our society’. 74 A later, more pessimistic article of Litman’s worries that ‘copyright law may be developing into the engine that drives an information policy sharply restrictive of the public’s access to ideas and information’, 75 as ‘a tide of strong protectionism in influential commentary has encouraged the courts to view copyright as a broad property right’. 76 The landmark Feist case, 77 which adhered to the letter of the law in denying copyright protection to facts, caused an uproar precisely because it went so strongly against this trend.

Litman lists four areas in which the trend is evident. The first is the protection of facts by the back-door method of granting protection of the ‘form’ in which factual material is ‘expressed’. The second is the piecemeal repeal of the first-sale doctrine, which has traditionally granted the purchaser a broad range of rights of use, including commercial use, of a copyrighted work. The third is the extension of protection to government-developed databases and software, as a prelude to their commercialization. And the fourth is the conflict between the fair-use exemption—defending a range of rights of public access—and moral rights principles, especially as the latter have been used to prohibit use of unpublished works (Jaszi refers to moral rights doctrine in these cases as representing ‘a charter for private censorship’) 78 and to give, for complex technical reasons, almost unqualified protection to computer software. Litman concludes that the principle of authorial rights inherent in the idea/expression dichotomy, and the principle of a reserved commons in information embodied in the fair-use exemption, are in fundamental contradiction, and that the public interests represented in each are in the process of being eroded by default. 79

Contemporary information policy, under pressure from industry groups and considerations of short-term political expediency, sets the

73 Ibid., pp. 992–3.
74 Ibid., p. 995.
76 Ibid., p. 188.
79 Marlin Smith makes a similar case about the erosion of the fair-use principle in recent cases involving parody of copyrighted work, where judges have privileged the test of economic harm over public rights to access to creative work. Marlin H. Smith, ‘Note: The Limits of Copyright: Property, Parody, and the Public Domain’, Duke Law Journal, no. 42, 1993, pp. 1233–72.
conditions for an increasing enclosure of the commons in information under the rubric of copyright.

The Public Realm

All uses of the concept of the commons imply in one way or another the concept of the public sphere—which in turn cuts across the gift/commodity opposition in interesting ways. Richard Sennett has documented the shift in the word ‘public’ from a generalized conception of the common good, res publica, to its modern sense, fully developed by the eighteenth century, of a special region of sociability passed outside the life of the family and intimate friends. Both uses of the word conceive of the public domain as a space of association between strangers; the difference between them lies in the intensity with which this sphere comes to be opposed to that of privacy, and the increasingly negative connotations that it acquires.

Western liberalism from Locke onwards is built on the logic of the opposition of a public sphere of citizenship and formal equality to the private sphere of civil society in which real differences of social status and power are operative. The dilemma that follows from this separation is that liberal theory ‘must exalt the virtues of egalitarianism, of each person’s voice counting equally and, at the same time, confine that egalitarianism to the public sphere’—which means, by and large, to the state. The enclosure of the commons conforms to this logic of division between an egalitarian public sphere and a private and hierarchical sphere of individual power and interest.

Yet there is neither a logical nor an historical necessity for the public sphere to be equated with the state, or to figure as the opposite of civil society. In Habermas’s account of the formation of Öffentlichkeit (the bourgeois public sphere), this category is coextensive with civil society (bürgerliche Gesellschaft) and embraces the public virtues of commerce. In the same way, a Memphis court ruling on Elvis Presley’s fame defined the public domain in terms of free access to the market; and Carole Rose argues that one reason why roadways and waterways were so tenaciously held in US law to be inherently public spaces is the persistent association of commerce and trade with the sorts of ‘interactive’ uses that actually increase the value of the commons. The concept of civil society, which includes the market as a crucial component, has historically been understood both as a realm of ‘private’ rather than state activity—and as a ‘public’ space of the free and open flow of information and trade. It is in this sense that it has historically been possible to equate cultural works both with a notion of the public good and with an intensification of cultural commodification, and it is for this reason that the category of the market occupies so ambivalent a position in relation to the distinction

between the public and the private—it is a ‘public’ fact in relation to the family, but a ‘private’ fact vis-à-vis the state.  

All of this makes much more complicated Titmuss’s attempt, in his classic study of donative and commercial blood-collection systems, to define the state as the domain of an altruism that is in some sense gift-like. Yet the practical consequence of the way we divide the public from the private is precisely the one that Titmuss was concerned with: the question of the extent to which social goods should be administered and allocated by public or by private means. Should it be the case—to use an example of James Boyle’s—that, as in the US, access to medicine is a private matter dependent on my ability to pay, while the right to a lawyer is granted in the Constitution, and I get one whether I can pay or not? Or should the opposite be the case, as it is for me in Australia? By what rationale should ‘private’ branches of law like torts make restitution for loss of earnings on the basis of very unequal levels of income—the wealthier I am, the more I get—while ‘public’ branches of law such as criminal law reject differential treatment out of hand? Beyond these very general questions of principle lie a host of policy issues to do with equity, access, and efficiency, which are organized around precisely the same question of the socially contested division between ‘public’ and ‘private’ mechanisms for the administration and distribution of social goods. The anti-government rhetoric and the wave of privatizations of state institutions in most countries of the advanced capitalist and former-communist world over the last two decades have been the most visible outcome of these questions in the area of policy.

The ‘positive’ concept of the public domain that I have projected here—a reserved domain of inalienable personal and social goods and rights—is intended as a way around some of the conceptual impasses that flow from the notion of a transcendental and autonomous sphere of personhood which is prior to and essentially untouched by property relations and which exists in a ‘private’ rather than a ‘public’ space. Public-domain rights are those rights that, rather than deriving from personhood, precede and enable it. They are rights to the raw materials of human life: language, ideas, an inherited culture, a ‘common heritage’ of environmental resources, bodily integrity, civil entitlement. These are not ‘natural’ rights, located in an originary contract or a state of nature, but customary social rights, developed and recognized as a provisional end state of the struggle for civilized conditions of life—and of course, whatever their recognition, they are always contested. Like all rights, they represent a balance between conflicting demands, and they carry with them a corresponding set of obligations to the common good.

**Everyday Citizens**

Yet there are, inevitably, disadvantages and limitations attaching to such a conception of the public domain. One is that the category of citizen—the form of personhood most closely associated with it and currently

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fashionable in a number of post-leftist discourses—is in many ways a nostalgic concept, predicated on the recovery of a lost but once flourishing public sphere. (Philip Elliott, for example, writes of a shift ‘from involving people in society as political citizens of nation states towards involving them as consumption units in a corporate world’.)

The ring of officialese to the word, too—which makes it virtually equivalent to good citizen—covers over the fact that many of the conditions for full and active citizenship are not present, not, at least, in the traditional ways, in mass-mediated societies. Margaret Morse writes eloquently of the difficulty of strengthening genuinely ‘public’ values in a world structured by mobile privatization and an ‘attenuated fiction effect in everyday life’ which slowly and pervasively undermines the ‘sense of different levels of reality and of incommensurable difference between them’. The difficulty is precisely that of appealing to traditional notions of civic responsibility and the public space of the agora in the context of ‘a built environment that is already evidence of dream-work in the service of particular kinds of commerce, communication, and exchange’ and of a representational apparatus in which ‘the public and private worlds outside are distanced ontologically under several other layers of representation’. Imagined communities may command civic allegiance, but not imaginary ones.

A further limitation to the category of citizen lies in its silent genderedness. The designation of public space as masculine and of private, intimate or domestic, space as feminine has historically accompanied—as at once cause and effect—the restriction, whether by formal or informal mechanisms, of full citizenship to men. This restriction is bound up in multiple ways with the association of women with the gift: on the one hand, their status as themselves the gift within systems of matrimonial exchange and, on the other, the encoding of nurture and the gift of life as the woman’s gift, a power within her gift, and thus at once beneficent and dangerous, the opposite of the enlightened abstraction of the commodity form. This opposition entails a ready-made rationale for the exclusion of women from the public sphere, and then in turn for the shaping of its rules to reflect this exclusion. ‘What should be remembered’, writes Rosalyn Diprose, ‘is that the giving which is consistently forgotten by the law is woman’s and the gift which the law consistently recognizes is man’s’.

More generally, a concept of the public good grounded in the category of the inalienable gift cannot be applied in any direct way to the social. The state is not a ‘gift’ domain because its forms of sociability do not involve the magical and dangerous ties of personal obligation. At this level, obligation is an abstract matter. Nor of course is the market a domain of


gift, both because it is built on the price mechanism and because, like the state, its workings are complex, impersonal, and abstract. In any strict sense, the concept of gift is irrelevant to the structural understanding of modern societies, with the exception of the micro-level of everyday life. There is no state sphere in traditional gift economies, and neither, therefore, is there a civil society—the distinction is simply not meaningful.

Yet that exception is crucial. Everyday talk is the model of all free exchange of information, and the realm of the everyday is the place where, through the constant transformation of commodity relations into gift relations, it becomes difficult to hold the two terms in their categorical purity. It is a realm permeated by the archaic patterns of gift-obligation—the dangerous, fluid, subtle generosities that bind members into crystallized orders of relation, in all dimensions of human life, from which they cannot easily be released. These patterns of obligation are, at the same time, in tension with the contractual rationality of the commodity, which produces quite different forms of the everyday. It may produce greater equalities as well as greater inequalities; it may enhance or reduce the sharing of wealth. It can be seen as a liberation from the ‘antiquated and dangerous gift economy’,\(^{92}\) or as a destruction of human sharing; but it is never neutral in relation to the economy of gift. Gift and commodity exchange are mutually overdetermined: they merge with each other, absorb or transform each other, or clash in open contradiction. The energies, the social intensities they set in play structure and continuously transform the moral ground of everyday life—our fundamental capacity to be, to have, and to know.

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