For a time, "authorize" was equated with "sanction, approve, and countenance" or even "permit."²⁸⁶ This equation fell out of favour in the United Kingdom in the 1980s, when attempts to turn passivity into authorization were rejected. This broader meaning, however, led to liability in Australia against a university library that let photocopying occur on its premises without taking reasonable steps to discourage suspected infringements.²⁸⁷ This is doubtful law in the United Kingdom and probably in Canada, too. Bill C-32 would remove any risk of this or other liability from non-profit educational institutions, libraries, archives, and museums that operate photocopiers on their premises. A copyright notice in a form to be prescribed would, however, have to be exhibited.²⁸⁸

9) Substantial Infringement

A copyright owner controls what may be done not only with her whole work but with any substantial part of it.²⁸⁰ Taking half a book may be infringement; so, too, may changing direct to indirect speech or even paraphrasing every sentence, as these acts change nothing of substance. A substantial part of a book may be not merely its collocation of words but its structure: its relationship of characters, incidents, and development. To lift this structure is as much infringement as lifting a chapter bodily. But structure cannot be abstracted too highly: had William Shakespeare and Leonard Bernstein been contemporaries, *West Side Story* should have opened despite its being inspired by *Romeo and Juliet*. The general stock of incidents in fiction or drama is free for all to use — a substantial part of everyone's culture, not of any one individual's work. "Substantial part" thus polices the line dividing what belongs to one and what belongs to all.

Nineteenth-century copyright statutes did not usually include any "substantial part" language, but judges nevertheless rightly wrote it into the law. Infringement then was a question of fact, often decided by a jury. The questions asked interchangeably were whether a taker had "unfairly" or "wrongfully" appropriated a claimant's labour and skill, or

²⁸⁶ Falcon v. Famous Players Film Co., [1926] 2 K.B. 474 at 491 (C.A.); Muzak, ibid., at 193.

²⁸⁷ Moorhouse and Angus & Robertson (Publishers) Ltd. v. University of New South Wales, [1976] R.P.C. 151 (Austl. H.C.).

²⁸⁸ Bill C-32, above note 9, cls. 30.3 & 30.4.

²⁸⁹ *C Act*, above note 1, s. 3(1), refers to "any substantial part" of a copyright work only in reference to the opening rights (reproduce, publish, publicly perform), but it applies to *all* the rights: for example, *Kelly*, above note 250 at 371.

whether he had "unfairly used" a claimant's material. Clearly, a value judgment was being made, depending on a number of considerations. Judges who today say that infringement is "all a question of fact and degree" mean much the same.

a) Taking a Particle Does Not Infringe

One should first screen out what cannot in law be a substantial part. "Part" means portion, not "particle."290 A copyright owner cannot therefore control every particle of her work, any little piece the taking of which cannot affect the value of her work as a whole. So to carry two minor scenes from one play into another was found not to infringe copyright. More recently, transferring 60 of 14,000 lines of computer program source code into another program was found not to take a substantial part of the former work, especially since writing this routine material from scratch would have taken a competent programmer twenty minutes.²⁹¹ The occasional hyperbole to the contrary — that the taking of even a single sentence from the likes of a Dickens or a Shakespeare may infringe²⁹² — is simply nonsense. It falsely supports more mischievous assertions, such as that the inclusion in an audio recording of a single sound, however distinctive, from an earlier record infringes copyright. But two or three seconds from a three-minute recording is a mere particle; the sound, while perhaps of value to the taker, should not affect the value of the source work as a whole and so should be outside the copyright owner's control. Performers and record companies nevertheless continue to make such claims.293

b) Taking an Essential or Material Part Infringes

All concede that "substantial" connotes quality as much as or even more than quantity: so taking a material or essential part alone infringes another's copyright. A line or note count is relevant, but not conclusive.

290 Chatterton v. Cave (1878), 3 App. Cas. 483 at 492 (H.L.) [Chatterton].

²⁹¹ Ibid., at 495: "their extent was so slight, and their effect so small, as to render the taking perfectly immaterial"; Delrina, above note 22.

²⁹² For example, Rockford Map Publishers v. Directory Service Co. of Colorado Inc., 768 E2d 145 at 148–49 (7th Cir. 1985): "Dickens did not need to complete Bleak House before receiving a copyright; every chapter — indeed every sentence could be protected standing alone," citing (of course) no authority.

²⁹³ Grand Upright Music Ltd. v. Warner Bros. Records Inc., 780 F. Supp. 182 (D.N.Y. 1991) finds unauthorized sampling to be an infringement, but the part taken appears to have been substantial. Jarvis v. A & M Records, 827 F. Supp. 282 (D.N.J. 1993) suggests that a distinctive bridge and keyboard rill may be a substantial part of a musical work.

On the one hand, to take a major chapter from a novel must be infringement except in the rarest of cases. So is the taking of a few bars from the refrain of a popular song — presumably more than the few notes necessary for anyone to "name that tune" — for what else is left?²⁹⁴ On the other hand, to take four lines from a poem may not infringe: the context in which they are put may be critical. To feature the lines in an advertisement would most likely infringe; to stand them at the head of a magazine article probably would not.²⁹⁵ Asking whether the part taken could have been protected on its own, as sometimes happens, is not helpful. Let us admit that *haiku* can be protected. How does that answer the question whether what *this* defendant did in taking *these* four lines from *this* poem infringes *this* claimant's rights?

What activities have been found to infringe or not to infringe has been indicated during the discussion on owner's rights.²⁹⁶ Matters are often judged by how the ordinary reasonable buyer or user would react on seeing the two products involved together. Expert evidence may be needed to put the court in the position of someone reasonably versed in the relevant art or technology, so it may view the products through the eyes of such a person.²⁹⁷ The following factors then become relevant in reaching a decision on infringement:²⁹⁸

- Is the part taken distinctive something on which the first author spent much skill, effort, or ingenuity? The simpler a work, and the closer the line between its idea and its expression, the less need there is to grant broad control — indeed, the greater the care that must be taken that ideas do not end up being protected.
- Does the author merit the degree of protection sought, to her and others, to produce works of that sort? Would takings like this significantly impair the incentive to create for other similarly placed authors?

²⁹⁴ Hawkes & Son (London) Ltd. v. Paramount Film Service Ltd., [1934] Ch. 593 (C.A.); compare G. Ricordi & Co. (London) Ltd. v. Clayton & Waller Ltd. (1930), [1928–1935] MacG. Cop. Cas. 154 (Ch.): taking eight bars, a fourth of the waiting motif in Madame Butterfly, may not infringe if "not the most distinctive or important part of that air."

²⁹⁵ Compare Kipling v. Genatoson (1920), [1917–1923] MacG. Cop. Cas. 203 (Ch.) with Chappell & Co. Ltd. v. D.C. Thompson & Co. Ltd. (1934), [1928–1935] MacG. Cop. Cas. 467 (Ch.).

²⁹⁶ See section G, "Owner's Rights," in this chapter.

²⁹⁷ Tele–Direct, above note 79; Ancher, Mortlock, Murray & Wooley Pty. Ltd. v. Hooker Homes Ltd., [1971] 2 N.S.W.L.R. 278 (S.C.); Nichols, above note 252.

²⁹⁸ Compare the list in U & R Tax Services Ltd. v. H & R Block Canada Inc. (1995), 62 C.P.R. (3d) 257 at 268 (Fed. T.D.).

- Has the claimant's present or future ability to exploit her work been substantially affected?
- Is the user unfairly enriching himself at the author's expense? Has he saved himself much time, trouble, or expense by taking the features that make the claimant's work what it is?
- Do the two works compete for much of the same market? Is the market for the user's work one that ought fairly to belong to the author?

The more one answers these questions in the affirmative, the more likely one should find infringement. Since the variables differ from case to case, decisions on ostensibly similar facts may also — perhaps frustratingly — differ. The overall goal is to ensure that any decision furthers copyright as a means to encourage the production and dissemination of valuable creative work. At the same time, public access to and use of a work for socially desirable ends should not be unduly fettered. A balance must be struck between these two objectives.

c) Mediating Artistic Practice: Parody and Postmodernism

In deciding whether an activity infringes, courts should be careful not to interfere with fair artistic practices and trends. Substantiality can act as a rough mediator between what is and what is not acceptable. For example, parody could reasonably be given wide leeway when practised by writers, artists, and performers, except in the rare case where the parody is meant to, and does, substitute for its target. Purely commercial parodies could be more strictly controlled. So, for example, advertisers taking others' music for their jingles could be held to be taking a substantial part, even when they parody the music. Takings like these directly interfere with a composer's livelihood and the stream of income she can expect from having her work exploited.²⁹⁹

Other interferences seem less justifiable. Spoofs of trade-marks and labels that were found to be protected by copyright have been held to be infringements. A union was forbidden from caricaturing the St-Hubert rooster logo, even though this activity was part of a campaign designed to gain support for restaurant workers in a labour dispute with the mark owner. Similarly, a firm was stopped from marketing SCHLURPPES "tonic bubble bath," even though the product did not compete with tonic water

^{Glyn v. Weston Feature Film Co., [1916] 1 Ch. 261; Joy Music Ltd. v. Sunday Pictorial} Newspapers (1920) Ltd., [1960] 2 Q.B. 60; Campbell v. Acuff-Rose Music Inc., 114
S. Ct. 1164 (1994) (rap treatment of Roy Orbison's Oh Pretty Woman), compare MCA Canada Ltd. (Ltec.) v. Gilbery & Hawke Advertising Agency Ltd. (1976), 28
C.PR. (2d) 52 (Fed. T.D.) (parody for jungle admittedly infringement).

and Schweppes lost no sales. Neither free speech nor free trading were found important enough interests to outweigh the court's desire to protect a trade-mark from having its value diluted. The strange thing is that trademark law may not have been violated by these acts; so copyright, as applied, has produced a result apparently at odds with trade-mark policy.³⁰⁰ Even more dubious has been a U.S. court's decision to brand a whole postmodernist artistic practice — appropriating and recontextualizing previous artwork — as copyright infringement: postmodernism will go its own way whatever four New York judges say or do.³⁰¹ Courts as much as right-holders may need to be constantly reminded to "lighten up."

Unfortunately, many courts still work on the "rough practical test," frequently trotted out by claimants' lawyers, that "what is worth copying is prima facie worth protecting."³⁰² As a legal invitation, this is too crude to be overtly accepted. Taken literally, it begs all questions of copyrightability, infringement, and substantiality.³⁰³ More often, however, the "test" operates covertly, directing action from the wings rather than taking centre stage. The upshot is that, in practice, people regularly seek permission to carry on arguably non-infringing activities because the cost of permission is usually less than the cost and inconvenience of going to court. But right-holders may refuse permission. When they do, the effect may be to eliminate a socially beneficial, or at least not socially harmful, practice. The uncertainties surrounding substantial infringement work very much to the advantage of powerful right-holders, and quite often to the disadvantage of the general community and the values of free expression.

10) Distributing and Importing Infringing Copies

Anyone can usually sell, resell, and rent lawfully acquired works and non-infringing copies without worrying about copyright.³⁰⁴ But copy-

Rôtisseries St-Hubert Ltée v. Syndicat des Travailleur(euses) de la Rôtisserie St-Hubert de Drummondville (CSN) (1986), 17 C.P.R. (3d) 461 (Que. S.C.)
 [St-Hubert]; Schweppes Ltd. v. Wellingtons Ltd. (1983), [1984] F.S.R. 210 (Ch.).
 See section G(3), "Dilution," in chapter 4.

³⁰¹ Rogers, above note 228.

³⁰² University of London, above note 20 at 610.

³⁰³ Ibcos Computers Ltd. v. Barclays Mercantile Highland Finance Ltd. (1994), 28 1.P.R. 25 at 37 (Ch.), National News Ltd. v. Copyright Agency Ltd. (1996), 34 1.P.R. 53 at 71 (Austl. Fed. Ct.).

³⁰⁴ An exception is renting computer programs and sound recordings. See section G(7), "Rental," and section E(6), "Sound Recordings, Performances, Broadcasts," in this chapter.

right owners can control the distribution of infringing copies in Canada or unauthorized parallel imports. Someone who knows that a work infringes copyright, or knows that it would infringe had it been made in Canada, has to get the copyright owner's consent to deal with the work. Otherwise, he infringes if he does any of the following: sells or hires out the work; exposes it by way of trade, or offers it for sale or hire; distributes it for the purposes of trade or so as to affect the owner of the copyright prejudicially; by way of trade exhibits it in public; or imports it into Canada for sale or hire.³⁰⁵ Indeed, these activities — as well as making an infringing work for sale or hire, possessing plates to make infringing copies, or performing works in public for private profit — are criminal acts that, on conviction after indictment, can attract penalties of up to a \$1 million fine and/or five years jail.³⁰⁶

Two issues are pertinent to this discussion: parallel imports and the knowledge requirement.

a) Parallel Imports

The provision that a person who handles a work, knowing that it "would infringe copyright if it had been made within Canada," operates to prevent the import and commercial handling of unauthorized copies made outside Canada. Works made offshore without anyone's consent are obviously caught. Indeed, the Canadian owner or exclusive licensee who suspects that such goods are about to be imported can obtain a court order directing Customs to stop them at the border.³⁰⁷ But the provision also strikes at goods legitimately made abroad that are imported into Canada. The idea is not to strike at the inadvertent or otherwise innocent importer. To be liable, the importer must know that the Canadian copyright owner would not have consented to the making of the works had they been made in Canada.³⁰⁸

These provisions work unevenly. Exclusive selling agents or distributors have been unable to use them because they typically have merely contractual rights that create no interest in copyright.³⁰⁹ Canadian authors also have complained of the import of remaindered copies of their books, on which they may receive no royalty and which compete

³⁰⁵ C Act, above note 1, s. 27(4).

³⁰⁶ C Act, ibid., ss. 41(1) & (2).

³⁰⁷ CAct, ibid., s. 44.1.

³⁰⁸ Clarke Irwin & Co. v. C. Cole & Co. [1960] O.R. 117 (H.C.J.): Fly by Nite Music Co. v. Record Wherehouse Ltd., [1975] F.C. 386 (T.D.).

³⁰⁹ Maison du livre français de Montréal Inc. v. Institut littéraire du Qué. Lice (1957), 31 C.P.R. 69 (Que, S.C.).

with regularly priced local stock.³¹⁰ Bill C-32 proposes to remedy both these perceived faults by letting distributors with sole Canadian distribution rights prevent parallel imports and redistribution.³¹¹ The bill does not, however, touch another pressing problem. Copyright in the trade-marks, labels, packaging, or even computer programs associated with goods (e.g., a computer chip that helps run a car or a microwave) has been used elsewhere to stop imports of the non-copyright goods themselves.³¹² Similar strategies could be employed in Canada.

b) Knowledge

Whoever personally makes or authorizes the making of an infringing copy of a work infringes.313 But, as already noted, those who deal (by sale, hire, import, etc.) with an infringing copy that they have not personally made infringe only if they know they are dealing with infringing copies. The ignorant, careless, or unsophisticated are spared. Claimants wanting to reach such dealers may need to inform the trade or a targeted dealer of their allegations and fully back them up, for proceedings issued before an innocent acquirer has had a reasonable time to investigate the allegations risk dismissal with costs. Turning a blind eye to the obvious can, however, amount to knowledge. A person is assumed to have "the ordinary understanding expected of persons in his line of business, unless by his or other evidence . . . [the court] is convinced otherwise."314 Some say that knowledge only of the facts constituting infringement is enough and that an honest but mistaken belief that the goods do not infringe is irrelevant.315 This comes close to equating constructive with actual knowledge. Bill C-32 would achieve this equation by extending liability to those who "should have known" that the copies were infringing.³¹⁶ Whether this looser standard, commonly applied as an "interpretation" of the Act, is legally justifiable is debatable.

- 314 RCA Corp. v. Custom Cleared Sales Pty. Ltd. (1978), 19 A.L.R. 123 at 126 (N.5.W.C.A.).
- 315 Sillitoe, above note 244.
- 316 Bill C-32, above note 9, cls. 27(2) & (3).

³¹⁰ C Act, above note 1, ss. 45(3)(d) & (5); McClelland & Stewart Ltd. v. Coles Book Stores Ltd. (1974), 7 O.R. (2d) 426 (H.C.J.) (Farley Mowat's A Whale for the Killing).

³¹¹ Bill C-32, above note 9, cls. 27,1 & +4.2, cl. 1(5) def. "exclusive distributor."

³¹² For example, Frank & Hirsch (Pty.) Ltd. v. A. Roopanand Brothers (Pty.) Ltd. (1993), 29 I.P.R. 465 (S. Afr. S.C., (A.D.)) (TDK blank audio tapes). Removal of the offending trade-mark or part, if possible, may avoid infringement.

³¹³ There may, however, also be liability on other grounds — for example, vicarious liability. See section D(2), "Whom to Sue," in chapter 5.

H. OWNER'S RIGHTS: SOUND RECORDINGS, PERFORMANCES, BROADCASTS

Copyright for sound recordings presently includes only first distribution, reproduction, and rental rights.³¹⁷ Bill C-32 proposes the addition of an authorization right. Record companies and makers connected to a *Rome Convention* country would also have public performance and telecommunication rights.³¹⁸ In addition, blank audio tape music royalties would be provided for Canadian record companies and individual makers. Entities from other states could have this right extended to them, based on reciprocity.³¹⁹

Performers from WTO states have rights to fix their performance on a record, reproduction rights over records containing unauthorized fixations, telecommunication rights over their live performance, and authorization rights.³²⁰ Bill C-32 proposes to add, for performers from *Rome Convention* states, rights of fixation, public performance, and telecommunication in respect of their live performances, as well as reproduction, rental, and authorization rights. A blank audio-tape music royalty is provided for Canadian performers and others, based on reciprocity.³²¹

Bill C-32 proposes that broadcasters have rights to fix their transmissions, reproduction rights over unauthorized fixations, performance rights over television programs played in places where the public pays an entrance fee to view, a general authorization right, and a specific right to authorize simultaneous retransmission by other broadcasters.³²²

I. AUTHORS' MORAL RIGHTS

Authors have "moral rights" in respect of their works, quite apart from any copyright. The word "moral" is somewhat misleading. These rights are legally enforceable.³²³ They are based on the idea that an author's

³¹⁷ C Act, above note 1, s. 5(4).

³¹⁸ For the content of these rights, see the corresponding headings under section G, "Owner's Rights: Literary, Dramatic, Musical, and Artistic Works," in this chapter.

³¹⁹ Bill C-32, above note 9, els. 18(1), 19(1), 27(5), & 81.

³²⁰ C Act, above note 1, s. 14.01

³²¹ Bill C-32, above note 9, cls. 15(1), 19(1), 27(5), & 81.

³²² Ibid., cl. 21. For the content of these rights, see the corresponding headings under section G, "Owner's Rights: Literary, Dramatic, Musical, and Artistic Works," in this chapter.

³²³ The term is a poor translation of *droits moraux*, roughly "personal" or "intellectual" rights.

work is an extension of the author and that any assault on it is as much an attack on the author as a physical assault. Parting with the copyright does not lessen the author's personal attachment to the work, and the author should have recourse against those who present the work differently from the way the author originally intended.³²⁴

1) General Features

The *Act* recognizes three rights: attribution, integrity, and association. Other analogous author interests are protected through common and civil law doctrines. The rights provided by the *Act* are intimately linked with copyright. They apply only to authors who have produced an original work protected by copyright, whether or not they still own the copyright.³²⁵ The rights last as long as the copyright and descend to an author's estate. Otherwise, they are personal: they can be waived, but not assigned.³²⁶ The usual schedule of remedies applies, but it is discretionary.³²⁷

Moral rights theory emanated from nineteenth-century Europe and became internationally entrenched in *Berne*'s 1928 revision. Canada legislated the *Berne* provision (art. 6^{his}) into the *Copyright Act* in 1931, later clarifying and expanding its operation in 1988. But moral rights were recognized even earlier in a 1915 *Criminal Code* amendment. This made it an offence either to change anything in a copyright-protected dramatic, operatic, or musical work that was to be publicly performed for profit or to suppress its title or authorship, unless the author or her legal representative consented. A filmmaker who took a play, changed its title, and suppressed the dramatist's name was successfully prosecuted in 1916.³²⁸ This criminal provision was moved to the *Copyright Act* in 1921. Though still on the books, it has lain unused for at least the last half century.³²⁹

³²⁴ Moral rights of integrity may perhaps presently apply to sound recordings because they have a "deemed author" — the record producer. Under Bill C-32, above note 9, sound recordings have no "author" and so would have no moral rights; the same applies to performances and broadcasts.

³²⁵ See section E(1), "Author," and section C(1), "Originality," in this chapter.

³²⁶ C Act, above note 1, ss. 14.1, 14.2, 28.1, & 28.2.

³²⁷ For moral rights infringement the court "may" grant the author a remedy: C Act, ibid., s. 34(1.1). Compare this wording with s. 34(1) for copyright infringement, where the owner is "entitled" to the stated remedies. See section D(3), "Remedy Selection," in chapter 5.

³²⁸ Joubert v. Géracimo (1916), 35 D.L.R. 683 (Que. C.A.).

³²⁹ C Act, above note 1, s. 43. The penalties for violation — maximum \$250 or \$500 fines, and two to four months' jail in addition for repeat offences — have not changed since 1921.

Authors' interests may also be protected through common and civil law doctrines. This protection was pointed out as long ago as 1911, when the Supreme Court forced a publisher to return the author's only copy of a rejected manuscript. One judge said:

I cannot agree that the sale of a manuscript of a book is subject to the same rules as the sale of any other article of commerce, e.g., paper, grain or lumber. The vendor of such things loses all dominion over them when once the contract is executed and the purchaser may deal with the thing which he has purchased as he chooses. It is his to keep, to alienate or to destroy. But it will not be contended that the publisher who bought the manuscript of "The Life of Gladstone," by Morley, or of Cromwell by the same author, might publish the manuscript, having paid the author his price, with such emendations or additions as might perchance suit his political or religious views and give them to the world as those of one of the foremost publicists of our day. Nor could the author be denied by the publisher the right to make corrections, in dates or otherwise, if such corrections were found to be necessary for historical accuracy; nor could the manuscript be published in the name of another. After the author has parted with his pecuniary interest in the manuscript, he retains a species of personal or moral right in the product of his brain.330

Sentiments like these may underpin authors' actions for passing-off, misappropriation of personality, or breach of contract when their interests are affected. Such claims, interestingly enough, have met with more success than assertions of the moral rights the *Act* provides. These rights and interests are now examined.

2) Attribution

The *Act* entitles an author to remain anonymous. It also entitles an author to be associated with the work by name or under a pseudonym, "where reasonable in the circumstances," when an act within copyright occurs (e.g., reproduction, translation, broadcast).³³¹

The "reasonableness" qualification, introduced in 1988, has not been judicially discussed. It is presumably there for the sake of flexibility and to deter trivial complaints. For example, producing a music

³³⁰ Morang & Co. v. Le Sueur (1911), 45 S.C.R. 95 at 97–98, Fitzpatrick C.J.C., relying on civil law doctrine in an Ontario appeal.

³³¹ C Act, above note 1, s. 14.1(1). The "reasonableness" qualification does not seem to apply to the right to remain anonymous.

video, an advertising campaign, or a complex computer program may involve inputs from many people. Demands for attribution could produce a list as long as that found at the end of a movie. The difficulties of deciding who did what and how it contributed to the final product may make it unreasonable for anybody to demand credit. This is certainly the way many advertising agencies and software companies proceed, preferring to stress their ownership rather than actual authorship. Presumably, too, the reasonableness qualification is what allows broadcasters not to mention composers or lyricists when playing records on air, while, perhaps paradoxically, often mentioning the names of the performers, who have no statutory moral rights.³³²

The qualification is unclear about whether it is supposed to reinforce or to undermine respect for contractual provisions that deal explicitly with credit. Suppose two people collaborate on a work, but only one is named co-author. In the absence of any agreement on the point, the omitted person is entitled to credit. A court may give damages for the past breach and order an appropriate credit line to be inserted. For example, if Martha thinks up a short story and takes it to John, a script doctor, to put into literary shape, Martha and John may technically be joint authors.333 An appropriate credit line might be "by Martha and John" or, perhaps, vice versa. But if Martha's contribution is relatively more important, the credit line might better read "by Martha, with John."334 Suppose, however, the contract said that John would get no credit. Would it be "reasonable in the circumstances" to enforce this agreement and perpetuate the lie that the work was a sole production? Or would it be more reasonable to refuse to enforce the provision and let the truth out? Since the Act specifically allows moral rights to be waived, 335 one suspects that contract may be allowed to trump truth.

3) Integrity

The right of integrity stops work from being "distorted, mutilated or otherwise modified," but only if this prejudices the author's honour or reputation.³³⁶ Theoretically, then, the author may control the way her

³³² Bill C-32 does not propose to change this position.

³³³ See section E(1)(c), "Joint Authors," in this chapter.

³³⁴ Courtenay v. Polkosnik (1983), 77 C.P.R. (2d) 140 at 144 (Ont. H.C.J.); compare Goulet v. Marchand (18 Sept. 1985), (Que. S.C.) [unreported]: part compiler of legal text entitled to co-author credit.

³³⁵ See section I(6), "Waiver," in this chapter.

³³⁶ C Act, above note 1, ss. 14.1(1) & 28.2(1),

work is presented, at least to some extent, though this control should not prevent reasonable adaptations and changes over time. So, for example, even "faithful" cinematic adaptations of a book rarely transpose the literary medium directly into a visual one; so long as the book's theme and spirit are fairly interpreted and presented, an author may not be able to complain if whole scenes and characters are omitted. Similarly, an artist's natural sensitivity should not interfere with the sort of experimentation that is the hallmark of much artistic progress. Where would parody and jazz be if authors could complain about the way a parodist or jazz musician handled their work? The reputation of both Leonardo da Vinci and the *Mona Lisa* remains intact, despite Marcel Duchamp's representation of her with an added moustache and goatee, and our understanding of art is enriched by the implications of Duchamp's iconoclasm.

Concerns like these may underlie the often sceptical reception with which moral rights are greeted in Canada. The scrawler of graffiti on a public sculpture may, on one view, be infringing the sculptor's moral rights. On another view, he may be exercising, however crudely, rights of free speech and comment. In any event, he is untraceable, and courts have not visited his delinquency on art owners, who have been held under no duty to preserve or restore inventory. Courts have even held that total destruction may not violate moral rights. Thus, when a town's clean-up crew dumped public sculptures in the local river after the works had deteriorated through vandalism and neglect, the Quebec courts dismissed the sculptors' claims against the town. The artists' reputation could hardly suffer from works that were out of sight and out of mind.337 At the other extreme, a choreographer's claim that the ballet he composed could not be staged without his participation was also dismissed. Others could direct the work competently and not "every step or nuance of movement in every performance" need be duplicated. Near enough was good enough.338 Against unpromising jurisprudence like this, a case where Michael Snow forced the Eaton Centre in downtown Toronto to remove Christmas decorations with which the centre's management had bedecked his Canada geese sculpture comes as somewhat of a surprise. The court there found that the work had indeed been distorted or modified to the prejudice of the artist's honour or reputation.339

³³⁷ Gnass v. Cite d'Alma (3 June 1977), (Que. C.A.) [unreported] [Gnass], discussed in D. Vaver, "Authors' Moral Rights in Canada" (1983) 141.LC. 329 at 341ff.

³³⁸ Patsalas v. National Ballet of Canada (1986), 13 C.P.R. (3d) 522 at 528 (Ont. H.C.J.).

³³⁹ Snow v. Eaton Centre Ltd. (1982), 70 C.P.R. (2d) 105 (Ont. H.C.J.) |Snow|

Snow would have an even easier ride today because prejudice to an artist's honour or reputation is now "deemed to have occurred" whenever a painting, sculpture, or engraving is distorted, mutilated, or otherwise modified.340 One trusts this "deeming" presents only a rebuttable presumption; otherwise, a modern-day da Vinci would have a clear claim against a follower of Duchamp who dared to interfere with even a print purchased from a museum gift shop. The Act also provides that merely changing a work's location or making good-faith efforts to preserve it is not automatically a distortion.³⁴¹ The right of owners of public artwork to relocate works to placate offended public sensibilities is therefore confirmed, at least if the new site still allows some public viewing. No attempt is made, however, to reconcile these provisions with the case earlier noted, in which public sculptures were relocated at the bottom of the local river.342 Total destruction apparently continues to be less offensive than relocation to an obscure warehouse or handing the work back to the artist. The views of those who produced the now dismantled or crumbling sculptures of Lenin throughout Eastern Europe would be interesting on this point.

Proving prejudice to honour or reputation outside these "deemed" cases continues to be difficult. In *Snow*, the court said that considerable weight may be given to the artist's opinion if "reasonably arrived at."³⁴³ But, more recently, "objective" evidence of prejudice has been insisted on. A novelist's moral rights claim that his work had been poorly anthologized by a copyright infringer was dismissed because the claimant's view was unsupported by expert opinion and his career had continued to flour-ish despite wide distribution of the repugnant work.³⁴⁴ This approach may help stem some dubious claims — for example, where employers enlist their employees' moral rights as a tactic against competitors.³⁴⁵ At the

340 C Act, above note 1, s. 28.2(2), introduced in R.S.C. 1988 (4th Supp.), c. 10, s. 6.

344 Prise de Parole Inc. v. Guerin, Éditeur Ltée (1995), 66 C.P.R. (3d) 257 at 266 (Fed. T.D.) (a copyright infringement claim, however, succeeded); similarly Gnass, above note 337, where the sculptors' defamation claim equally failed.

345 Nintendo tried this tactic in seeking to block *Game Genic*, a third-party cartridge that fitted a Nintendo computer and improved the way Nintendo videogames ran. The complaint of Nintendo's staff videogame designer that his artistic integrity had been compromised because of the new antics Super Mario and Donkey Kong were made to perform did not impress Canadian courts much: *Nintendo of America Inc. v. Camerica Corp.* (1991), 34 C.P.R. (3d) 193 (Fed. T.D.), aff'd (1991), 36 C.P.R. (3d) 352 (Fed. C.A.), refusing interlocutory relief.

³⁴¹ C Act, ibid., s. 28.2(3).

³⁴² Gnass, above note 337 at 338.

³⁴³ Snow, above note 339 at 106; see D. Vaver, "Snow v. The Eaton Centre: Wreaths on Sculpture Prove Accolade for Artists' Moral Rights" (1983) 8 Can. Bus. L.J. 81.

same time, it may turn aside legitimate complaints from artists with wellestablished reputations: the da Vincis that even Duchamps cannot shake.

4) Association

The author may also control the use of the work "in association with a product, service, cause or institution." This right is part of the integrity right and so is infringed only if the use prejudices the author's honour or reputation.³⁴⁶ An advertiser may therefore be unable to use a Gordon Lightfoot composition in a commercial, even if the copyright owner (typically the music publisher) agrees, unless Lightfoot also agrees. If he never appears in commercials, Lightfoot could argue that any use of his work in advertising is in itself offensive. That apart, whether Lightfoot has a right to refuse may depend on the commercial involved. His honour or his reputation could still be prejudiced if the music is badly presented, the lyrics are distorted, or the commercial is distasteful (e.g., for toilet cleaners rather than an anti-drug campaign).

5) Other Rights

The Act recognizes no other moral rights, although under Berne an author can prevent "derogatory action" in relation to her work beyond attribution, integrity, and association right infringements. The sort of derogatory action recognized in European states that take moral rights seriously may, however, also be recognized by the common or the civil law. For example, authors are said to have the right to create or to refuse to create a work; this right is reflected at common law in rules that invalidate unreasonable restraints on the right to work and that allow dilatory authors under contract to plead "writer's block" to specific performance (but not damages) actions brought by publishers.

In Europe, artists are also said to have a right to prevent excessive criticism of their work. This right may be vindicated in Canada through defamation law. European authors may also usually decide when or whether to make a work public. This feature is part of copyright in Canadian law — the first public distribution right.³⁴⁷ Even the right, recognized in France, to withdraw a work from circulation or disavow it if

³⁴⁶ C Act, above note 1, ss. 14.1(1) & 28.2(1)(b)

³⁴⁷ *C Act*, *ibid.*, s. 3(1). Being a copyright, however, it can be exercised by the owner against an author's interests. This may happen when the copyright has been assigned or has first vested in someone other than the author (e.g., her employer). See also section G(1), "First Public Distribution," in this chapter.

it no longer represents the author's views may be recognized at common law. This author's right is rarely exercised in France because publishers can insist on being indemnified for the cost of existing stock. Common law courts could presumably develop a similar right subject to similar conditions. There is unfavourable old case law. For example, British poet laureate Robert Southey found he could not suppress distribution of a youthful poem he no longer believed in.³⁴⁸ But is it really possible that a newspaper today could publish, with impunity, a letter to the editor, over the objections of a sender who has since found out that his facts are wrong and that the letter is defamatory?³⁴⁹

6) Waiver

One reason moral rights are more talked about than exercised in Canada is because the *Act* explicitly allows their waiver.³⁵⁰ The waiver need not be in writing. It may even be implied, as when an engineer was held unable to complain about changes made in his design work for public safety reasons.³⁵¹

Exploitation agreements often contain provisions under which authors expressly waive their moral rights in perpetuity. This practice has long been common, for example, in the motion picture industry: writers whose books, plays, or scripts are used for a film inevitably sign a standard form that lets the film company do what it likes with the material. The heirs of Victor Hugo cannot complain about Disney's animated version of The Hunchback of Notre Dame because the book is long out of copyright; but had Hugo been alive today he would have had no claim, either, because any contract he would have signed with a North American film company would have required him to waive all moral rights. Courts may sometimes restrict a waiver by construing it to cover only changes that do not prejudice the author's honour or reputation. But explicit language can presumably oust this qualification.352 Otherwise, trying to invalidate such waivers is as difficult as avoiding any other contract provision for some abuse of power (fraud, misrepresentation, restraint of trade, unconscionability, etc.).

³⁴⁸ Southey v. Sherwood (1817), 2 Mer. 435, 35 E.R. 1006 (Ch.).

³⁴⁹ This act was unlikely even in the nineteenth century; Davis v. Miller & Fairly (1855), 17 D. 1166 (Ct. Sess., Scot.).

³⁵⁰ C Act, above note 1, s. 14.1(2). The waiver prima facie also benefits later copyright owners and licensees, but an assignment is not by itself a waiver: s. 14.1(4) & (3).

³⁵¹ John Maryon, above note 61.

³⁵² Kerr, above note 168.

7) Justification and Problems

How, then, can moral rights be theoretically justified? Metaphysical reasoning about the intimate link between an author and her work seems about as persuasive as attempts to base copyright protection on everyone's "natural" right to the fruits of his labour. A more plausible case for moral rights could draw on four sources:

- "Truth-in-marketing": Like trade-marks, moral rights help assure the public that the works it has come to associate with a particular author are indeed that author's genuine product.
- Social reward: Authors merit whatever reward (or lack of it) their work may bring, and that merit is in the work as they have issued it.
- Author empowerment: Moral rights give authors a bargaining chip which, given the greater power generally wielded by entrepreneurs, allows the former some say over the manner in which their work is later exploited.
- Cultural preservation: The public interest in a continuous record of its culture justifies giving authors some control over their works as a private right to be exercised for the public good.

In practice, however, there are enormous difficulties in enforcing moral rights in a digital era. They may be enough to cause the "moral" in "moral rights" to take on its more common meaning as an opposite of "legal," since moral suasion may come to replace legal enforceability on the Internet. How may an author stop a user from altering and redistributing work that has been downloaded from the Internet? How can he stop still later users altering it further? How can authorship in a composite work be traced and established? When practical problems like this combine with the scepticism with which North Americans treat moral rights, the threat to moral rights is clear.⁵⁵³ By contrast, Europeans have tended to treat moral rights more reverentially. The notion of the Author as Romantic Genius may still linger there. Whether this respect will hold true much longer, except as a form of academic nostalgia, is an interesting question.

Meanwhile, how moral rights will play out in Canadian courts is uncertain. Take the problem of colourizing black-and-white movies.

³⁵³ A typical U.S. response to moral rights is to call them "elitist and despotic," "special-interest legislation ... for the benefit of a minority who feel better knowing that the owner is not allowed to act in an uncultured way" for example, S.L. Carter, "Owning What Doesn't Exist" (1990) 13 Harv. J. L. & Pub. Policy 99 at 100–1.

After initial hostility during the late 1980s from many film directors and actors, this practice has become so accepted in North America that a moral rights claim is almost inconceivable except against a totally incompetent adaptation. By contrast, in 1991 John Huston's heirs convinced France's highest court to stop a television screening of a colourized version of *The Asphalt Jungle*. Huston may have had no integrity right in the United States when the film was made, but the French court was willing to teach Americans a lesson in how to preserve a culture they did not recognize they had. The right of a film director and his estate to prevent modifications of his *oeuvre* which would prejudice his honour or reputation was affirmed.³⁵⁴

The reaction of Canadian courts to a case like Huston's would be interesting. Their overall record to date has, with few exceptions, shown little inclination to press moral rights liability much beyond what the common law or the civil law would have imposed anyway. Claims relying purely on the *Act* may therefore be risky propositions unless strong common or civil law support is also available.

J. USERS' RIGHTS: FREE USE

Fairly liberal exemptions to copyright are allowed by international law.³³⁵ The *Act* provides some statutory exemptions, little changed since 1924. Others are imposed by common or civil law techniques. Principles of statutory interpretation, estoppel, waiver, implied licence, and public policy have all been invoked to prevent copyright laws from becoming "instruments of oppression and extortion."³⁵⁶

1) Specific Exemptions

The following narrowly focused exemptions apply to particular classes of work or activity.

³⁵⁴ Y. Gendreau, "The Continuing Saga of Colourization in France" (1993) 7 I.P.J. 340.

³⁵⁵ Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, (1994) 25 I.I.C. 209, art. 13 [TRIPs], generalizing from Berne, above note 2, art. 9(2), which applies only to the reproduction right.

³⁵⁶ Canadian Assn. of Broadcasters v. Society of Composers, Authors & Music Publishers of Canada (1994), 58 C.P.R. (3d) 190 at 196 (Fed. C.A.).

a) Artistic Work

Artists who no longer own their copyright may nevertheless continue to use preparatory material — for example, moulds, casts, sketches from their earlier works for new projects if the main design of the earlier work is not repeated.³⁵⁷

Paintings, drawings, engravings, or photographs can also be made and published of certain works: architecture, sculpture, and works of artistic craftsmanship. A limitation for architecture is that the derivative work cannot itself be an architectural drawing or plan; for sculpture or works of artistic craftsmanship, the item must be permanently situated in a public place or building.³⁵⁸ Presumably, this list includes works in a gallery's permanent collection, though not currently exhibited.

b) Musical Work

Music may be freely performed at any agricultural or agricultural-industrial exhibition or fair receiving a grant from a federal, provincial, or municipal authority, or held by its directors under such authority, but the performance must be "without motive of gain."³⁵⁹ This exemption is rarely used, because a motive of gain has been found where any musician is paid to perform, or the music is designed to attract people to the event or to any special exhibition at the event.³⁶⁰

Music may also be performed by a church, college, school, or by a religious, charitable, or fraternal organization to further a religious, educational, or charitable object.³⁶¹ But putting on a function and applying the proceeds to a worthy object does not qualify: the performance must be a "participating factor in the [religious, educational, or] charitable object itself or in an activity incidental to it."³⁶²

A radio may be played anywhere without infringing public performance rights in music, but a licence is needed if it plays in a theatre ordinarily and regularly used for entertainment for which an admission charge is made.³⁶³

³⁵⁷ C Act, above note 1, s. 27(2)(b): Franklin Mint Corp. v. National Wildlife Act Exchange Inc., 575 E2d 62 (9th Cir. 1978): McCrum v. Eisner (1917), 87 LJ Ch. 99.

³⁵⁸ C Act, ibid., s. 27(2)(c).

³⁵⁹ C Act, Ibid., s. 27(2)(g).

³⁶⁰ Western Fair, above note 277.

³⁶¹ C Act, above note 1, s. 27(3).

³⁶² C.A.P.A.C. v. Kiwanis Club of West Toronto, [1953] 2 S.C.R. 111 at 115.

³⁶³ C Act, above note 1, s. 69(2); Vigneux, above note 259

c) Newspapers

Newspapers may publish reports of addresses of "a political nature delivered at a public meeting,"³⁶⁴ and also reports of public lectures, addresses, sermons, or speeches. The second class of report is, however, prohibited if a conspicuous notice prohibiting reports is kept at the main entrance of the building and, unless the building is being used for public worship, near the speaker.³⁶⁵ Whether this prohibition can stand with the *Charter* guarantee of freedom of expression is doubtful. Reports, including those made in defiance of a prohibition, may nevertheless themselves have copyright.³⁶⁶

d) School Compilations

Short passages from literary works may be published in a collection intended for schools if the following conditions are met: the collection is composed mainly of non-copyright matter, the publication is described in the title and any advertising as intended for the use of schools, the literary works were not themselves published for the use of schools, the source from which the passages are taken is acknowledged, and no more than two passages from the same author are published by the same publisher within five years.³⁶⁷ By contrast, a U.S. decision in 1996 allowed copy shops to produce course-packs for university classes, even though the materials contained substantial extracts from published literary works. The practice was initially treated as a fair use because the market for the works was said to be unaffected. Professors ordering the course-packs would not, the court said, have demanded that students acquire any book from which extracts had been made. However, on reargument, an 8:5 majority of the court reversed the earlier decision and held that such course-packs could be produced only with the copyright holder's permission and on payment of whatever fee the latter demanded. 308

e) Computer Programs

The owner of a physical copy of a computer program can make a backup copy if none is supplied. She may also make the program compatible

³⁶⁴ CAct, ibid., s. 28.

³⁶⁵ C Act, ibid., ss. 27(2)(e) & 28.02(2)(b).

³⁶⁶ See section C(1), "Originality," in this chapter.

³⁶⁷ C Act, above note 1, s. 27(2)(d).

³⁶⁸ Princeton University Press v. Michigan Document Services, 74 F.3d 1512 (6th Cir. 1996), rev'd 1996 Fed. App. 0357P (6th Cir. 1996), en banc [Princeton].

with her own computer. In either case, she must delete the copy or adaptation on ceasing to own the program.³⁰⁹

2) Copying Authorized by Legislation

Copying material under the *Cultural Property Export and Import Act*, *Access to Information Act*, federal and provincial *Privacy Acts*, and the *National Archives of Canada Act* is allowed.³⁷⁰ Other legislation requiring or allowing copying may also implicitly exempt that act from infringing. For example, copying material from public registries may be allowed; this may also be true for material produced on discovery in litigation. The copying would have to be consistent with the reason for having the registry or the discovery in the first place. A manuscript that is produced on discovery may be copied for purposes relevant to the litigation, but cannot be distributed for sale.³⁷¹

3) Repairs and Modifications

There may be a right at common law to repair, or to make spare parts designed to repair, products protected by copyright.⁴⁷² Authors' moral rights³⁷³ may, however, need to be heeded to avoid changes that prejudice the author's honour or reputation.

The width of this right is ill defined and controversial. Presumably, public policy would allow repairs to avoid danger to the user or the public. Buyers may also be able to bring products up to the standard that a seller has expressly or impliedly promised but not met, even where the defect is not dangerous.³⁷⁴ On the other hand, sellers have restricted rights to repair computer software by limiting the licence attached to the product, so that an unauthorized repairer who downloaded a program to diagnose an operating defect was found to infringe copyright.¹⁷⁵ Such attempts to withdraw or restrict repair rights need close scrutiny. There may be some ground to hold them void where

³⁶⁹ C Act, above note 1, ss. 27(2)(1) & (m).

³⁷⁰ C Act, ibid., ss. 27(2)(h) to (k) & 28.02(2)(c)

³⁷¹ Home Office v. Harman, [1981] Q.B. 534 at 558–59 (C.A.), all'd on other grounds (1982), [1983] 1 A.C. 280 (H.L.).

³⁷² British Leyland Motor Corp. Ltd. v. Armstrong Patents Co. Ltd., [1986] A.C. 577 (H.L.).

³⁷³ See section I, "Authors' Moral Rights," in this chapter.

³⁷⁴ John Maryon, above note 61; compare Saphena, above note 183.

³⁷⁵ MAI, above note 236.

they collide with the public interest in having competition in the repair and aftermarket sectors.³⁷⁶

4) Imports

Imports of the following are allowed:

- up to two copies of any work published in a WTO state for the importer's own use;
- copies of any work for use by a federal or a provincial government department;
- copies required for any public library or institution of learning, before the work is printed or made in Canada; and
- any work lawfully printed in a WTO state and published for public circulation there.³⁷⁷

The Customs authorities have jurisdiction over these provisions, although enforcement is sporadic. Bill C-32 would extend the exemption to sound recordings, but tighten the provisions in other respects. For example, only one book could be imported for a library, archive, museum, or educational institution. Further copies would have to be obtained through the exclusive Canadian distributor.³⁷⁸

5) Public Interest

At common law, a person may have "good cause or excuse" to deal with material as a matter of public interest. Copying a judge's reasons for judgment (assuming these have copyright at all) has been suggested as acceptable for this reason.³⁷⁹ Whistleblowers may also sometimes be excused from copying private documents and handing them over to a newspaper for publication. The exposure must first be found to be in the public interest — for example, if criminal or disgraceful conduct or matters affecting others' life or liberty is disclosed.³⁸⁰ Merely making public information more accessible has, however, not been thought important enough to qualify as a good excuse for producing a low-priced abridgment. The *Charter* right of free expression was, perhaps

³⁷⁶ Compare section H(6), "Repairs and Modifications," in chapter 3.

³⁷⁷ C Act, above note 1, ss. 45(3) & (5).

³⁷⁸ Bill C-32, above note 9, cl. 45(1).

³⁷⁹ British Columbia Jockey Club v. Standen (1985), 8 C.P.R. (3d) 283 at 288 (B.C.C.A.).

³⁸⁰ Lion Laboratories Ltd. v. Evans, [1985] Q.B. 526 (C.A.) [Lion].

surprisingly, found irrelevant, even though the original material was produced under the aegis of the Canadian government, which claimed it wanted the material to have the widest public distribution.³⁸¹

6) Fair Dealing

Anyone may deal fairly with any work for the purposes of private study, research, criticism, review, or newspaper summary. In the latter three cases, it is apparently mandatory for the source and the author's name, if given in the source, to be mentioned before the dealing can qualify as fair.³⁸² This rigid structure may be contrasted with U.S. law. There the "fair use" justification is worded expansively. The purposes — "criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research" — are non-exhaustive.³⁸³ Nor is there any requirement to attribute source as a precondition of the use being fair. Still, the U.S. provision has not shielded a U.S. commercial copy shop from liability in producing university course-packs that contained substantial extracts from literary works. In Canada, a similar practice would have equal difficulty passing muster.³⁸⁴

The following passage from a U.K. case, where an ex-Scientologist successfully claimed fair dealing in a book critical of Scientology that contained long quotes from the church's teaching material, seems also to represent Canadian law:

It is impossible to define what is "fair dealing." It must be a question of degree. You must consider first the number and extent of the quotations and extracts. Are they altogether too many and too long to be fair? Then you must consider the use made of them. If they are used as a basis for comment, criticism or review, that may be fair dealing. If they are used to convey the same information as the author, for a rival purpose, that may be unfair. Next, you must consider the proportions. To take long extracts and attach short comments may be unfair. But, short extracts and long comments may be fair. Other considerations

³⁸¹ James Lorimer, above note 168.

³⁸² C Act, above note 1, s. 27(2)(a) & (a.1) The analagous provisions relating to performers do not require attribution: *ibid.*, s. 28.02(2)(a).

³⁸³ Copyright Act 1976, above note 133, § 107.

³⁸⁴ Compare Princeton, above note 368 with Laurier, above note 8, where a crimmal prosecution for infringement against an Ottawa copy shop failed; but the firm nevertheless took a reprography licence from CanCopy to avoid future problems.

may come to mind also. But, after all is said and done, it must be a matter of impression. As with fair comment in the law of libel, so with fair dealing in the law of copyright. The tribunal of fact must decide.³⁸⁵

This high level of uncertainty favours only those with deep pockets. Parliament has not only passed its responsibility to provide clear rules over to the courts but has let them regulate industries as "a matter of impression." The result has been that people have avoided going to law except as a last resort or to settle a principle: copyright is either ignored or negotiated around by private agreement. The following discussion of the jurisprudence may suggest why.

a) Factors to Consider

The following factors have been used to determine whether a dealing is fair: the purpose and character of the dealing; the nature of the source work; what and how much has been dealt with, compared with the source work as a whole; the effect of the dealing on the potential market for or value of the source work; whether the source work was available within a reasonable time at an ordinary commercial price; and any reasonable guidelines accepted by joint owner and user interests.

Some subsidiary general points have also been made, such as:

- One may deal fairly with even a whole work. How else can haiku or a
 photograph be sensibly criticized or reviewed? But the longer a work
 and the more taken, the less likely the dealing will be fair, as the
 owner's market is cut into by the new work.
- The dealing must be fair in relation to its purpose and medium. The fair amount copied for private study may be unfair if copied for criticism. Extracts, too long for a newspaper, may be found fair if used in a television news film.
- Dealings with unpublished material "leaked" in breach of confidence have had difficulty passing the test of fairness. Private sector leaks that further an important public interest, such as the due administration of justice, have been dealt with more leniently, but the treatment is far from uniform.³⁸⁶

³⁸⁵ Hubbard v. Vosper, [1972] 2 Q.B. 84 at 94 (C.A.) [Hubbard].

³⁸⁶ Compare Fairfax, above note 166, and B.W. International Inc. v. Thomson Canada Ltd. (1996), 137 D.L.R. (4th) 398 at 409–10 (Ont. Gen. Div.), rejecting fair dealing for leaked documents, with Lion, above note 380, accepting it so as to minimize convictions of innocent defendants.

- One can apparently deal fairly only for one's own purposes. A teacher may copy fairly for her own private study; her student may copy fairly for his private study; the student may, if the teacher's employee or agent (e.g., research assistant), copy for his teacher's purpose; but, otherwise, neither teacher nor student may copy for the other's purpose.
- Dealings for mixed purposes seem acceptable. I may criticize a work fairly, even if I mean also to educate, so long as the criticism is not a cover for another unallowed purpose.

A discussion follows of some general factors in light of these considerations.

i) Purpose of the Dealing

Fair dealing can occur only in respect of a closed set of purposes: newspaper summaries, criticism or review, research or private study.

Newspaper summaries Fair dealing for "newspaper summary" only is presently permitted. Bill C-32 would expand this permission to cover all media ("news reporting or news summary") and all subject matter (works, sound recordings, performances, etc.). There is a rigid requirement that the source and the author's (performer's, maker's, etc.) name must be mentioned before the dealing can qualify as fair.³⁸⁷

Criticism or review "Criticism" and "review" presumably involve analysing and judging merit or quality. "Review" may also include surveying past events or facts. The attempt to justify *Coles' Notes* study aids on these grounds failed, however, because criticism did not require as full a condensation of the source work as the *Notes* contained.³⁸⁸ On the other hand, a British television program that criticized a film distributor's decision to stop exhibiting *Clockwork Orange* in the United Kingdom and included extracts totalling some 8 percent of the film was held to be dealing fairly.³⁸⁰

Parody and satire could qualify under this head as implicit fair criticisms of their target.³⁹⁰ The apparently mandatory requirement that the source and the original authors must be mentioned might, however, rule out some otherwise qualifying material. As a policy matter, it would therefore be better that parody and satire not be held infringements in the first place.³⁹¹

³⁸⁷ Bill C-32, above note 9, cl. 29.2.

³⁸⁸ Sillitoe, above note 2++

³⁸⁹ Time Warner Entertainments Co. v. Channel Four Television Corp. (1993), 28 LP.R. 459 (C.A.).

³⁹⁰ The point was overlooked in St-Hubert, above note 300, holding a union liable for using caricatures of a firm's logo on stickers during a strike.

³⁹¹ C Act, above note 1, s. 27(2)(a.1); see section G(9), "Substantial Infringement," in this chapter.

Research or private study "Research" in this context means investigating or closely studying a subject. "Study," on the other hand, involves applying oneself to acquire knowledge or learning, or examining and analysing a particular subject.³⁹² Although dealing for *private* study only is acceptable, this qualification does not apply to research. Thus, non-private or commercial research may qualify as fair dealing. This means that not only scholars and students may engage in reasonable discourse but private sector firms and workers should also be able to further their knowledge and research. Such activities become even more important to achieve national competitiveness in a global market. Firms may also be able to copy news or current affairs articles or programs — for example, to study public attitudes to their business.³⁹³ However, in the United States, a corporation's research workers have not been allowed to copy journal articles for future reference where an efficient means of buying copyright clearances existed.³⁹⁴

Bill C-32 would clarify and exempt some of these activities. Nonprofit educational institutions would be able to use material for tests and assignments, copy work onto blackboards or for overhead projection, perform work in class, tape news programs or commentaries off air for classroom use within the year, and tape other programs off air for thirty days' evaluation.³⁹⁵ Non-profit libraries, archives, and museums would also be able to copy works to maintain and manage their collection, and copy specified material for people doing research or study.³⁹⁶ A copy of a sound recording or work (but not film) could be made for a person with defective vision, but more than one copy would attract royalties fixed by the Copyright Board or agreement.³⁰⁷

³⁹² British Columbia (A.G.) v. Messier (1984), 8 D.L.R. (4th) 306 at 309–10 (B.C.S.C.); see also G.A. Bloom & T.J. Denholm, "Research on the Internet: Is Access Copyright Infringement?" (1996) 12 Can. Intell. Prop. Rev. 337.

³⁹³ D. Vaver, "Clipping Services and Copyright" (1994) 8 I.P.J. 379 at 381-82.

³⁹⁴ American Geophysical Union v. Texaco Inc., 37 F.3d 881 (2d Cir, 1994) [Geophysical]; compare D. Vaver, "Copyright inside the Law Library" (1995) 53 Advocate 355.

³⁹⁵ Bill C-32, above note 9, cls. 29.3–29.9. Tapes kept beyond these periods would be subject to a royalty set by the Copyright Board.

³⁹⁶ Ibid., cls. 30.1 & 30.2.

³⁹⁷ Ibid., cl. 32. Oddly, a large-print book could not be made, even if no such format was commercially available: *ibid.*, cls. 32(2) & (3). Nor is any provision made for the deaf-*ibid.*, cl. 1(5), def. "perceptual disability."

ii) Nature of the Work Taken From

Fair dealing applies to both published and unpublished work. Were it otherwise, plays could not be reviewed.³⁹⁸ But fair dealing is harder to prove for unpublished documents unless, for example, they expose illegal or unethical practices. Biographers have had a particularly hard time. In the United States, for example, J.D. Salinger's biographer, Ian Hamilton, was forced into paraphrasing his subject's ideas after being enjoined from using direct quotes from Salinger's publicly archived correspondence.³⁹⁹ Fair dealing is more likely for material with some public circulation (e.g., bulletins sent by a corporation to its stockholders) than for material where the interest in secrecy is higher (e.g., material produced on discovery).

iii) How Much and What Is Used

The amount and substantiality of the material taken from the source work is always relevant: Has the user taken more than reasonably necessary for the purpose? This criterion should be looked at broadly. The copying of very "substantial" extracts or even whole works can be fair, although the burden of justification gets higher the more is taken.⁴⁰⁰ Guidelines settled by owner and user groups may also help if they sufficiently take account of the general public interest. Thus the Australian Parliament has deemed that copying one article from a periodical, or the greater of one chapter or 10 percent of a published edition, is fair dealing for research or study, without precluding other uses from qualifying.⁴⁰¹ A guideline like this may also be acceptable in Canada.

iv) How the Market for or Value of a Work Is Affected

It is always important to know what effect a use has on a work's present or reasonably expected future market. A use that substitutes for or competes with the copyright work is less likely to be held fair. A maker of instructional films had no trouble stopping buyers from making permanent copies for their convenience: it was being unfairly deprived of a sale or licence fee.⁴⁰² Owners may also be entitled to reserve future markets.

³⁹⁸ Public performance is technically not a publication. see section G(1), "First Public Distribution," in this chapter.

³⁹⁹ Salinger v. Random House Inc., 811 E2d 90 (2d Cir. 1987).

⁴⁰⁰ Hubbard, above note 385 at 98.

⁴⁰¹ Copyright Act, 1968 (Austl.) No. 63, ss. 40(3) & 10(2).

⁴⁰² Tom Hopkins International Inc. (Tom Hopkins Champions Unlimited) v. Wall & Redekop Realty Ltd. (1984), 1 C.P.R. (3d) 348 (B.C.S.C.), varied (sub nom. Tom Hopkins International Inc, v. Wall & Redekop Realty Ltd.) (1985), 6 C.P.R. (3d) 475 (C.A.)

Thus, a magazine publisher may stop its cartoons from being compiled into a thematic anthology: it may want to develop its own anthology later and so should be entitled to refuse to license a potentially harmful use.⁴⁰³

v) Easy Alternative Availability

Copyright owners can hardly complain of unwanted uses if their distribution or permission practices are unfair or inefficient. A U.S. court noted: "It is sensible that a particular unauthorized use should be considered 'more fair' when there is no ready market or means to pay for the use, while such an unauthorized use should be considered 'less fair' when there is a ready market or means to pay for the use."⁴⁰⁴ This reasoning cannot, however, avoid the question whether payment is fairly due for particular uses in the first place.

b) Bill C-32

Bill C-32 would extend fair dealing on the same basis to sound recordings, performances, and broadcasts as it presently applies to works. Incidental non-deliberate inclusions of material would also be exempted: for example, a film documentary may not necessarily infringe just because a copyright logo appears in a shot.⁴⁰⁵

K. USERS' RIGHTS: PAYING USES

1) Music: Public Performance and Telecommunication

Someone wishing to perform a musical work in public or to communicate it to the public by telecommunication must obtain a licence from the Society of Composers, Authors and Music Publishers of Canada. SOCAN takes assignments of performance and telecommunication rights in musical works from composers and lyricists. It then issues blanket licences for its repertoire, which comprises virtually any piece of music still in copyright. The royalties received from licensing are distributed to composers, lyricists, and music publishers according to rules fixed by SOCAN's board. A 50 percent split of the royalties for original published music always goes to the publisher; the remaining 50 percent goes to the composer or composers. If lyricists are involved, the split is 25 percent to the composer(s) and 25 percent to the lyricist(s). Nothing seems to prevent private rearrangement of this division, even though

⁴⁰³ Bradbury v. Hotten (1872), L.R. 8 Ex. 1.

⁴⁰⁴ Geophysical, above note 394 at 898.

⁴⁰⁵ Bill C-32, above note 9, cl. 30.7.

SOCAN's rules try to discourage it. For example, a music publisher can buy the author's share of SOCAN royalties if the author goes bankrupt.⁴⁰⁶ This practice suggests that a provision in the original publishing agreement, assigning the author's share of royalties to the publisher, may equally be held valid.

The fees SOCAN charges are fixed annually by the Copyright Board after hearing from SOCAN and considering any objections to the proposed tariff advertised in the *Canada Gazette*.⁴⁰⁷ In 1994 SOCAN collected domestic fees of \$66 million, of which \$56 million came from radio and television, and \$10 million came from licensing taverns, shopping centres, restaurants, halls, and the like. SOCAN also has affiliation agreements with foreign performing rights societies, and it similarly distributes monies received from foreign performances.

Bill C-32 would make public performance and telecommunication royalties payable also to record companies and performers (50 percent to each) whenever their commercially released records are played. A society organized on similar lines to SOCAN will likely administer the scheme, with the Copyright Board settling tariffs. Broadcasters would have to pay only \$100 royalties on the first \$1.25 million of advertising revenue. Beyond that, liability would be phased in gradually over five years, with a 20 percent incremental liability each year.⁴⁰⁸

2) Cable Retransmission

Since 1989 cable retransmitters of television and radio programming have paid royalties fixed by the Copyright Board for copyright material contained in distant broadcasts they retransmit. The Board sets a rate based on what willing sellers and buyers would have agreed to. This rate currently averages fifteen cents per subscriber per month. The lion's share of the \$45 million per year this rate costs cable companies is distributed to collecting societies representing U.S. film and television companies (57 percent). Another roughly 13 percent goes to public television and non-U.S. foreign program producers, 12 percent to Canadian and U.S. networks, 10 percent to the baseball, hockey, and football leagues, and 3 percent to SOCAN.⁴⁰⁹

⁴⁰⁶ Editions MCC Ltee v. Assn. des Compositeurs, Auteurs & Editeurs du Canada Liée (1987), 11 C.I.P.R. 322 (Que, S.C.).

⁴⁰⁷ C Act, above note 1, ss. 67-69.

⁴⁰⁸ Bill C-32, above note 9, cls. 19, 68 & 68.1.

⁴⁰⁹ Royalties 1995–7, above note 74, and FWS, above note 34. Royalties 1995–7, above note 74, sets out the 1995–7 television and radio tariffs. Performers are excluded: C Act, above note 1, s. 28.02(2)(d).

3) Collecting Societies

Other collecting societies based on the SOCAN model have formed to collect royalties for uses in circumstances where individual collection has proved either impossible or extremely costly to monitor and enforce. The collecting society seeks to reach agreements with users on royalties and related terms. Failing this, either party may apply to the Copyright Board.⁴¹⁰ Agreements filed with the Board within fifteen days of being concluded are insulated from attack under the *Competition Act*. The competition director may, however, ask the Board to examine any agreement thought to be against the public interest. No such request has been made to date.⁴¹⁰

Operating under these provisions, the Canadian Musical Reproduction Rights Agency Ltd. (CMRRA) has licensed record producers to make sound recordings of the agency's repertoire at a standard negotiated rate. This rate presently is 5.9 cents per work per record, with an added 1.18 cents per minute for works longer than five minutes.⁴¹² Similarly, the Canadian Reprography Collective (CanCopy) has concluded agreements with the federal government, universities, copy shops, and other institutions, providing for payment of royalties for photocopying from books.

Collecting societies would be given further roles by Bill C-32. For example, a blank audio-tape levy fixed by the Copyright Board would be administered by a collecting society representing eligible composers. lyricists, performers, and record companies.⁴¹³

4) Unlocatable Owners

Copyright owners sometimes seem to disappear off the face of the earth, and efforts to locate them to obtain copyright permissions are unavailing. If the work is published, the Copyright Board can issue a non-exclusive licence to use the work in such cases. The Board has sometimes fixed an appropriate royalty to be paid to a collecting society. If the copyright owner does not collect the royalty within five years, the Board has authorized the society to apply the sum to general revenue. Bill C-32 would extend this right to license to most published matter having copyright.⁴¹⁴

⁴¹⁰ C Act, above note 1, s. 70.2.

⁴¹¹ CAct, ibid., ss. 70.5 & 70.6.

⁴¹² Mechanical Licensing Agreement between CMRRA and CRIA (the Canadian Recording Industry Assn. Inc.), 1 October 1990, as am. 12 July 1991.

⁺¹³ Bill C-32, above note 9, new Part VIII.

⁺¹⁴ C Act, above note 1, s. 70.7; Re Fritz (Licence to use English Language Instruction Video) (1995), 62 C.P.R. (3d) 99 (Copyright Bd.); compare Bill C-32, ibid., cl. 77.

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PATENTS

A. INTRODUCTION

Patents for inventions are issued and protected solely under the *Patent Act.*¹ Intended to stimulate the creation and development of new technologies, they are granted to inventors of new, useful, and unobvious ideas with practical industrial application: new machines, products, processes, or improvements to existing technology. Without patents, ideas have little protection. As soon as a product implementing the new idea hits the market, anybody can copy it and compete with the original producer without incurring the initial costs of invention and product development. A patent gives its holder a lengthy breathing-space to enable the invention to be developed and marketed without competition except from non-infringing substitutes. The patentee can thus recoup its initial outlay plus recover a profit commensurate with the value the market puts on the invention.

¹ R.S.C. 1985, c. P-4 [P Act]; in this chapter, called the "Act" [unless otherwise indicated, references are to the Act as amended]. The discussion deals mainly with patent applications made after the Patent Rules. 1996 [PR] (the "Rules"), and the amendments to the P Act effected by the Intellectual Property Law Improvement Act. S.C. 1993, c. 15, took effect, namely, 1 October 1996. Previous applications and patents may be affected by transitional provisions that, for reasons of space, cannot be discussed here.

A patent is granted by the Patent Office (PO) and now generally lasts twenty years from the date of filing the application.² Its holder obtains an absolute monopoly: nobody may make, sell, or use the patented invention, even if he arrives at it independently without knowing of the earlier inventor or patent.³ More than 25,000 applications are filed annually in Canada. In 1993–94, 14,000 patents were issued, and in 1994–95, 11,000. Annual maintenance fees (starting at \$100 per year and rising progressively to \$400 for each of the last five years) must be paid to the PO to keep the patent alive. More than 120,000 fees were paid in 1994–95, while 31,500 patents lapsed for non-payment. Sole inventors, small businesses, and universities usually pay half-rate.⁴

1) Trade Secret Protection for Ideas

Some protection can be granted at common law for ideas outside the patent system, through contracts and the breach of confidence action. Firms can erect a wall of secrecy around their operations to protect their trade secrets, potentially forever, against faithless employees, industrial spies, and co-venturers using trade secrets and other confidential information outside the purpose for which they were given it. Anything of potential economic value can be protected anywhere in the world. A trade secret confided in China and wrongly used in Canada may be protected if the Chinese confider sues in Canada. But common law protection is volatile. It can disappear despite the owner's best efforts. Someone may learn of the secret independently or may reverse-engineer it or the product that contains it; innocent buyers from an industrial spy may profit from their purchase and can end up destroying its value as a trade secret by publicizing it. Departing employees can also use information that has become part of their general skills and knowledge. The most the ex-employer can do is restrict the ex-employee by contract from

2 P Act, ibid., s. 45; s. 2 def. "filing date"; for the filing date of an application made under the Patent Cooperation Treaty, 2 October 1989, Can. T.S. 1990 No. 22 [PCT], see section A(4), "International Patenting," in this chapter. The Statute of Monopolies (U.K.), 1624, 21 Jac. 1, e. 3, provided fourteen years protection from grant.

The present monopoly period is effectively less than twenty years. Thus, monetary compensation for infringement is available only from when the specification is published, which may be as long as eighteen months after filing: *P Act*, *ibid.*, s. 55(2). Before 1989, patents lasted seventeen years from date of grant, which could be long after the date of application because of delays in the PO. Some delays were unavoidable. Others were deliberately caused by applicants intent on prolonging their monopoly.

³ P Act, ibid., ss. 42 & 44.

⁴ PR, above note 1, s. 2, def. "small entity," Sch. II.

working in a particular field. Such restrictions are still vulnerable. They may, for example, not be enforced if they do not reasonably balance the employer's interests against the public interest in employee mobility, especially in times of economic instability and job insecurity.

2) Applying for a Patent

Patent drafting is an arcane art best left to professional patent agents. These agents are trained to make trifling advances look like Galilean leaps. In fact, a patent agent must be employed at least to handle the application after filing if anyone other than the inventor applies.⁵ The application is anachronistically called a "Petition." This terminology dates back to the time when English patent applications were "humbly" made "To The Queen's Most Excellent Majesty." Until 1 October 1996 Canadian applications still contained vestiges of this ancient language, such as the final flourish that "Your Petitioner(s) therefore pray(s)" for a patent. These phrases, mercifully, have been eliminated." The petition can be made by the inventor or by his assignee, guardian, or executor.⁷ It comes with a patent "specification," comprising a "disclosure" detailing the invention and how it is carried out (often with drawings) and "claims" staking out the monopoly sought.

Timing is everything. The right to a patent depends on the claim date of the application, usually its filing date. An earlier inventor will lose out to one who arrives first at the PO with an application. If both arrive the same day, the timing is "deemed" a dead heat entitling both to patents.⁸ The claim date may be even earlier if the Canadian application is filed within twelve months of an earlier filing in a *Paris Convention* or *WTO* state. The foreign filing date then becomes the Canadian claim date, bumping later local filings. Because applications are often rushed, technical defects are common but curable by amendment during PO proceedings or by filing a new application within twelve months. The second application can take the first's claim date if the same invention is retained. The PO will not allow major redelineations; and if by accident it does, the resulting patent can be invalid.⁹

⁵ PR, above note 1, s. 20(1).

⁶ Ibid., Sch. L. Form 3.

⁷ P Act, above note 1, s. 27; s. 2 del. "legal representative."

⁸ P Act, ibid., s. 27(1.5).

⁹ P Act, ibid., s. 28.1, Martin v. Scribal Pty. Ltd. (1956), 95 C.L.R. 213 (P.C.) [Martin], Canadian Intellectual Property Office, Manual of Patent Office Practice, §§ 7.01– 7.06 [MOPOP] (Convention priority).

The rule is "one invention, one application." But inventions are like a many-faceted prism: multiple claims (sometimes running into the hundreds) covering all facets are allowed in the same patent. If more than one invention is disclosed, the PO can demand that the application be split into two or more "divisional" applications, each claiming only one invention.¹⁰

3) Proceedings in the Patent Office

For a patent to issue, the application must first be examined. The applicant has up to five years to request examination, so the market for the invention can be tested. It must meanwhile pay the usual annual maintenance fees.¹¹ If no timely request is ultimately made, the application is deemed abandoned. An application may also be withdrawn any time, but it becomes public eighteen months after filing. The application and its supporting documents are then laid open, and notice of the application appears in the *Canadian Patent Office Record*.¹² Examination was requested for more than 11,000 applications in 1994–95 — a two to three ratio in relation to the number of applications filed that year.

"Examination" means that a specialized examiner will check the specification against the technical documents in the PO's extensive library and decide whether a patent should be granted. Nobody can oppose the grant, although anyone who suspects that an application has been filed or sees the published application can "protest" the grant and send the PO material to use during examination. The interloper will not, however, be told of the PO's reaction.¹³ The PO will then decide whether the applicant is "by law" entitled to a patent. Anything that would invalidate an issued patent bars the initial grant.¹⁴ All aspects of patentability are checked: Is this an "invention"? Is it new, non-obvious, useful? Does the application fully disclose the invention? Do the claims fairly reflect the invention or are they too broad? All patent offices see their job as granting, not rejecting, patents, so an examiner's objections are directed to ensuring that a valid patent issues.

The applicant may overcome objections by argument or by amendment. If the examiner is satisfied, the application is allowed and a patent

¹⁰ P Act, ibid., s. 36.

¹¹ PR, above note 1, s. 96(1). Requests to examine a pre-1996 application can occur up to seven years after filing: *ibid.*, s. 150(1).

¹² P Act, ibid., s. 10.

¹³ PR, above note 1, s. 10.

¹⁴ P Act, above note 1, s. 40, Martin, above note 9,

issues, often stronger because of the interchange with the PO. If not satisfied, the examiner will reject the application, giving reasons. Rejection can be appealed to a Patent Appeal Board comprising senior PO examiners. The Board holds a hearing and recommends confirmation, reversal, or amendment of the examiner's decision to the Commissioner. The Commissioner only rarely disagrees with the Board's recommendation.

The PO can reject an application only if it is positively satisfied that the applicant is *not* by law entitled to a patent. No discretion is involved.¹⁵ If judicial developments point to likely patentability, the PO may grant the application, leaving the courts to decide validity in contested litigation. An adverse PO decision is appealable directly to the Federal Court of Appeal and, ultimately, to the Supreme Court of Canada. The courts can substitute their views for the PO's and are not confined to the PO's grounds for rejection.¹⁶ Although rarely interfering on technical questions, such as whether the invention works, courts have not hesitated to reverse longstanding PO practices or policies that have lacked a legal basis.

4) International Patenting

There is no such thing as an international patent. Patents are applied for country by country — an expensive proposition that involves much duplication among patent offices. Some attempts to avoid needless effort have occurred. Within much of Europe, for example, rules on patentability and infringement have been largely standardized; a single application to the European Patent Office in Munich can lead to patents being granted for those states the applicant has nominated. The Office can also revoke a wrongly granted patent, but the main tasks of adjudication fall to national courts.

A similar, but looser, model applies beyond Europe. The *Patent Cooperation Treaty* of 1970 sets up a simplified procedure for applicants wanting to obtain patents in several states. The *PCT* has been ratified by most industrialized countries, including Canada since 1990. So a Canadian national or resident may file an international application with the Canadian PO (the "receiving office"), designating the countries in which patents are sought. The Canadian filing date becomes the international filing date, and a copy of the application is sent to each designation.

¹⁵ Monsanto Co. v. Canada (Commissioner of Patents), [1979] 2 S.C.R. 1108 [Monsanto].

¹⁶ Pioneer Hi-Bred Ltd. v. Canada (Commissioner of Patents), [1989] 1 S.C.R. 1623 [Pioneer].

nated country and treated as a separate application there. Similarly, an application received in a foreign receiving office designating Canada is transmitted to the PO and treated as a local application. Although each country's substantive patent law must be complied with, member states accept a *PCT* application as complying with their procedural law. Search and examination reports can be obtained from International Searching and Preliminary Examination Authorities. For Canada, this is currently the European Patent Office rather than the U.S. Patent Office — perhaps surprisingly, since most Canadian patentees' first interest is the North American market. The search report may alert the applicant to potential problems, and the examination report can be filed with national offices as a non-binding aid on patentability.¹⁷ The success of this procedure is witnessed by the fact that, in 1994–95, *PCT* applications made up 40 percent of the nearly 28,000 applications filed with the Canadian PO.

5) The Application Must Be Truthful

The petition for a patent must be truthful. The *Act* provides that even innocently made false "material allegation[s]" invalidate the patent.¹⁸ But this provision applies only to false allegations in the petition. Misstatements in the disclosure or the claims are apparently irrelevant.¹⁹ Moreover, courts have found few allegations "material." Suppose an applicant falsely alleges that she invented X, but gets a patent for less-than-X (which she did invent). Or suppose she says her employee Bloggs was the inventor, when employee Dingle really was. The allegations are all "immaterial," since the patent was issued to the right owner for the right invention.²⁰

¹⁷ MOPOP, above note 9, § 22; PR, above note 1, ss. 50–66; G.O.S. Oyen, "The Canadian Patent Law Amendments of 1987" (1988) 4 I.P.J. 237 at 259ff; Celltech Ltd. v. Canada (Commissioner of Patents) (1993), 46 C.P.R. (3d) 424 (Fed. T.D.), aff'd (1994), 55 C.P.R. (3d) 59 (Fed. C.A.).

¹⁸ P Act, above note 1, s. 53(1); Beloit Canada Ltée/Ltd. v. Valmet Oy (1984), 78 C.P.R. (2d) 1 at 28–29 (Fed. T.D.), rev'd (1986), 8 C.P.R. (3d) 289 (Fed. C.A.) [Beloit].

¹⁹ A misstatement may make the patent invalid for other reasons — for example, if the misstatement does not properly disclose the invention or leads to its not working as promised. See sections C(3) and (4), "Usefulness" and "Contents of a Patent," and section G, "Invalidity" in this chapter.

²⁰ Procter & Gamble Co. v. Bristol-Myers Canada Ltd. (1978), 39 C.P.R. (2d) 145 at 157, (Fed. T.D.), aff'd (1979), 42 C.P.R. (2d) 33 (Fed. C.A.); Beloit, above note 18 at 29–30 (T.D.).

A patent's specifications and drawings should contain only what is needed to describe, disclose, and exemplify the invention. Omissions or additions made wilfully "for the purpose of misleading" invalidate the patent.²¹ Few patents collapse for this reason today since most applications are handled by professionals, who will not purposely mislead the PO.

This history should not, however, encourage too much complacency. Intellectual property rights may be vulnerable to the application of common law principles that traditionally took a dimmer view of even innocently false statements that materially contributed to the registration of a right.²² The United States has a principle of "fraud on the Patent Office," where there has been deliberate or grossly negligent withholding of prior art or other pertinent information. This non-disclosure breaches a duty of good faith, imposed because of the *cx parte* character of the application process, and invalidates the patent even if it would have been issued had the truth been told.²³ Similar principles could equally be held applicable in Canada as a check on the integrity of the application process.

B. WHAT IS PROTECTED

1) Invention Defined

Any "art, process, machine, manufacture or composition of matter" or any new and useful "improvement" of one of these qualifies as a patentable "invention" in Canada if it is "new and useful."²⁴ This language (apart from the later addition of "process") goes back as far as pre-Confederation patent laws that borrowed from U.S. law.²⁵ The underlying aim is to protect ideas of "practical application in industry, trade or commerce."²⁶

²¹ P Act, above note 1, s. 53(1)

²² For example, Billings & Spencer Co. v. Canadian Billings & Spencer Ltd. (1921), 20 Ex.C.R. 405 (design); Prestige Group (Aust.) Pty. Ltd. v. Dart Industries Inc. (1990), 19 I.P.R. 275 (Austl. Fed. Ct.) [Prestige]. Compare W.L. Hayhurst, "Grounds for Invalidating Patents" (1975) 18 C.P.R. (2d) 222 at 251–54.

²³ See R.J. Goldman, "Evolution of the Inequitable Conduct Defense in Patent Litigation" (1993) 7 Harv. J.L. & Tech. 37.

²⁴ P Act, above note 1, s. 2, def. "invention." The word "invention" also implies something not obvious: see section C(2), "Non-obviousness," in this chapter

²⁵ See also The Patent Act of 1869, S.C. 1869, c. 11, s. 6, compare Patents Act, 35 U.S.C. § 101 (1988) [Patents Act, 1988].

²⁶ MOPOP, above note 9, § 16.03 (c).

This taxonomy of invention — something by definition unexpected or unforeseeable — is peculiarly a North American conceit. The United Kingdom never defined invention. Instead, the *Statute of Monopolies* of 1624 spoke of granting patents for "any manner of new manufactures," leaving the definition for judges to work out. Over time, they included within it methods of producing marketable products and other useful economic results.²⁷ European patent laws now define invention negatively by saying what is *not* considered patentable.²⁸

Despite these methodological differences, what qualifies as patentable is remarkably similar worldwide. Historical exceptions sometimes lurk in corners; the Canadian ones derive largely from English law prior to the *European Patent Convention* of 1973. Over time the exceptions have become unstable, as perceptions about the boundaries between "pure" and "applied" science change, pressure mounts to make more material patentable, or ethical concerns about new technologies emerge. In the United States, reforms come as often from the courts (particularly the federal circuit in Washington, D.C., which handles all patent appeals) as from the Congress. U.S. courts say "anything under the sun that is made by man [*sic*]"²⁹ is patentable, and they often search for results that best advance U.S. economic policy. By contrast, Canadian judges are reluctant to extend the concept of invention beyond established precedent: it is Parliament's job, not the courts', to extend or contract patentability.³⁰

2) Public Benefit Irrelevant

Inventions are patentable despite a lack of perceptible public benefit. Public benefit is supposedly measured by the market, not by the Patent Office or the courts.³¹ Even concerns of legality or morality have, since 1994, been swept aside with the removal of the requirement that inventions must have no "illicit object in view."³² A method for the better administra-

²⁷ National Research Development Corp. v. Australia (Commissioner of Patents) (1959), 102 C.L.R. 252 (Austl. H.C.).

²⁸ For example, Patents Act 1977 (U.K.), 1977, c. 37, s. 1(2) [Patents Act]; European Patent Convention, 7 October 1973, as am. by Decision of the Administrative Council of the European Organisation of 21 December 1978, reprinted in World Patent Law and Practice (New York: Matthew Bender, 1996), art. 52 [EPC].

²⁹ Diamond v. Diehr, 450 U.S. 173 at 182 (1981) [Diamond].

³⁰ Pioneer, above note 16; compare Wellcome Foundation Ltd. (Hitchings') Application, [1983] ES.R. 593 at 616 (N.Z.C.A.).

³¹ Thompson & Co. v. American Braided Wire Co. (1888), 6 R.P.C. 518 at 528 (H.L.).

³² Patent Act, R.S.C. 1985, c. P-4, s. 27(3), prior to amendment by North American Free Trade Agreement Implementation Act, S.C. 1993, c. 44, s. 192 [NAFTA 1 A].

tion of crack cocaine presumably would still be rejected as not being "useful"³³ — that is, against criminal law policy — but an invention with both legal and illegal uses (e.g., a deadlier handgun) would still be patentable.

The agnostic stance of Canadian patent law is not a necessary feature of it. The *Statute of Monopolies* of 1624 banned patents for inventions that were "mischievous to the state by raising prices of commodities at home, or hurt of trade, or generally inconvenient." The decision to patent could therefore take into account contemporary economic and social policies. Elizabethans, for example, feared the social disorder high unemployment might bring and so deemed it "inconvenient" to patent machines that would throw workers out of jobs. More recently, Commonwealth states that retain the *Statute of Monopolies*' criteria test the patentability of medical or surgical treatments³⁴ for public "inconvenience." And in Europe, inventions whose publication or exploitation would be "contrary to 'ordre public' or morality" are unpatentable.³⁵ Genetic engineering patents are currently under attack on this ground, although so far with little success.³⁶

Testing inventions for their public benefit is not something the PO is now equipped to handle. A panel independent of the PO has been suggested to vet patent applications on the frontiers of knowledge for ethical concerns.³⁷ This appointment would give the public greater involvement in the decision to patent, and would acknowledge that the market alone cannot adequately judge public welfare.

3) Categories of Patentable Matter

What then qualifies as a "useful art, process, machine, manufacture or composition of matter" or an "improvement" of one of these? "Improvement" needs little comment. Most patents are not pioneers that open up a whole new field, but are for modest improvements to existing technology. Such patents give their holders no rights over any earlier patented invention they improve: neither patentee can use the other's invention without the other's licence.³⁸

³³ See section C(3). "Usefulness." in this chapter.

³⁴ See section B(4)(e), "Medical or Surgical Treatments," in this chapter.

³⁵ EPC, above note 28, art. 53(a).

³⁶ See section B(3)(f), "Patenting Life," in this chapter.

³⁷ Westminster Institute for Ethics and Human Values & McGill Centre for Medicine, Ethics and Law, Ethical Issues Associated with the Patenting of Higher Life Forms, (London, Ont., 1994) at 103II

³⁸ P Act, above note 1, s. 32.

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a) Art

In its narrow sense, an art is "an act or series of acts performed by some physical agent upon some physical object and producing in such object some change either of character or of condition."³⁹ This definition encompasses processes and methods. Art also more broadly connotes any applied learning or knowledge, including its resulting product. Known chemical compounds when applied to a new use have been patented as embodying a new art.⁴⁰

The art must, however, be "useful." Written material and fine art are typically excluded because they fall under copyright. Professional arts and skills are similarly excluded because they are not traditionally (and should not be) bought and sold on the market. Methods of crossexamination, advocacy, or tax avoidance, building designs and land subdivision schemes, and medical or surgical treatments⁴¹ cannot be patented by lawyers, architects, doctors, or anyone else. Were it otherwise, the professions would be hindered in exercising, sharing, and disclosing their skills in the best interests of their clients or patients.

b) Process

A process is a systematic series of interdependent actions or steps directed to some useful end. Often synonymous with "art," it excludes a machine, thing, or result. The process need not produce a marketable commodity so long as an economically useful result is achieved — for example, applying a selective herbicide to improve crop yields.

c) Machine

A machine may be an apparatus of interrelated parts (today often electronic) with separate functions. It may also be a mechanism or other device that modifies force or motion and that, by itself or combined with other elements, can achieve some useful end. Attempts to patent computer programs have sometimes come dressed up as claims to a new machine — a computer temporarily transformed by new software. The United States recently allowed a patent drafted in this fashion for a program, and similar Canadian applications have also sometimes slipped through.⁴²

³⁹ Lawson v. Canada (Commissioner of Patents) (1970), 62 C.P.R. 101 at 109 (Ex. Ct.) [Lawson].

⁴⁰ Shell Oil Co. v. Canada (Commissioner of Patents), [1982] 2 S.C.R. 536 [Shell Oil].

⁴¹ See section B(4)(e), "Medical or Surgical Treatments," in this chapter.

⁴² See section B(4)(d), "Computer Programs," in this chapter.

d) Manufacture and Composition of Matter

"Manufacture" connotes a product made manually or by an industrial process, by changing the character or condition of material objects. It therefore overlaps with "machine" and "composition of matter." "Composition of matter" connotes any composite article or substance — a solid, gas, fluid, or powder — produced from two or more substances. New molecules, purified substances, and even isolated microorganisms have been included in the United States.⁴³ The glide in law from inanimate to animate matter is, after all, short: only a couple of letters' difference.⁴⁴

e) New Substances

New substances — that is, a manufacture or a composition of matter — raise interesting issues. The theoretical formula for a substance may be known, but a patent may still be issued to the first person to produce the substance. The claim may extend to homologues beyond the particular use discovered. For example, a researcher may make a new compound X, which she finds is good for killing crabgrass. She can patent X itself, not just X when used to kill crabgrass.⁴⁵ She may also patent all analogous substances. These analogues may run into the millions, so long as they can be "soundly" predicted, even without tests, to have similar herbicidal properties to X.⁴⁶ The later discovery by someone else that X or a homologue efficiently kills weeds other than crabgrass then may become a windfall for the patentee. Although this rule stops easy evasion of the invention, the result is problematic: Why should the patentee's limited prediction that X and its homologues can kill crabgrass entitle it morally to these substances for all uses?

One qualification should be noted. A patent may still be granted later for a non-obvious use of the patented substance. Neither patent can then be exploited for this new use without the concurrence of both patentees. On the first patent's expiry, the second patentee can still prevent the other patentee (and anyone else) from exploiting the substance within the claims of the second patent until it, too, has expired.⁴⁷

⁴³ Re Bergstrom, 427 F2d 1394 (Ct. of Customs and Patent Appeals 1970)

⁴⁴ See section B(3)(f), "Patenting Life," in this chapter.

⁴⁵ Marzone Chemicals Ltd. v. Eli Lilly & Co. (1977), 37 C.P.R. (2d) 37 at 38 (Fed. C.A.) [Marzone]

⁴⁶ Monsanto, above note 15.

⁴⁷ Shell Oil, above note 40; E.I. Du Pont de Nemours & Co. (Witsiepe's) Application. [1982] ES.R. 303 (H.L.) ("selection" patent).

f) Patenting Life

In 1980 the U.S. Supreme Court held that a genetically engineered bacterium that degraded crude oil was a patentable manufacture or composition of matter.⁴⁸ The Canadian PO followed suit in 1982, listing human-made items it thought were now patentable: "all micro-organisms, yeasts, moulds, fungi, bacteria, actinomycetes, unicellular algae, cell lines, viruses or protozoa; in fact . . . all new life forms which are produced *en masse* as chemical compounds are prepared, and are formed in such large numbers that any measurable quantity will possess uniform properties and characteristics."⁴⁰ Indeed, in the PO's view, higher life forms such as plants or animals were logically patentable: "If an inventor creates a new and unobvious insect which did not exist before (and thus is not a product of nature), and can recreate it uniformly and at will, and it is useful (for example to destroy the spruce bud worm), then it is every bit as much a new tool of man as a micro-organism."³⁰

How far society wishes to encourage (let alone allow patents for) genetic engineering of plants, animals, humans, or animal and human parts is highly controversial. On the positive side are advantages such as improving human and animal life and gaining efficient agricultural yields. On the negative side are fears about reduced biodiversity, eugenics, suffering caused to sentient beings in experiments, the objectification of life, altering the balance of nature, and the general inappropriateness of humans playing God. Spectres of neocolonialism also surface when human cell-lines are developed from samples taken by researchers from Third World peoples. The end-product may become the subject of a patent owned and commercialized by governments and corporations in industrialized nations. This practice may raise bothersome questions. Did the subjects really know and consent to the commercialization of their body parts? Should they be excluded from any control or ownership over the resulting cell-lines? Are the benefits of exploitation appropriately shared? Have developed countries simply switched the form in which they exploit less-developed countries, from taking natural resources to taking genetic material?

Whether the Canadian PO became troubled by such questions is unclear. After its initial burst of enthusiasm, however, it decided to refuse a patent for a new hybrid soybean variety, produced only "accord-

⁴⁸ Diamond v. Chakrabarty, 447 U.S. 303 (1980).

⁴⁹ Re Abitibi Co. (1982), 62 C.P.R. (2d) 81 at 89 (Patent Appeal Bd. & Commissioner of Patents) [Abitibi]: Re Application for Patent of Connaught Laboratories (1982), 82 C.P.R. (2d) 32 (Patent Appeal Bd. & Commissioner of Patents).

⁵⁰ Abitibi, ibid., at 90.

ing to the laws of nature." In affirming, the Federal Court of Appeal went on to deny that hybrid plants were according to "common and ordinary meaning" a manufacture or composition. They were not "produced from raw materials" or "a combination of two or more substances united by chemical or mechanical means," except in a metaphorical sense.³¹ This decision prompted the PO to turn 180 degrees and to refuse patents for higher life forms like plants and animals. The patent bar and the biotechnology industry, not unnaturally, took issue, arguing that no Canadian precedent definitively prevents the patenting of genetically engineered life forms. Until this challenge is resolved, the PO will continue to issue patents for processes for producing plants and animals if there is "significant technical intervention by man," but not for traditional biological breeding processes for producing plants and animals, since these are "essentially natural biological processes."³²

By contrast, the U.S. Patent and Trademark Office in 1987 announced it would allow patents for "non-naturally occurring non-human multicellular living organisms, including animals." This arose in a case where a genetically altered oyster, designed for year-round eating, was thought to be patentable subject matter.53 A flurry of activity then ensued around the so-called Harvard mouse. The rodent had been implanted by Harvard researchers with a cancer gene, and was useful as a standard tester for cancer cures in humans. The researchers obtained a U.S. patent in 1988. They failed, however, in 1995 in their attempt to obtain a Canadian patent, but this refusal is currently under appeal to the courts. A European patent application was initially successful, but it prompted a battle between pro-patent Eurocrats and a sceptical European Parliament, as well as proceedings by the Green Party to revoke the grant. Meanwhile, in the United States, although the National Institutes of Health in 1994 abandoned their attempt to patent the entire human genome,⁵⁴ more modest U.S. patents have been granted for recombinant animal and human DNA

⁵¹ Re Application for Patent of Pioneer Hi-Bred Ltd. (1986), 11 C.P.R. (3d) 311 at 319–20 (Patent Appeal Bd. & Commissioner of Patents), [1987] 3 EC. 8 at 13 (C.A.), aff'd on other grounds (sub nom. Pioneer Hi-Bred Ltd. v. Canada (Commissioner of Patents)), above note 16.

⁵² MOPOP, above note 9, § 16.05; Re Application No. 079,973 (Now Patent No. 1,069,071) (1979), 54 C.P.R. (2d) 124 (Patent Appeal Bd. & Commissioner of Patents).

⁵³ Re Allen, 2 U.S.P.Q.2d 1425 (P.T.O. Bd. App. & Int. 1987). (1987), 1077 Official Gazette of the U.S. Patent and Trademark Office announced the new policy.

⁵⁴ R.S. Eisenberg & R.P. Merges, Opinion Letter as to the Patentability of Certain Inventions Associated with the Identification of Partial cDNA Sequences (1995) 23 AIPLA Q.J. 1.

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The controversy continues worldwide. In 1996 Papua New Guinea threatened to take the U.S. government before the International Court of Justice over a U.S. government-owned patent that claimed a human cell-line developed from blood taken from a Papua New Guinea tribesman in circumstances of dubious consent.

g) Plant Varieties

Concerns like those just discussed in respect of patenting life were not enough to prevent Canada from filling the gap in patent protection for plant life. This was done by passing the Plant Breeders' Rights Act (PBR Act) in 1990 and acceding the following year to the International Convention for the Protection of New Varieties of Plants of 1961. Administered by the Department of Agriculture, the PBR Act provides WTO members on registration with eighteen years' patent-like protection covering sale and propagation for sale of prescribed distinct new plant varieties - cultivars, clones, breeding lines, or hybrids that can be cultivated. The items prescribed so far are a mixed bag: African violet, alfalfa, apple, barley, bean, begonia, blueberry, canola/rape, cherry, chrysanthemum, clematis, corn, creeping red fescue, dianthus, flax, grapevine, impatiens, Kentucky bluegrass, lentil, maple, mustard, oats, peach, pear, pea, pelargonium, plum, poinsettia, potato, potentilla, raspberry, rose, soybean, spirea, strawberry, timothy, viburnum, wheat, and yew.55 The PBR holder must pay annual maintenance fees and provide propagating material throughout the term of the right. The right does not prevent the development of different varieties from protected plants or the use of seeds taken from protected varieties.

The philosophy behind PBRs rejects the view that germplasm is the common heritage of mankind and thus unable to be privatized. The common heritage theory was originally supported by the less-developed nations that house most of the world's plant species. It was found to benefit them little in practice. Having let their germplasm leave their borders for nothing, they found the proprietary re-engineered seeds either unaffordable or irrelevant to their needs.⁵⁰ Consequently, the 1992 UN *Convention on Biological Diversity* simultaneously endorsed both national sovereignty over and worldwide access to genetic resources. How these contradictory concepts could stand together was left tantalizingly

⁵⁵ Plant Breeders' Rights Act, S.C. 1990, c. 20, s. 2, defs. "new variety," "plant variety," and "prescribed"; s. 4, s. 6 [PBR Act]; Plant Breeders' Rights Regulations, SOR/91-594, Sched. I; D'Iorio & J.A. Erratt, "Plant Breeders' Rights — Practical Considerations" (1994) 11 Can. Intell. Prop. Rev. 277.

⁵⁶ The seeds came typically bundled with compatible pesticides produced by the same petrochemical or pharmaceutical firm that owned the plant patent or PBR.

unclear. The *Convention*'s ambivalence over intellectual property's role was, however, only temporary. In 1994 *TRIPs* bound even developing states to move towards patent or PBR protection for plants.

The transition is not likely to be frictionless. A U.S. patent over all forms of genetically engineered cotton was eventually revoked after widespread opposition, but it has not stopped strategic patenting that privatizes and commercializes knowledge that some Third World nations to date have treated as free to all.³⁷ Many of the same objections raised against patenting life generally⁵⁸ have also been levelled against the extension of monopoly rights to plants and seeds.

h) Medicine and Food

After 1923, Canada issued patents only for new processes for making new medicines and foods, not for the products themselves. The patents were subject to compulsory licensing at low royalty rates, leading to a thriving generic drug industry. Under pressure from the U.S. pharmaceutical drug industry and its proxies in the U.S. government, this system was entirely dismantled between 1987 and 1993. Product patents for medicine and food are now granted, compulsory licensing is gone, and a Patented Medicine Prices Review Board monitors patented medicines for "excessive" prices.³⁹ The Board claims to have kept patented drug price increases close to the rate of inflation and to have restrained the opening price at which new patented drugs enter the market. For example, in 1994 and 1995 drug prices decreased slightly, despite an increase in the consumer price index. Overall prices are nevertheless higher than when compulsory licensing was in full swing, thus creating one more problem for Canada's embattled health care system.

4) Unpatentable Inventions

Some matters may be unpatentable.

⁵⁷ Compare R.L. Margulies, "Protecting Biodiversity: Recognizing International Intellectual Property Rights in Plant Genetic Resources" (1993) 14 Mich. J. Int'l L. 322, with V. Shiva & R. Holla-Bhar, "Intellectual Piracy and the Neem Tree" (1993) 23 Ecologist 223.

⁵⁸ See section B(3)(f), "Patenting Life," in this chapter.

⁵⁹ P Act, above note 1, ss. 79–103; Patented Medicines Regulations, SOR/88–474; ICN Pharmaceuticals Inc. v. Canada (Patented Medicine Prices Review Board) (1996), 68 C.P.R. (3d) 417 (Fed. C.A.) [ICN].

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a) Material under Other Intellectual Property Laws

Patenting should usually be denied where adequate protection exists under other intellectual property laws.⁶⁰ Semiconductor topographies are protectable under the *Integrated Circuit Topography Act*, plant varieties under the *PBR Act*, designs under the *Industrial Design Act*, trademarks under the *Trade-marks Act* and the law of passing-off, literary and artistic material under the *Copyright Act*. Why grant patents as well? Architectural or engineering plans and instructions for speech therapy and written directions for use — all protected by copyright — have therefore been refused patents.⁶¹ But printed material serving a mechanical end may be patentable — for example, a method of printing a language to indicate stress and inflection, for scanning and encoding into a device for mechanical aural reproduction.⁶²

b) Natural Phenomena, Scientific Principles, Abstract Theorems

A newly discovered natural law or phenomenon would include a new plant or animal found in the wild, a new mineral in the earth, or any other "product of nature." Other "discoveries" are equally unpatentable, such as "mere scientific principle or abstract theorem" or other purely mental operation.⁶³ Einstein could not patent the theory of relativity, nor could Newton the theory of gravity. Patents can, of course, be granted for a new practical application of the theory of gravity — for example, on an improved gravity pump.

c) Schemes, Plans, Business Methods

Many "sure-fire" schemes for winning money on lotteries or the racetrack have been invented, but none are patentable. Methods for aircraft pilots to handle the controls so as to reduce engine noise on takeoff are unpatentable: "as much outside the operation of any of the useful arts as would be a trainer's direction to a jockey in his control of a racehorse."⁶⁴ As in Europe,⁶⁵ systems for operating bank accounts or setting up trading markets for securities should also be unpatentable.

⁶⁰ Compare section B(4)(d), "Computer Programs," in this chapter.

⁶¹ Lawson, above note 39; Re Dixon Application No. 203 (1978), 60 C.P.R. (2d) 105 at 118 (Patent Appeal Bd. & Commissioner of Patents); Wellcome Foundation Ltd. v. Australia (Commissioner of Patents) (1980), 145 C.L.R. 520 (Austl. H.C.).

⁶² Pitman's Application, [1969] R.P.C. 646 at 649 (Patent Appeal Tribunal).

⁶³ P Act, above note 1. s. 27(8); Pioneer, above note 16.

⁶⁴ Rolls-Royce Ltd.'s Application, [1963] R.P.C. 251 at 255 (Patent Appeal Tribunal).

⁶⁵ For example, Patents Act, above note 28, s. 1(2)(c), excluding "a scheme, rule or method for performing a mental act, playing a game or doing business... as such."

d) Computer Programs

Many countries are reluctant to grant patents for computer programs, fearing that technological progress in this volatile industry would be impeded. The Canadian PO has adopted this formal position since 1978. It does not matter theoretically whether the claim is phrased as a new method of programming computers or as an apparatus claim covering a newly programmed computer. Programs are effectively treated as algorithms — "a set of rules or processes for solving a problem in a finite number of steps" — and so fall under the prohibition against patenting abstract theorems.⁶⁶ A program may do sums faster than an unaided human, but that does not make doing sums patentable even if useful data result.⁶⁷ Patents are nevertheless allowed for a "computing apparatus programmed in a novel manner, where the patentable advance is in the apparatus itself," or for a "method or process carried out with a specific novel apparatus devised to implement a newly discovered idea."⁶⁸

A 1981 U.S. decision allowed a patent for a rubber-curing process that depended on the computerized application of a known algorithm, and the Canadian PO has accepted this where a "real change in a tangible thing," not just the production of information, results.⁶⁹ Thus, a computerized method of controlling the operation of an industrial plant is patentable.⁷⁰ The United States has since allowed apparatus claims for *a general computer as modified by a new computer program.*⁷¹ The Canadian PO has not to date formally changed its policy. Indeed, on 21 February 1995, in the wake of the new U.S. ruling, the Canadian PO issued the following guidelines, reaffirming its earlier position:

 Unapplied mathematical formulae are considered equivalent to mere scientific principles or abstract theorems which are not patentable under section 27(3) of the Patent Act [now section 27(8)].

⁶⁶ Re Application No. 096,284 (1978), 52 C.P.R. (2d) 96 at 100 (Patent Appeal Bd. & Commissioner of Patents) [096,284]; see section B(4)(b), "Natural Phenomena, Scientific Principles, and Abstract Theorems," in this chapter.

⁶⁷ Schlumberger Canada Ltd. v. Canada (Commissioner of Patents), [1982] 1 EC. 485 (C.A.); Re Application for Patent No. 178,570 (1983), 2 C.P.R. (3d) 483 (Patent Appeal Bd. & Commissioner of Patents) [178,570].

^{68 096,284,} above note 66 at 111-12

^{69 178,570,} above note 67, following Diamond, above note 29.

⁷⁰ Re Application for Patent of Tokyo Shibaura Electric Co. (sub nom. Rc Application No. 241,635 for Patent by Tokyo Shibaura Electric Co.) (1985), 7 C.P.R. (3d) 555 (Patent Appeal Bd, & Commissioner of Patents).

⁷¹ Re Alappat, 33 E3d 1526 (Fed. Cir. 1994). See also U.S. Patent & Trademark Office, Request for Comments on Proposed Examination Guidelines for Computer-Implemented Inventions, 60 Fed. Reg. 28,778 (1995), Fujitsu Ltd.s. Application, [1996] R.P.C. 511 at 530–31 (Pat. Ct.) on U.K. practice.