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## Intellectual Property over Seeds versus Civil Liberties

**Birgit Müller**

The spring and summer 2010 had been exceptionally wet in Saskatchewan, so wet that farmers were unable to seed certain fields. Yet some fields were covered thick with beautiful canola plants, which germinated from the seeds that had fallen to the ground at last year's harvest. The weather was good and the price for canola as well. It was tempting to take the combine harvester and harvest this crop, which would be lower yielding than canola carefully seeded at uniform distances and depth, but which had cost nothing in inputs. However no farmer in the neighbourhood of Colonsay dared to take the step. Although the land belonged to them and they had bought the seed the preceding year they were afraid of intellectual property claims. They remembered well the Saskatchewan farmer Percy Schmeiser who lost his case against Monsanto at the Supreme Court. In 1996, one year after transgenic herbicide resistant canola varieties were introduced, he found herbicide resistant canola plants in his field and reseeded the grains of these volunteers. Monsanto persecuted him for patent infringement right up to the Supreme Court. The Supreme Court ruled that the ownership of the patent over the herbicide resistance gene conferred to Monsanto by extension intellectual ownership over the seed and over the plants developing from them wherever they occurred (Müller 2006).

When farmers want to buy transgenic seed of herbicide resistant canola they have to sign a contract, a technology use agreement, which Monsanto baptized *Technology Stewardship Agreement*. Using the term 'stewardship' Monsanto tried to link up with the positive meaning conferred to the term by the Convention for Biodiversity of 1992. By signing their contract, however, Monsanto wants farmers to be stewards of their intellectual property rights not to be stewards who care for and preserve natural resources. By signing the contract with Monsanto farmers commit themselves to using the seed only once in the first year. They cannot keep their harvested grain and use it as seed. They agree that they will not transfer the seed to anybody-else and that they will pay all the fees related to the use of the technology and all the royalties. They assure that intellectual property rights will be respected even on fields that they rent to others and on fields that they rent from others to plant transgenic canola, thus guaranteeing that Monsanto's property rights over a spontaneous re-growth will be respected. They commit to selling their harvest only on markets that accept GMOs. They have to allow access to their fields, granaries and accounting books to an inspector delegated by Monsanto for three years after having cultivated the IP protected variety.

In this article I would like to draw attention to the fundamental contradiction between civil liberties and intellectual property rights attributed and transported by living self-reproducing organisms. The point I want to make is that intellectual property over seeds establish fields of ownership that crosscut and invalidate property over land and labour that John Locke regarded as the basis for civil liberties.

Anthropologists working in different societies have questioned the concept of property and pointed out, that the definition of 'property' even within the Western legal and scholarly tradition has been variously understood as 'things, as relations of persons to things, as person-person relations mediated through things, and as a bundle of abstract rights'. (Humphrey/Verdery 2004:1) For the purpose of contemplating relationships of property over land together with relations established through intellectual property rights I find it useful to return to one of the founding fathers of social anthropology, to Henry Maine, who defined property as a 'bundle of powers capable of being mentally contemplated apart from one another and capable of being separately enjoyed' (Maine 1876: 158). Maine saw the mixing of political and economic power in the different property forms throughout history, drew distinctions between various forms of property (Maine 1890: 281, 283) and showed the way in which these had been gradually separated into the institution of private, individual property (Macfarlane 2002).

If we look at the field where transgenic canola plants are growing we can see different relationships of property in operation. The farmer owns the land where the canola plants are growing. He has the perpetual, exclusive and inviolate right over the tangible property of his land written into the constitution. This constitution is strongly influenced by Lockean liberal philosophy. Locke believed that 'every man has a property in his own person'. 'The labour of his body, and the work of his hands, [...], are properly his'. (Locke 1690:sec.27) By joining his labour to something that nature has provided, he makes it his property. Locke declared that man has 'by nature' a power, 'to preserve his property, that is, his life, liberty and estate'. In a political society all men resign this power into the hands of the community that protects their property for them (Locke 1690: sec.87). The essential function of the institutions of a liberal society is thus to protect the property of the individuals over tangible things, their estate, and over intangibles such as 'life', 'liberty' and 'labour' that in turn are the foundation of their material property. As Edwin Hettinger pointed out: 'Private property also promotes privacy. It constitutes a sphere of privacy within which the individual is sovereign and less accountable for her actions.' (Hettinger 1989: 45). When political institutions introduce intellectual property rights over living self-reproducing organisms in the field of the farmer what happens to the property of 'his life, liberty and estate' and to his or her privacy?

With the seed whose cells carry a patented transgenic seed conveying resistance to the herbicide glyphosate to the canola plants a new bundle of power is introduced into the field. The Canadian Supreme Court attributed in 2004 an intellectual property right over all the plants developing from a seed that carries a patented transgenic gene, to the patent holder. In that case that opposed the Saskatchewan farmer Percy Schmeiser to Monsanto, the multinational corporation obtained the assurance of wide ranging intellectual property rights. These rights cascaded from the patent for the invention of the chimerical transgene by researchers working for the company down to the right to confiscate the entire seedstock contaminated with GM canola of Percy Schmeiser (Müller 2006). The Supreme Court decision was the latest step in a series of legal decisions that toughened intellectual property rights over seeds. The Plant Breeders

Rights Act of 1990 gave 'plant breeders'<sup>1</sup> exclusive rights to sell seeds and other propagating material (cuttings, etc.) of protected varieties, and exclusive rights to 'produce in Canada for the purpose of selling' seeds and other propagating material (section 5-1). Since the Plant Breeders Rights Act based on UPOV 1978 restricted only the sale of seeds or the production of seed for sale, farmers could still reseed their harvest and paid royalties only once, when they purchased their seeds. It was common tolerated practice for farmers to sell cleaned grain for seed to their neighbours in brown bags without indicating the variety name. This changed when farmers started to buy patented varieties and signed contracts in which they committed themselves to not saving any seed from their harvest. The corporations were fast to enforce these contracts, setting up phone-lines where neighbours could report anonymously on farmers who had sold or saved transgenic seed and sending out inspectors into the farmers' fields to check out whether all the cultivations of transgenic canola had been duefully reported and all royalties had been paid. The intellectual property, this new bundle of powers, introduced through the transgenic seed into the field invalidated thus the inviolability of the land the farmer owned and of the fruit of his labour.

If we define a relationship of power as an action on the action of others (Foucault ), we can say that through their intellectual property rights the firm owning the patent over a gene in the seeds has become able to act on the actions of the farmer. It determines what they harvest, how they sell it, whether they reseed their harvest, how they keep their books. 'Property signifies a relation of the working subject ... to the conditions of his production' and it is necessarily a political relation (Macfarlane 1998:113). By attributing to the patent holder intellectual property rights over all the plants emerging from seeds carrying the proprietary gene no matter where they grow, the Supreme Court and the Canadian legislator extended the intellectual property right, to take precedence over the right of property to the land and to the labour of the farmer. Intellectual property over seed thus transforms and weakens freehold property upon whose foundation — as Locke asserted — a just society is based.

While initially in the nineteenth century intellectual property rights were created to protect the 'commons of mind' (Boyle 2003: 41) intellectual property has recently been extended everywhere. The subject matter that is now patentable has been expanded from inventions to mere discoveries. Hundreds of genes and gene sequences that occur naturally and have been isolated by geneticists — such as genes in plants that have been identified as being linked to drought or frost resistance and to moisture tolerance — have been patented (ETC). 'In patent law, stretched interpretations of novelty and non-obviousness allow intellectual property rights to move closer and closer to the underlying data-layer; gene sequence patents come very close to being rights over a particular discovered arrangement of data — Cs, Gs, as and Ts' (Eisenberg in Boyle

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<sup>1</sup> 'Almost all Canadian wheat acreage is planted to varieties developed by Agriculture Canada and other public agencies. The same is true for barley, oats, and most cereals. Corn, canola, and soybeans are different. The majority of the rights-holders are corporations such as Monsanto, Bayer, and Pioneer Hi-Bred. When we talk about Plant Breeders' Rights, the "breeders" whose rights we are protecting are not hard-working individual researchers, but, instead, public agencies, on the one hand, and transnational seed corporations, on the other.' (NFU 2005:6)

2003: 39). These patents are now used to justify the claims of biotechnology corporations that they have the solution to the challenges posed to agriculture by climate change.

Nineteenth century thinkers such as famously Thomas Jefferson and Thomas Macaulay were sceptical of intellectual property rights and warned that inventions should never become subject to a permanent and exclusive property right. 'Stable ownership is the gift of social law, and is given late in the progress of society. It would be curious then, if an idea the fugitive fermentation of an individual brain, could, of natural right, be claimed as exclusive and stable property' (Jefferson in Boyle 2003:53). While they recognised that intellectual property might be necessary, they warned of the monopolistic dangers that they pose. '[T]he effect of monopoly generally is to make articles scarce, to make them dear, and to make them bad' (Macaulay in Boyle 2003:54). The monopoly over the product or processes invented were attributed to inventors in exchange for the disclosure of information sufficiently detailed to reproduce the inventive act. The initial justification of intellectual property rights was to compensate the inventor for his or her inventive effort and to stimulate creativity. However, as Edwin Hettinger pointed out, knowledge is cumulative and the inventor stands on the shoulders of giants and the result of his or her labour is a joint product of human intellectual history (Hettinger 1989:38). This is particularly true in the domain of seed breeding. The patented seed is the ultimate outcome of the breeding work of thousands of farmers and dozens of public plant breeders to which a single chimerical gene was added (Cleveland/Murray 1997: 477, 485). Also, most of the time the intellectual property right does not lie with the inventor him- or herself but with public and private institutions, such as corporations or universities that bought the labour of the inventors and invested into their inventions. 'Prospective employees are required to give the rights to their inventions and works of authorship to their employers as a condition of employment' (Hettinger 1989: 46). What used to be a system to reward the individual inventor and thereby stimulate invention can be used today as a device to monopolize industries (Hettinger 1989: 50) The monopoly of the exclusive use of the invention for a determinate amount of time was granted originally in exchange for letting the invention become common knowledge. This has changed in recent years, corporations depositing patents make the information over the inventive process more and more confidential while they claim detailed information over the personal and business data of suspected infringers and their helpers. The enforcement of intellectual property rights has taken such prominence that details of how to deter and ward off potential infringers are meticulously spelled out in bilateral trade agreements such as the one that Canada is currently negotiating with the European Union.

Allan Macfarlane quoting Tocqueville pointed to the link between the strength of the state and the security of private property from arbitrary political acts. 'What is needed is a state that is strong enough to guarantee order and to protect property, and not to give in to the pressure to relinquish too much power either to the great lords or the peasant families. The dissolution of the state is not a good basis for modern private property which is ultimately underpinned, as Locke and his successor recognized, by powerful, if largely invisible, state power' (Macfarlane 1998:115). Are the biotechnology

corporations the 'lords' of the 21<sup>st</sup> century, which usurp more and more regulatory functions from the state? Intellectual property rights have become a vehicle for big corporations to impose — with the backing of the state — regulatory frames, which prevail over relations of tangible property. While the patent office attributes the patents, it is the law courts that enforce them. Once an intellectual property right is created the corporations enforce them through contracts, which have conditions, which go most of the time well beyond what is stipulated by law, but which create a constant pressure for the legislator to adapt the legal frames to the contractual practice. As Boyle put it: 'Once a new intellectual property right has been created over some informational good, the only way to ensure efficient allocation of that good is to give the rights holder still greater control over the user or consumer in the after market so as to allow for price discrimination, since the only efficient monopoly is a monopoly that is able [...] to charge every user the exact maximum of their ability and willingness to pay, so that the market can be perfectly segregated by price' (Boyle 2003: 50).

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