

policies are conditions precedent to liability now have another reason to make this explicit.¹³

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GIVING AWAY THE FARM? THE RIGHTS AND OBLIGATIONS OF BIOTECHNOLOGY MULTINATIONALS: CANADIAN DEVELOPMENTS

1. INTRODUCTION

THE EMERGENCE of genetically modified (GM) crops has generated many novel regulatory and legal challenges. How should these crops be regulated? How can developers and manufacturers recoup the significant research and development costs associated with product development? Should such products constitute patentable subject matter or is some alternative *sui generis* intellectual property regime required? Should new biotechnology specific regulatory regimes be developed for the approval of such products or are existing regimes sufficiently flexible?

Aside from these questions, the most complicated (and controversial) legal challenge is achieving the appropriate balance between the intellectual property and contractual rights enjoyed by agricultural biotechnology multinationals on the one hand, and the obligations that the enjoyment of these rights should entail on the other. In Canada the manufacturers of GM crop systems possess a significant arsenal of legal rights in relation to their products. However, they appear to be relatively unburdened by legal obligations.

This is not to say that such products are unregulated. Canada has the world's third largest biotechnology sector, worth an estimated \$50 billion (at least £25 billion) annually. The sector is regulated by multiple government agencies and GM crops must be approved prior to release. Canada regards itself as having a "responsible" regulatory approvals process.¹ However, in the post-approval phase the disparity between rights and obligations becomes apparent. In response to a request from Greenpeace for information on post-approval monitoring of GM crops, the Canadian government stated the following:

If a product gains market approval, it is the legal responsibility of the proponent to provide the Government of Canada with additional information regarding

13. For the courts' general approach to construing such statements, see *Gan Insurance Co Ltd v Tai Ping Insurance Co Ltd* (No 2) [2001] EWCA Civ 1047, [2001] 2 All ER (Comm) 299; *George Hunt Cranes Ltd v Scottish Boiler & General Insurance Co Ltd* [2001] EWCA Civ 1964, [2002] 1 All ER (Comm) 366; *Eagle Star Insurance Co Ltd v Cresswell* [2004] EWCA Civ 602, [2004] 2 All ER (Comm) 244.

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1. Government of Canada, *Canada's Biotechnology Strategy* (Ottawa, 1998), 8. The strategic vision is "to enhance the quality of life of Canadians—in terms of health, safety, the environment and social and economic development—by positioning Canada as a responsible world leader in biotechnology".

any untoward observations or effects. The Government of Canada may carry out post-market sampling, auditing and testing, either as routine post-market surveillance or on a case-by-case basis, or change its regulatory decisions, in response to additional information provided by the proponents, the public, or advances in scientific knowledge.²

Given this predominantly self-regulatory approach, governmental imposition of legal liability for any damage caused by the introduction of GM crops appears unlikely. At this juncture, it may be entirely inappropriate to talk of “balance”. The absence of meaningful obligations in the post-approval phase stands in marked contrast to the significant rights that Canadian law affords biotechnology multinationals.

Two recent Canadian judicial decisions—one in the Supreme Court of Canada and one in the Saskatchewan Court of Queen’s Bench—show clear evidence of the lack of (and need for) balance in this context. This comment will focus on these decisions and assert that either judicial creativity or legislative intervention are required if any semblance of balance is to be achieved. It is submitted that analysing Canadian developments will produce insights of general application, as the issues addressed by the Canadian courts are of universal import.³

2. RIGHTS

In the case of *Monsanto v Schmeiser*,⁴ the Supreme Court of Canada upheld Monsanto’s patent relating to a genetically modified variety of Canola, and found a Canadian farmer guilty of patent infringement. In strict legal terms *Schmeiser* could be viewed as a rather “run of the mill” patent infringement suit. An examination of the plethora of socio-economic issues that the litigation raised (such as farmers’ rights, the corporate control of agriculture, and the pitfalls of globalisation) was beyond the jurisdictional competence of the court. However, the decision went further than an affirmation of previously conferred intellectual property rights, ultimately extending the rights enjoyed by Monsanto far beyond the scope of those afforded by Canadian patent law.

In 1993 Monsanto obtained a Canadian patent for, *inter alia*, a process for creating and inserting glyphosate resistant genes into Canola⁵ plants. In 1995 Round-up™ Ready Canola (which incorporated the patented invention) was approved for sale in

2. Agriculture and Agri-Food Canada, *Response to Environmental Petition No 44* (Office of the Auditor General of Canada, 4 June 2002); emphasis added. Full text of document available at <http://www.oag-bvg.gc.ca/dominio/petitions.nsf>.

3. For an analysis of liability issues in relation to GMOs from a UK perspective, including the potential impact of Canadian cases raised in this comment, see Maria Lee and Robert Burrell, “Liability for the Escape of GM Seeds: Pursuing the Victim?” (2002) 65 *Modern Law Review* 517 (hereinafter “Lee & Burrell”). For an examination of liability issues from a wider European perspective see Maria Lee, “Regulatory Solutions for GMOs in Europe: The Problem of Liability” (2003) 13 *Journal of Environmental Law and Practice* 311.

4. [2004] 1 SCR 902 (hereinafter “*Schmeiser*”). For a remarkably thorough analysis of this decision, see A. David Morrow and Colin B. Ingram, “Of Transgenic Mice and Round-up Ready Canola: The Decisions of the Supreme Court of Canada in *Harvard College v Canada* and *Monsanto v Schmeiser*” (2005) 38 *University of British Columbia Law Review* 189 (hereinafter “Morrow & Ingram”). The authors were legal counsel for Monsanto at the Supreme Court of Canada.

5. Canola is a particular cultivar of the rapeseed family. Its name is an abbreviation of Canadian Oil Low Acid.

Canada. The purported benefit of the crop is that it is resistant to Monsanto's hugely successful glyphosate herbicide Round-up™. Farmers are able to maximise yields by spraying their crop with Round-up™, killing all other plants and weeds, but leaving the Canola intact.

If a farmer wishes to use Round-up™ Ready Canola, it is not a simple matter of purchasing the seed and harvesting the crop when mature. The Round-up™ Ready Canola seeds are not sold directly by Monsanto, but through a network of approved seed companies who sell to farmers. In order to use Round-up™ Ready Canola, farmers must sign a detailed Technology User Agreement (TUA). Under the terms of the TUA the farmer must pay a royalty fee of \$15 (approximately £7) per acre to Monsanto Canada, agree not to save and replant seed, agree to use Monsanto's Round-up™ herbicide, and allow Monsanto to inspect their crops to verify compliance with the terms of the TUA.

In March 2001, Percy Schmeiser, a farmer from Bruno, Saskatchewan, was ordered by the Federal Court Trial Division to pay Monsanto Canada \$20,000 (approximately £10,000) after losing a patent infringement suit.⁶ The facts of Schmeiser's case are fascinating in that they are illustrative of the conflict emerging in rural areas between farmers and multinational ag-biotech companies. In 1997 Mr. Schmeiser planted a canola crop with seed saved from his 1996 crop (a common farming practice). As the 1997 crop grew, it became clear that it was infested with Round-up™ Ready Canola, which Mr. Schmeiser subsequently alleged was "volunteer" canola.⁷ Following an anonymous tip from a neighbouring farmer, Monsanto took samples from Mr. Schmeiser's farm, which found high levels of Round-up™ Ready Canola. As Mr. Schmeiser was not in possession of a TUA, Monsanto began legal proceedings against Mr. Schmeiser for patent infringement, alleging that he had planted the seed without Monsanto's permission.

After a lengthy trial, Mr. Schmeiser was found guilty of patent infringement. In his defence, he argued that he had neither deliberately planted the canola, nor used Round-up™ on the crop. Thus he did not intend to benefit from use of the patented invention. He asserted that the Round-up™ Ready Canola was volunteer canola which had infested his field. However, "the general rule in patent law is that the defendant's intention is irrelevant to a finding of infringement. The issue is 'what the defendant does . . . not what he intends'".⁸ The mere fact of using patent protected material without authorisation constitutes infringement. Mr. Justice McKay of the Federal Court Trial Division found that the evidence suggested that Mr. Schmeiser "knew or ought to have known" that the seeds he replanted contained Monsanto's patented product, thus establishing infringement.⁹ Mr. Schmeiser's appeal to the Federal Court of Appeal was rejected unanimously.¹⁰

6. *Monsanto Canada Inc v Schmeiser* (2001) 12 CPR (4th) 204 (hereinafter "Schmeiser FCTD").

7. Volunteer canola is regarded as a weed. Herbicide tolerant volunteer canola is now a common occurrence in Western Canada. The proponents of agricultural biotechnology use the phrase "adventitious presence" to refer to the arrival of volunteer plants, while their opponents prefer the term "pollutant" or "contaminant". See the discussion of Hoffman, below n27.

8. Comments of McLachlin CJ in Schmeiser, above n4, para. 49.

9. Schmeiser FCTD, above n6, para. 120.

10. 218 DLR (4th) 31 (2003).

Given the robust nature of these Federal Court decisions, this appeared to signal the end of the litigation until the intervention of another Supreme Court of Canada decision, *Harvard College v Canada (Commissioner of Patents)*.¹¹ In late 2002, by a 5:4 majority, the court ruled that non-human mammals fell outside the scope of the terms of the Patent Act¹² as currently drafted. To be patentable subject matter, an invention must be “a manufacture or a composition of matter”.¹³ Writing for the majority, Mr Justice Bastarache stated that:

Patenting higher life forms would involve a radical departure from the traditional patent regime. Moreover, the patentability of such life forms is a highly contentious matter that raises a number of extremely complex issues. If higher life forms are to be patentable, it must be under the clear and unequivocal direction of Parliament. For the reasons discussed above, I conclude that the current Act does not clearly indicate that higher life forms are patentable. Far from it. Rather, I believe that the best reading of the words of the Act supports the opposite conclusion—that higher life forms such as the oncomouse are not currently patentable in Canada.

The essence of the majority decision was that the Harvard Mouse was a higher life form and therefore not patentable. This distinction between higher and lower life forms in the context of patentability has been a feature of Canadian appellate jurisprudence for some time.¹⁴ A clear articulation of where that line (if it exists) should be drawn has never been forthcoming. That pattern continued in *Harvard Mouse*, where again no attempt to provide such a line was made, with the rather obvious exception of a statement that human beings are not patentable.¹⁵ In the light of this decision on 8 May 2003 the Supreme Court granted Mr. Schmeiser leave to appeal.

This decision resuscitated the *Schmeiser* case. One of Mr. Schmeiser’s main arguments in the Supreme Court was that the Monsanto patent should be declared invalid because it related to a “higher life form”. In the absence of a valid patent over Roundup™ Ready Canola, Mr. Schmeiser could not be guilty of patent infringement.

The Supreme Court rendered its judgment in *Schmeiser* in May 2004. By another 5:4 vote the court upheld the validity of Monsanto’s patent, and found Mr. Schmeiser guilty of patent infringement. Given the findings of fact at trial, this conclusion was not entirely unexpected. However the Court’s analysis of the legal validity of Monsanto’s patent raises troubling questions about the lack of balance in the apportionment of rights and obligations in the context of GM crops in Canada. Writing for the majority, McLachlin CJ and Fish J concluded that Monsanto’s patent was valid as it only claimed the genes and the modified cells and not the plant itself (which under

11. [2002] 4 SCR 45 (hereinafter “*Harvard Mouse*”). For a detailed analysis of the decision see: Teresa Scassa, “A Mouse is a Mouse is a Mouse: A Comment on the Supreme Court of Canada’s Decision on the Harvard Mouse Patent” (2003) 3 *Oxford University Commonwealth Law Journal* 105. For a comparative analysis of the Supreme Court of Canada decisions in *Harvard Mouse* and *Schmeiser* see Morrow & Ingram, above n4.

12. Patent Act (RSC 1985, c-P.4.)

13. *Ibid.* s 2.

14. See e.g. *Re Application of Abitibi Co* (1982) 62 CPR (2d) 81, and *Pioneer Hi-Bred Ltd v Canada (Commissioner of Patents)* [1989] 1 SCR 1623.

15. See *Harvard Mouse*, above n11, para. 120.

Harvard Mouse would be considered a higher life form). The majority indicated that the validity of Monsanto's patent was supported by both the majority and minority judgments in *Harvard Mouse*. Given this finding, Mr. Schmeiser's reliance on the *Harvard Mouse* prohibition on higher life form patents failed to discharge his burden of proving that Monsanto's patent was incorrectly issued by the Commissioner of Patents. Therefore, by cultivating plants containing validly patented material Mr. Schmeiser had infringed the patent. The majority reasoned that by cultivating a plant that contains a patented product the user, of necessity, must infringe if the product is an essential component. As the GM genes exist throughout the plant, they are an essential component. Cultivating an unpatented vector acting as a carrier for patented subject matter infringes the patented material. "Infringement through use is thus possible even where the patented invention is part of, or composes, a broader unpatented structure or process."¹⁶

The Court was similarly dismissive of the argument that Mr. Schmeiser was not guilty of infringement because he had not "used" the patented gene when he did not spray Round-up™. As the majority note:

Whether or not a farmer sprays with Roundup Herbicide, cultivating canola containing the patented genes and cells provides standby utility. The farmer benefits from that advantage from the outset: if there is reason to spray in the future, the farmer may choose to do so.¹⁷

The decision in *Schmeiser* represents a dramatic shift in Canadian law, and represents a significant transfer of rights to agricultural biotechnology multinationals. It is generally accepted that under Canadian law plants are not patentable. As Gold and Adams had noted with regard to the lower court decisions in this litigation, "the decisions allow Monsanto to do indirectly what Canadian patent law has not allowed them to do directly: namely, to acquire patent protection over whole plants".¹⁸

Indeed, the majority in *Schmeiser* note that "everyone agrees that Monsanto did not claim protection for the genetically modified plant itself, but rather for the genes and cells that make up the plant."¹⁹ Furthermore, as Arbour J notes in her dissent, "the classic rule [in patent law] is 'what is not claimed is considered disclaimed',²⁰ re-iterating comments made by the Supreme Court four years previously.²¹

Under Canadian law, a form of *sui generis* protection is available to crop developers under the terms of the Plant Breeders Rights Act.²² Some jurisdictions allow the patentability of GM plants²³ or the simultaneous enjoyment of rights in plants under

16. *Schmeiser*, above n4, para. 43.

17. *Ibid.* para. 84.

18. E. Richard Gold and Wendy A. Adams, "The Monsanto decision: The Edge or the Wedge" [2001] *Nature Biotechnology* 587. As cited with approval by Arbour J in *Schmeiser*.

19. See *Schmeiser*, above n4, para. 17.

20. *Ibid.* para. 123.

21. See *Whirlpool Inc v Camco Corp* [2000] 2 SCR 1067, para. 42. Interestingly, the decision in this case was delivered by Binnie J, who sided with the majority in *Schmeiser*.

22. Plant Breeders Rights Act SC 1990 c.20.

23. For example, the European Union. See Lee & Burrell, above n3, 523n.

both patent law and specific plant variety protection legislation.²⁴ Neither of these scenarios reflects the Canadian position. It is also noteworthy that the Plant Breeders Rights Act allows for a so called “farmers privilege”, whereby (under certain prescribed circumstances) farmers can retain seed from a previous crop and re-use it.²⁵ No such privilege exists under the Patent Act. The decision in *Schmeiser* effectively hands control of these un-patentable and hitherto unclaimed plants to agricultural biotechnology companies. This represents a major extension of the rights enjoyed by these entities.

In *obiter dicta* the Court discussed the possibility of the existence of an “innocent infringer” defence in Canadian law.²⁶ This may prevent farmers, who through no fault of their own encounter “volunteer” GM plants in their fields, from becoming embroiled in patent infringement suits. In addition, the Court reduced the quantum of damages that Mr. Schmeiser had to pay. Ultimately, however, the decision stands as authority for the proposition that Monsanto’s patent on Round-up™ Ready Canola is valid, and that its reach extends to material previously understood to be beyond the scope of the Patent Act.

3. OBLIGATIONS?

In *Hoffman v Monsanto*²⁷ a group of organic canola farmers in Saskatchewan were seeking class action certification under the Class Actions Act²⁸ in litigation against Monsanto and Bayer CropScience, both of whom market GM Canola varieties in Canada.²⁹

GM crops are rejected by all major organic certification bodies as being incompatible with organic production. As such, producers of organic canola must ensure that their crops are not “contaminated” with GM canola. Over 80% of the Canola grown in Canada is genetically modified, with Round-up™ Ready Canola representing 65% of this total.³⁰ In *Hoffman* the farmers alleged that “volunteer” GM canola appearing in their fields (presumably as a result of pollen drift) had caused them significant harm in that they effectively “lost” the organic canola market as they could not guarantee that their product remained GM free.

In order to qualify for certification under the Class Actions Act, plaintiffs must prove *inter alia* that they have “a cause of action”.³¹ In *Hoffman*, the farmers sought common law damages in the areas of negligence, strict liability, trespass, and nuisance. In addition, they sought damages under the civil liability provisions of various versions of

24. In 2001 the United States Supreme Court ruled that a sexually reproducing plant could receive protection under general patent legislation despite the availability of protection under the Plant Variety Protection Act 1970 and its predecessor legislation. See *JEM Ag Supply v Pioneer Hi-Bred Int'l* 534 US 124 (2001).

25. Interestingly this privilege is not explicitly stated, the Act simply does not prohibit the saving and re-using of seed in certain circumstances and, therefore, a farmers privilege has been read in to the Act. Proposals to include a specific farmers privilege under the Act are currently being discussed. Ironically they are facing significant opposition from many farming groups.

26. For a detailed discussion of this defence in UK law see Lee & Burrell, above n3, 523.

27. 2005 SJ No 304, 2005 SKQB 225.

28. SS 2001, c.C-12.01.

29. Round-up™ Ready and LibertyLink™ respectively.

30. Morrow & Ingram, above n11, n24.

31. Class Actions Act, s 6(a).

the Saskatchewan Environmental Protection Act.³² Under this legislation, the owner or controller of a "pollutant" may be held liable for any damage caused by its discharge.³³ It is noteworthy that in Saskatchewan (and most Canadian provinces), so called "right to farm" legislation³⁴ bars the commencement of nuisance actions against farmers who are operating in accordance with "normally accepted agricultural practices".³⁵ The Saskatchewan legislation even contains specific provisions barring nuisance actions against farmers in relation to the "use of innovative new technology".³⁶ Consequently, the plaintiffs in *Hoffman* must attempt to impose liability on the manufacturers of the GM crops themselves.

Justice Smith of the Saskatchewan Court of Queen's Bench denied the plaintiffs' action on the grounds that they had not satisfied the criteria for certification as stipulated in the Class Actions Act, including failure to demonstrate a cause of action in all the common law pleadings. Smith J also concluded that the plaintiffs disclosed no cause of action under EMPA.³⁷ EMPA was significantly amended in 2002³⁸ and the phrase "pollutant" was replaced by the term "substance" in the new civil liability section.³⁹ Given this change, and after expressing grave concerns over the breadth of the new provisions, Smith J somewhat reluctantly concluded that:

Given the literal wording of section 15 I am unable to say that it is plain and obvious that the plaintiffs' claim under this statute cannot succeed. This provision, so interpreted, would not require the plaintiffs to allege and prove that the "substance" at issue is inherently harmful or unsafe.⁴⁰

Leave to appeal has now been granted by the Saskatchewan Court of Appeal, which is expected to rule sometime in 2006.

Failing to achieve certification is an enormous blow to the farmers. Certification makes litigation cheaper and more efficient, and the costs of having to "go it alone" against two of the world's largest biotechnology companies may well bring an end to the lawsuit. The plaintiff Larry Hoffman stated bluntly that "a farmer like me can't afford to take on a big company like Monsanto".⁴¹

While the decision to refuse certification on several other grounds⁴² is legally defensible, the significance of the decision, for present purposes, is that it highlights the

32. See Environmental Management and Protection Act, SS 1983-4, c.E-10.2 (hereinafter "EMPA") and Environmental Management and Protection Act, SS 2002, c.E-10.21 (hereinafter "EMPA 2002").

33. *Ibid.* s 13(3). For a detailed discussion of whether GMOs constitute pollutants under EMPA, see Jodi McNaughton, "GMO Contamination: Are GMOs Pollutants under the Environmental Management and Protection Act?" (2003) 66 *Saskatchewan Law Review* 183.

34. Agricultural Operations Act, SS 1995, c.A-12 (hereinafter "Ag-Ops Act"). For a broader discussion of this form of legislation see: Martin Phillipson and Marie-Anne Bowden, "Environmental Assessment and Agriculture: An Ounce of Prevention is Worth a Pound of Manure" (1999) 62 *Saskatchewan Law Review* 414.

35. Ag-Ops Act, s 3(1).

36. Ag-Ops Act, s 2(i).

37. Hoffman, above n27, para. 158.

38. See EMPA 2002.

39. *Ibid.* s 15.

40. Hoffman, above n27, para. 168.

41. Statement to media by Larry Hoffman, 30 August 2005: <http://www.saskorganic.com/oapf/pdf/release30Aug05.pdf>.

42. Including a failure to demonstrate an identifiable class under s 6(a) of the Class Actions Act.

enormous difficulties facing plaintiffs seeking the assistance of the common law to impose obligations on the manufacturers of GM crops.

In her decision, Smith J indicated that the plaintiffs had failed to prove “a cause of action” in negligence, strict liability, nuisance and trespass. A detailed analysis of her reasons is beyond the scope of this analysis,⁴³ but her conclusions are clear. In relation to negligence the plaintiffs had failed to adequately address issues of foreseeability and proximity. In relation to foreseeability, Smith J noted:

What is missing from the plaintiffs’ claim, however, is any specific allegation that the loss and damage to organic farmers in particular which is claimed (*viz.*, loss of the use of canola as a marketable organic commodity and loss of canola for use in crop rotation, plus the clean-up costs and loss of use of fields as a result of GM canola volunteers) was foreseeable.⁴⁴

In relation to the question of proximity, Smith J observed that the plaintiffs “have not alleged any relationship at all, either in the pleadings or in argument before me, that would give rise to an argument for sufficient relational proximity to support a *prima facie* duty of care”.⁴⁵ In relation to nuisance, Smith J concluded that

No harm can be said to have been caused by the mere sale or marketing of GM canola. The adventitious presence of canola in the crops and on the land of organic farmers required the intervention of neighbouring farmers who cultivated GM canola. While the “release” of the GM varieties of canola by the defendants may have been a necessary condition for the occurrence of the harm alleged, it was far from sufficient, in itself.⁴⁶

Given the provisions of the Ag-Ops Act outlined above, Smith J’s comments leave the plaintiffs in *Hoffman* in something of a “Catch-22” with regards to an action in nuisance. By a combination of statutory provision and common law doctrine they cannot sue the user or the manufacturer of materials which are causing them significant harm.

In dismissing the plaintiffs’ claims relating to the imposition of strict liability under the rule in *Rylands v Fletcher*, Smith J concluded that

Regardless of whether one considers GM canola a “dangerous substance”, or the field trials for GM canola an “unnatural” or “non-natural” use of land, it is not reasonably arguable that the commercial release and sale of Roundup Ready canola seed and Liberty Link canola seed constituted an “escape” of a substance, dangerous or otherwise, from property owned or controlled by the defendants in the sense of “escape” required by the rule in *Rylands v Fletcher*. It is my conclusion that the pleadings do not disclose a reasonable cause of action based on the rule in *Rylands v Fletcher*.⁴⁷

43. For a cogent and detailed critique of the judgment, see Martin Z. P. Olszynski, “*Hoffman v Monsanto Canada Inc*” (2005) 16 *Journal of Environmental Law and Practice* (forthcoming).

44. *Hoffman*, above n27, para. 64.

45. *Ibid.* para. 67.

46. *Ibid.* para. 113.

47. *Ibid.* para. 97.

Finally, in relation to trespass, Smith J rejected the plaintiffs' argument on the basis of a failure to satisfy the directness requirement as enunciated by Lord Denning in *Southport Corporation v Esso Petroleum Inc.*⁴⁸ Smith J stated:

It is my conclusion that action in trespass does not lie against the defendants as the inventors and marketers of GM canola for the adventitious presence of GM canola in the crops and on the lands of organic grain farmers, for even a liberalised requirement . . . for direct interference cannot be met in the circumstances of this case.⁴⁹

If the foregoing analysis of Justice Smith in *Hoffman* stands, then the common law is of no use in redressing the current imbalance that exists in relation to rights and obligations concerning GM crops. Therefore, the only refuge lies in statutory enactments, which at this stage remain elusive, some twelve years after the grant of Monsanto's patent. In the context of *Hoffman*, it will be up to the Saskatchewan courts ultimately to determine whether GM crops can constitute a pollutant for the purposes of civil liability, or whether the common law can evolve. As stated above, it will take some judicial creativity, and perhaps even courage, to arrive at such a conclusion.⁵⁰ It should be remembered that *Hoffman* was a *certification* action, and not a hearing as to the merits of the common law claims. However, in ruling that no cause of action could be demonstrated, the analysis of Justice Smith certainly raises questions as to the adequacy of the common law to deal with the emergence and widespread commercial uptake of GM crops. Given that her decision was 175 pages long, it is also abundantly clear that her analysis of the merits of the common law claims was far from cursory.

Beyond the Canadian context, *Hoffman* may represent judicial confirmation that venerable institutions of the English common law such as nuisance, negligence and trespass cannot adapt to the challenge of this new technology. Authors in many jurisdictions have long doubted these institutions' ability to address the issues raised by GM crops. In advocating the creation of a new liability regime in New Zealand, Terry *et al* assert that

The practical difficulty with relying upon the forms of action under tort law . . . [or strict liability] is that neither have been noticeably effective to date in reducing environmental pollution. Often, both the victims of any damage caused through GMOs as well as the persons allegedly responsible for the damage can be numerous, difficult to identify and insubstantial, and the medical, aesthetic, and other harms of pollution are notoriously difficult to quantify. Such factors potentially lead to daunting forms of litigation involving difficult feasibility assessments for lawyers and plaintiffs as to the adequacy of the remedy, issues of causation and whether the costliness of the litigation is indeed worthwhile.⁵¹

In the context of the UK, Lee & Burrell's conclusions suggest that a common law action may be insufficient on two grounds. First:

48. [1954] 2 QB 182 (CA).

49. *Hoffman*, above n27, para. 133.

50. See McNaughton, above n33.

51. Simon Terry, Mark Hickford, Sir Geoffrey Palmer and Geoff Bertram, *Who Bears the Risk: Genetic Modification & Liability* (Wellington: Chen, Palmer & Associates and Simon Terry & Associates, 2001), Executive Summary at 8. Full text available at <http://www.sustainabilitynz.org/docs/RiskExecSumm.pdf>.

It is far from certain that the argument of a non GM farmer that her enjoyment of property has been interfered with by neighbouring GM farming would be accepted. It wholly depends on an individual court's application of these quite indeterminate common law notions. Even if some actions are successful, this would by no means guarantee that the same result would be reached in subsequent cases.⁵²

Furthermore,

An action would ordinarily have to be brought against a neighbouring GM farmer . . . [T]hus, a nuisance action would not normally be a direct challenge to the biotech industry at a higher level.⁵³

If the decision in *Hoffman* proves to be robust, such scepticism is well founded. It certainly should focus attention on the need to address liability questions via a tailored suite of legislative measures. Jurisdictions such as the European Union⁵⁴ and New Zealand⁵⁵ have taken tentative steps into the area of specific liability regimes. However, both regimes are limited in scope. With regard to the EU Liability Directive, Oehler comments that:

Directive 2004/35/EC does not regulate environmental liability conclusively. In relation to GMOs, in particular, the topic of "coexistence" and damage caused to organic and conventional farmers is not dealt with.⁵⁶

Similarly, a civil liability regime based on the New Zealand model would be of little use to the plaintiffs in *Hoffman*. The regime applies in very limited circumstances, such as the release of GMOs into the environment without approval. Such a regime is clearly unable to deal with the issues raised in this comment, as it not designed to address liability in the post-approval phase.

At present, many key biotechnology producing jurisdictions continue to assert that the common law and industry self-regulation are adequate tools to address liability issues. In Australia, the Department of Agriculture Forestry and Fisheries notes:

When drafting the Gene Technology Act 2000 (Cth), the legislature considered liability issues associated with GMOs and chose not to implement a specific liability regime for damage caused by GMOs. Importantly, in all other cases where the activities of one farmer affect a neighbour, recourse is to existing statute and common law. Since the implementation of the *Gene Technology Act 2000* (Cth), there does not appear to be new evidence or direct experience demonstrating any inadequacies in the existing regime. This is despite the commercial growth of GM cotton in Australia since 1996. It may therefore be sufficient to monitor

52. See Lee & Burrell, above n3, 531.

53. *Ibid.* 535.

54. See Directive 2004/35/EC.

55. See Hazardous Substances and New Organisms Act 1986 No 30 (as amended).

56. Ulla Oehler, *Environmental Liability and GMOs in the EU & Germany*, Exeter Papers in European Law No 15 (Exeter: Centre for European Legal Studies, 2004).

the situation at this stage. This would be consistent with the Primary Industries Ministerial Council's approach to the risks posed by gene technology to agricultural production—namely that such risks should be primarily handled by industry self regulation with continued government monitoring.⁵⁷

In Canada, the Canadian Biotechnology Advisory Committee concluded:

In our view, Canadian law already adequately addresses issues of liability and compensation for damages through the common law of negligence and the civil law of obligations, which are based on principles of accountability and responsibility. Specific provisions for damages caused by products of biotechnology, patented or not, are not required.⁵⁸

Given the decisions in *Schmeiser* and *Hoffman*, these conclusions may need to be reconsidered.

4. CONCLUSION

The notion that existing legal mechanisms (whether statutory or common law) are unable to address the issues raised in *Hoffman* is a significant cause for concern. Perhaps more troubling, however, is the *combined* effect of *Schmeiser* and *Hoffman*. Monsanto can exert unprecedented levels of control over things it could not patent, whilst simultaneously being able to deny that it has any control over the same product in the context of the common law or statute. This is an unacceptable incongruity.

In granting leave to appeal in *Hoffman*, Mr Justice Cameron of the Saskatchewan Court of Appeal stated: "I am satisfied the proposed appeal raises some comparatively new and potentially controversial points of law, that it transcends the particular in its implications and that it is of sufficient importance . . . to warrant attention by this Court."⁵⁹ While these comments can be viewed primarily against a Saskatchewanian (and Canadian) background, they could easily be applied to the global rights and obligations debate which is the theme of this analysis. The emergence of new technology inevitably tests the legal system and many of its long established doctrines. In the context of GM crops it is becoming increasingly apparent that the common law (and to a lesser extent patent and environmental law) may currently be unsuitable avenues for the attainment of balance. This conclusion begs the question whether the imposition of even modest obligations (let alone the attainment of balance) is a priority, or even a consideration, in the regulatory debate. If not, then by designing generous approvals and intellectual property regimes, while neglecting to address post-approval concerns in any meaningful fashion, the law at present may truly be engaged in giving away the farm.

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57. AAFA, *Liability Issues Associated with GM Crops in Australia* (Canberra: AAFA, 1998). See www.affa.gov.au/corporate_docs/publications/pdf/innovation/liability_issues_paper_final.pdf.

58. Canadian Biotechnology Advisory Committee, *Patenting of Higher Life Forms* (Ottawa: CBAC, 2002), 17.

59. Reasons of Mr Justice Cameron, www.saskorganic.com/oapf/pdf/Leave_to_Appeal_Decision.pdf.

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