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A PROPOSED APPROACH TO THE ANALYSIS OF COMPUTER PROGRAM COPYRIGHT INFRINGEMENT IN CANADA

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Abstract

Canadian computer program copyright infringement decisions are characterized by prolix reasoning and inconsistent methodological approaches. In this context, there exists a need for the explication of a revised approach to the analysis of infringement vis-à-vis production and reproduction rights. Herein the author explicates a proposed approach, which holds true to the dictates of the idea/expression dichotomy and the requirement of originality. It recognizes a difference between "copyrightable" and "protected by copyright" regarding parts of a computer program, rejects the U.S. abstraction-filtration-comparison test, allows a court to consider all admissible evidence when making the assessment of copying in fact, restrains the taking of parts of a computer program that in quality constitute original expression, and provides justification for the "weeding-out" favoured by the courts. The proposed approach provides a sound foundation for courts and lawyers to deal with issues looming on the litigation horizon as regards computer program copyright infringement.

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Introduction

In the last part of the 20th century a computer revolution began in which we are presently taking part. The use of computers has transformed modern society into a high-tech global community in which geographic boundaries no longer represent barriers to communication. In this global economy, businesses now rely heavily upon computers to conduct their affairs. These computers are driven by computer programs that allow users to manipulate data and customize functionality to increase productivity and at the end of the day, make life easier. Computer programs also find purchase in a wider array of applications including entertainment and learning. Such computer programs often fill a unique niche and provide some businesses with a marketable product.

The real value in today's software industry is associated with intangible intellectual property assets rather than those traditional tangible assets the economy is familiar with. Valuation often depends upon the relative strength of intellectual property assets, as determined by the ability to successfully assert intellectual property rights when infringed.

Under the current Canadian legal regime, the developer of a computer program can find legal protection for its intellectual property assets through various statutory systems including the law of copyright. However, as the law is often slow to adapt to change, the application of copyright to computer programs has been characterized by a re-shaping of traditional legal principles to fit the unique requirements of computer programs, which are generally utilitarian in nature. As is often the case with developing areas of law, solutions to the unique requirements have thus far been hammered-out on the anvil of litigation to the detriment of many plaintiffs. Indeed, as a

result of its claim for computer program copyright infringement in *Delrina*[1], one of the leading cases, not only did the plaintiff learn that the defendant's activities did not infringe the plaintiff's copyright, it also learned that much of its marketable computer program was not protectable.

One of the fundamental problems faced when asserting the rights associated with copyright in computer programs is that the Canadian jurisprudence has not yet reached a common understanding of the proper methodological approach to the analysis of infringement. The crux of the matter is whether a court ought to dissect a computer program into its component parts with a view to determining whether copyright protects the dissected parts. If the answer is in the affirmative, then the question remains as to the appropriate stage of the analysis for this dissection to occur. Furthermore, as it would appear that the concept of filtration or "weeding-out" has been entrenched in Canadian law vis-à-vis computer program copyright infringement, the issue becomes what, if anything, ought to be weeded-out from the infringement analysis and at what stage ought the weeding-out take place.

In a case in which there is no evidence of a line-by-line exact duplication by the defendant of an entire copyrighted computer program, the court is faced with conceptual issues exacerbated by both the technological complexities associated with computer programs and the measures taken by defendants to disguise their wrongful activities. Moreover, in such an instance, a delicate balance must be struck between the copyright holder's rights and the public interest in the free exchange of ideas. As a matter of praxis, there are unusually adverse risks associated with the commencement of a copyright infringement action in relation to computer programs under a

[1] *Delrina Corp. (c.o.b. Carolian Systems) v. Triolet Systems Inc.* (1993), 47 C.P.R. (3d) 1 (Ont. Gen. Div.), aff'd (2002), 17 C.P.R. (4th) 289 (C.A.), leave to appeal refused [2002] S.C.C.A. No. 189 (QL).

regime wrought with confusion and uncertainty. Therefore, certainty is needed in order to more fully weigh the risk of litigation through a precise explication of the methodology applicable to infringement analysis in Canada. Moreover, certainty in approach will allow litigants to gather and present evidence in a cogent manner and allow for transparency in the judicial decision-making process.

In *Delrina (C.A.)*[2], the Ontario Court of Appeal's findings provided guidance with respect to the proper analytical approach to computer program copyright infringement. The Court of Appeal's decision in effect should have eliminated any confusion regarding the correct approach to infringement analysis. Indeed, the Supreme Court of Canada refused to grant leave to appeal. However, instead of eliminating the confusion, it would appear as though *Delrina (C.A.)* has become a contributing factor to the continued uncertainty surrounding the correct approach to infringement analysis. For example, at least one court and commentator have interpreted and applied *Delrina* in a manner whereby a relatively confusing U.S. methodology known as the abstraction-filtration-comparison test has been purportedly adopted in Canada. It will be demonstrated herein that this is in fact not the case.

The prolixity of the jurisprudence dealing with the issue of computer program copyright infringement in Canada and the U.S. as well as the seemingly magnetic-pull felt by Canadian jurists towards the U.S. paradigm have also contributed to the uncertainty surrounding the correct approach to infringement analysis. Notwithstanding the fundamental differences between the Canadian and U.S. statutory copyright regimes resulting in Canadian judicial

[2] *Delrina Corp. (c.o.b. Carolian Systems) v. Triolet Systems Inc.* (2002), 17 C.P.R. (4th) 289 (Ont. C.A.), leave to appeal refused [2002] S.C.C.A. No. 189 (QL).

warnings against too much reliance on the latter[3], the U.S. treatment of the issues remains a seductive solution to the apparent confusion; however, the U.S. approach is no panacea. It will be demonstrated that although both Canada and the U.S. base their respective copyright law considerations on the same fundamental doctrines, the U.S. is focused on a line of inquiry that results in a complex methodology characterized by difficulty in its practical application. However, the Canadian *Copyright Act*[4] allows for this line of inquiry to be avoided.

As a result, the goal of this thesis is to elucidate a proposed Canadian approach to the analysis of infringement of copyright in computer programs. The proposed approach developed herein is guided by two fundamental copyright doctrines known as the idea/expression dichotomy and the requirement of originality. Furthermore, the proposed approach is consistent with many of the principles established in the leading cases, including the dictates of the Ontario Court of Appeal in *Delrina (C.A.)*, and has the capacity of addressing issues that loom on the Canadian legal horizon with respect to the litigation of copyright infringement vis-à-vis computer programs.

Under the proposed approach courts are not to weed-out non-protectable component parts of a copyrighted computer program from the analysis of whether an alleged infringer has, as a matter of fact, copied therefrom. This is distinct from the U.S. approach, where weeding-out in this manner is mandated. Rather, in determining whether there has been copying in fact, under the proposed approach a court may look to all the evidence that establishes a causal connection between the plaintiff's copyrighted computer program and the alleged infringer's materials,

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[3] With respect to copyright Estey J., writing on behalf of the Court, cautioned against too much Canadian reliance on American jurisprudence due to fundamental differences in the statutory regimes in *Compo Co. v. Blue Crest Music Inc.*, [1980] 1 S.C.R. 357 at 367.

[4] R.S.C. 1985, c. C-42, as amended.

regardless of whether that evidence relates to parts of the plaintiff's computer program that may not be protected by copyright. Furthermore, if it turns out that the alleged infringer has produced or reproduced the plaintiff's copyrighted computer program *in toto*, or a copyrightable sub-component thereof, then the court need not resort to any weeding-out. It is during the analysis of whether that which has been produced or reproduced by the alleged infringer constitutes a substantial part of the copyrighted computer program, or any copyrightable sub-component thereof, that the court must dissect the computer program and weed-out those parts that are not protectable by copyright. In order for a part to be protectable by the copyright that subsists in the copyrighted computer program, or copyrightable sub-component thereof, with which the part at issue is associated, it must, in quality, constitute the author's original expression. In such a case the part is considered to be a substantial part of the copyrighted computer program, or of a copyrightable sub-component thereof, as the case may be. The illicit production or reproduction of such a part by the defendant constitutes an act of copyright infringement, though the nature and quantum of relief remains to be decided.

In this sense under the proposed approach, something that is "copyrightable" is something in which copyright may subsist in accordance with the *Copyright Act*. By definition, something that is copyrightable is also "protectable by copyright", in the sense that a court will restrain its unauthorized production or reproduction. However, something that is protectable by copyright is not necessarily copyrightable, as a court will restrain the production or reproduction of any substantial part of a copyrighted computer program, or of a copyrightable sub-component thereof; the subsistence of copyright in such substantial part itself is not obligatory. Under the proposed approach to infringement analysis, the part produced or reproduced need not be

independently copyrightable, for if it were, then considerations of substantiality would not need to be made; the court would be dealing with the unauthorized production or reproduction of a copyrighted work *in toto*.

Though the concepts of "copyrightable" and "protectable by copyright" might seem confusing on first reading, they flow directly from the language used and dichotomy created by Morden J.A. in *Delrina (C.A.)*. The subtleties are therefore important in relation to developing the proposed approach to infringement analysis. It ill-behooves any consideration of computer program copyright infringement to ignore this apparent dichotomy. Notwithstanding that the term "copyrightable" lacks a precise recognized dictionary definition, if the proposed approach were not to deal with the difference between something that is copyrightable and something that is protectable by copyright, it would fail to address a fundamental distinction recently recognized by the Ontario Court of Appeal. In addition, this difference allows the proposed approach to be reconciled with jurisprudence that might appear to be improperly affording some copyright protection to ideas.

In Chapter 1 the relevant provisions of the Canadian copyright regime are detailed including general commentary on how a plaintiff proves infringement regarding its production and reproduction rights, according to the status quo. The two-step analysis dictated by the proposed approach is introduced. In addition, the idea/expression dichotomy and the requirement of originality are discussed, as the proposed approach to infringement analysis is guided by these traditional fundamental doctrines of copyright law. Finally, the proposed approach is explained in the form of a diagrammatic depiction, which highlights the substantive difference between

something that is "copyrightable" and something that is "protectable by copyright". In Chapter 2 the mechanics and considerations behind the first step in the two-step proposed approach are discussed and considered with regard to relevant case law. In this chapter, non-literal elements of a copyrighted work are introduced in relation to the establishment of copying in fact. In Chapter 3 the second part of the two-step proposed approach is discussed with elucidation of the potential for a copyrighted computer program to consist of copyrightable sub-components. In addition, issues surrounding the substantiality of that which has been produced or reproduced by the alleged infringer are considered while the method of dissection and weeding-out are discussed vis-à-vis the proposed approach. The relevance of non-literal elements under the proposed approach as regards the analysis of substantiality is provided. Finally, some conclusions regarding the proposed approach are made. In Chapter 4 there is a discussion of the proposed approach in respect of early Canadian analyses relating to copyright infringement and computer programs that are found in the relevant case law. Highlighted in this chapter is the judicial import of non-literal elements of a computer program including structure, sequence, organization, graphical user interface and user interface; the Supreme Court of Canada's input vis-à-vis the physical replication of computer programs and the flexibility of copyright; some of the problems associated with proving copying in fact; and the inappropriate consideration of parts of a computer program in terms of their "copyrightability". In Chapter 5 the proposed approach is considered in respect of various relevant U.S. approaches. It is demonstrated that the U.S. approaches have been the source of the improper Canadian tendency towards the analysis of "copyrightability" of the individual parts of computer programs. In addition, the proposed Canadian approach, which rejects the U.S. abstraction-filtration-comparison test, is compared therewith demonstrating that, in some respects, they are not all that dissimilar. In Chapter 6 the

proposed Canadian approach to infringement analysis is considered in depth with regard to the relevant leading Canadian authorities with a view to discussing the errors in approaches used as well as the differences and similarities evident in the proposed approach. In this chapter, the judgment in *Delrina (C.A.)* is seen to accord in the most part with the proposed approach, and the Canadian manifestation of "weeding-out" is properly understood and justified. As well, Justice Morden's dichotomy between "copyrightable" and "protectable by copyright" is reconciled with the proposed approach. Finally, in Chapter 7 the inconsistencies apparent in the jurisprudence with respect to recognized approaches to infringement analysis are assessed and the proposed approach is presented as a solution to a selection of legal issues that loom on the Canadian litigation horizon.

Chapter 1: The Canadian Copyright Regime and Fundamental Copyright Doctrines

1.1 Canadian Statutory Provisions

In order to understand the proposed approach to analyzing copyright infringement vis-à-vis computer programs, the mosaic generated through various provisions of the *Copyright Act* must first be developed. This mosaic ought not to be considered in a historical vacuum, as copyright rights are really nothing new. In his annotated *Copyright Act*, Tamaro provides a brief but interesting outline of the historical recognition of certain rights afforded to authors, which have been developed into copyright and are now codified by the *Copyright Act*.[5] A much more detailed and very illuminating history of copyright law is provided by Handa[6] as well as by McKeown.[7]

Under the *Copyright Act* as it exists today, certain conditions are found with respect to the subsistence of copyright in every original literary, dramatic, musical and artistic work. One of the explicit conditions found in s. 5 is originality, which is explored herein in detail.[8] The other explicit conditions found in s. 5 are of little significance to the proposed approach but are all related, in one way or another, to a "treaty country", which is defined as a Berne Convention country, UCC country, or a member of the WTO.

> 5. (1) Subject to this Act, copyright shall subsist in Canada, for the term hereinafter mentioned, in every original literary, dramatic, musical and artistic work if any one of the following conditions is met: ... [9]

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[5] Normand Tamaro, *The 2004 Annotated Copyright Act* (Toronto: Thomson, 2003) at pp. 193 to 195 [Tamaro, *Annotated Copyright Act*].
[6] Sunny Handa, *Copyright Law in Canada* (Markham: Butterworths, 2002) Ch. 3 [Handa, *Copyright Law*].
[7] John S. McKeown, *Fox on Canadian Law of Copyright and Industrial Designs*, 4th ed. (Toronto: Thomson, 2003) Ch. 2 [McKeown, *Fox on Copyright*].
[8] *Copyright Act*, *supra* note 4 at s. 5(1). For a consideration of "originality", see Chapter 1.4.
[9] *Ibid.* at s. 5(1) & s. 2 "treaty country". The requirement of fixation will be discussed in Chapter 1.3.

In *Théberge*[10], Binnie J. explained the modern dual objective of the *Copyright Act* as establishing a balance between the public interest and the rights of authors.

> The *Copyright Act* is usually presented as a balance between promoting the public's interest in the encouragement and dissemination of works of the arts and intellect and obtaining a just reward for the creator ... The proper balance among these and other public policy objectives lies not only in recognizing the creator's rights but in giving due weight to their limited nature.[11]

Notwithstanding the dual objective, there is no requirement of dissemination under the *Copyright Act* vis-à-vis the subsistence of copyright. Though Justice Binnie's explication of this objective may in fact detract from the long-established objectives recognized in the case law[12], it would appear as though we are now stuck with this duality, as McLachlin C.J. cited Justice Binnie's statement with approval in the recently decided copyright case *CCH Canada*.[13] Thankfully, this potential controversy need not be resolved in order to understand the proposed approach to infringement analysis.

The *Copyright Act* provides the definition for "every original literary, dramatic, musical and artistic work" as follows.

> "every original literary, dramatic, musical and artistic work" includes every original production in the literary, scientific or artistic domain, whatever may be the mode or form of its expression, such as compilations, books, pamphlets and other writings, lectures, dramatic or dramatico-musical works, musical works, translations, illustrations, sketches and plastic works relative to geography, topography, architecture or science;[14]

Other relevant definitions are provided for the terms "work", "literary work", "computer program" and "compilation".

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[10] *Théberge v. Galerie d'Art du Petit Champlain Inc.*, [2002] 2 S.C.R. 336.
[11] *Ibid.* at paras. 30 to 31.
[12] Though beyond the scope of this paper, it is of interest to note that in Tamaro, *Annotated Copyright Act*, *supra* note 5 at pp. 202 to 215 Tamaro discussed Justice Binnie's explication of the *Copyright Act's* objectives and points out the supposed departure from demonstrably well-established objectives recognized in the case law and other jurisprudence.
[13] *CCH Canada Ltd. v. Law Society of Upper Canada*, [2004] S.C.R. 339, [2004] S.C.J. No. 12 at para. 10 (QL).
[14] *Copyright Act*, *supra* note 4 at s. 2 "every original literary, dramatic, musical and artistic work".

"work" includes the title thereof when such title is original and distinctive;[15]

"literary work" includes tables, computer programs, and compilations of literary works;[16]

"computer program" means a set of instructions or statements, expressed, fixed, embodied or stored in any manner, that is to be used directly or indirectly in a computer in order to bring about a specific result;[17]

"compilation" means

(a) a work resulting from the selection or arrangement of literary, dramatic, musical or artistic works or of parts thereof, or

(b) a work resulting from the selection or arrangement of data;[18]

The *Copyright Act* also provides for what copyright means in association with a work. Among other things, copyright includes the right to produce or reproduce a copyrighted computer program or any substantial part thereof.

3. (1) For the purposes of this Act, "copyright", in relation to a work, means the sole right to produce or reproduce the work or any substantial part thereof in any material form whatever, to perform the work or any substantial part thereof in public or, if the work is unpublished, to publish the work or any substantial part thereof, and includes the sole right...[19]

A general definition of copyright infringement is also provided.

27. (1) It is an infringement of copyright for any person to do, without the consent of the owner of the copyright, anything that by this Act only the owner of the copyright has the right to do.[20]

As a result, the developed mosaic demonstrates that with respect to a copyrighted computer program, the copyright that subsists therein gives the copyright holder, *inter alia*, the exclusive right to produce or reproduce the computer program, or any substantial part thereof, in any material form whatever. These are considered the production and reproduction rights, which

[15] *Ibid.* at s. 2 "work".
[16] *Ibid.* at s. 2 "literary work".
[17] *Ibid.* at s. 2 "computer program".
[18] *Ibid.* at s. 2 "compilation".
[19] *Ibid.* at s. 3(1).
[20] *Ibid.* at s. 27(1).

form a part of the bundle of rights that is copyright.[21] The development of a proposed approach to the analysis of infringement of these rights is the focus of this thesis.

Traditionally, the right to produce has been viewed as the exclusive right to bring the work into existence for the first time in any material form, whereas the right to reproduce has been viewed as the exclusive right of repeating the production of a work, in any material form.[22] "If the right to reproduce a work were not included in copyright protection, anyone would be able to fix the work either in the same form or in a derived form without the author's consent."[23] Related to this concept is one of the un-written requirements for the subsistence of copyright known as "fixation", which has been developed by the courts.[24] The manner of proving infringement of these so-called production and reproduction rights is now considered.

1.2 Proving Copyright Infringement in Canada

Under s. 3(1) of the *Copyright Act*, copyright in a computer program includes the sole right to produce or reproduce it, or any substantial part thereof. According to s. 27(1), a person has committed an act of copyright infringement if she has produced or reproduced a copyrighted computer program or a substantial part thereof without the consent of the copyright holder. This is primary infringement.[25] Therefore, in order to understand the proposed approach to analyzing

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[21] See generally Handa, *Copyright Law*, *supra* note 6 at pp. 196 to 197. See also McKeown, *Fox on Copyright*, *supra* note 7 at pp. 7-2 to 7-4.
[22] Tamaro, *Annotated Copyright Act*, *supra* note 5 at pp. 215 to 226.
[23] *Ibid.* at p. 226.
[24] George S. Takach, *Computer Law*, 2nd ed. (Toronto: Irwin Law, 2003) at Ch. 2 [Takach, *Computer Law*]. The requirement of fixation will be considered further in Chapter 1.3.
[25] Handa, *Copyright Law*, *supra* note 6 at p. 260.

copyright infringement vis-à-vis computer programs, the terms "produce" and "reproduce" and the phrase "any substantial part" must be unpacked in light of established norms.

In *Francis, Day & Hunter v. Bron*[26] Lord Diplock provided an explication of the test to be met in establishing copyright infringement, though not with particular reference to computer programs.

> First, as to the law; ... it is well established that to constitute infringement of copyright in any literary, dramatic or musical work there must be present two elements: First, there must be sufficient objective similarity between the infringing work and the copyright work, or a substantial part thereof, for the former to be properly described, not necessarily as identical with, but as a reproduction or adaptation of the latter; secondly, the copyright work must be the source from which the infringing work is derived ... But, while the copyright work must be the source from which the infringing work is derived, it need not be the direct source; ... there must be a causal connexion between the copyright work and the infringing work. To borrow an expression once fashionable in the law of negligence, the copyright work must be shown to be a *causa sine qua non* of the infringing work.[27]

This statement of the law has been accepted in some Canadian cases[28] and in particular by Sookman[29] as well as by McKeown.[30] This test focuses on the result of a defendant's allegedly infringing activities with objective similarity and a causal connection being the elements necessary for a finding of copyright infringement. The objective similarity must be sufficient such that the alleged infringer's materials can be described as a reproduction or adaptation of the copyrighted work. The causal connection is attributable to the source, direct or otherwise, of the alleged infringer's materials being the copyrighted work.

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[26] *Francis, Day & Hunter Ltd. et al. v. Bron (trading as Delmar Publishing Co.) et al.*, [1963] 2 All E.R. 16 (Eng. C.A.).
[27] *Ibid.* at p. 27. See generally E.P. Skone James, *Copinger and Skone James on Copyright*, 12th ed. (Agincourt: Carswell, 1980) at p. 175 to 179 [*Copinger and Skone James on Copyright*].
[28] *Gondos v. Hardy* (1982), 64 C.P.R. (2d) 145 (Ont. H.C.J.); *North West Marine Technology, Inc. v. Crosby (c.o.b. Micro Mark)*, [1996] B.C.J. No. 2203 (S.C.) (QL).
[29] Barry B. Sookman, *Sookman: Computer, Internet and Electronic Commerce Law* (Toronto: Carswell, 2004) at p. 3-190 [Sookman, *Computer, Internet and E-Commerce Law*].
[30] McKeown, *Fox on Copyright, supra* note 7 at pp. 21-11 to 21-12.

It is apparent that there may in fact be more than one source for an alleged infringer's materials. As such, the problem with Lord Diplock's approach is that the objective similarities identified might not result from the causal connection identified. In other words, even though the alleged infringer did in fact use the plaintiff's copyrighted work as a source for its materials, under Lord Diplock's second step, the similarities identified under the first step might not be attributable thereto. As a result, although there is sufficient objective similarity and a causal connection, to put it in Lord Diplock's terminology, the copyrighted work would nevertheless not be the *causa sine qua non* of the infringing work. It is conceivably feasible, though highly unlikely, that a person could unwittingly duplicate a copyrighted computer program, or a substantial part thereof, through the exercise of an independent process of mind[31], or through access to information in the public domain.[32] The use of common sources may explain the form of a work and as a result, there will be no finding of infringement if the similarities are merely coincidental.[33] In such cases, copyright law has developed to ensure that there is no infringement as a result of considerations such as the defence of independent creation.[34] At the end of the day, "copying or reproduction must be established to show infringement."[35]

Thus, Lord Diplock's approach is awkward given the possibility of the existence of coincidental similarities at the same time as similarities resulting from a causal connection. In this regard, the proposed approach focuses the inquiry on what the alleged infringer generated as a result of its reference to the plaintiff's copyrighted work. The proposed approach to infringement analysis

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[31] Handa, *Copyright Law*, *supra* note 6 at pp. 260-261.
[32] Accidental similarity is the same as independent creation: McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-12.
[33] McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-33.
[34] *Hutton v. Canadian Broadcasting Corp.* (1992), 41 C.P.R. (3d) 45 at 48 (Alta. C.A.). See also Handa, *Copyright Law*, *supra* note 6 at p. 143.
[35] McKeown, *Fox on Copyright*, *supra* note 7 at pp. 21-33 to 21-34.

consists of two stages: (1) the determination of whether the alleged infringer has produced or reproduced something; and (2) whether that which has been produced or reproduced is: (i) the plaintiff's copyrighted computer program, *in toto*; or (ii) a copyrightable sub-component thereof; or (iii) any substantial part of either. This methodological approach holds true to the principles underlying Lord Diplock's approach, yet provides a more accurate methodology guided by the dictates of the idea/expression dichotomy and the requirement of originality.[36]

These two stages embody the elements of the proposed approach highlighted above in the Introduction, which are more fully described, and reduced to a diagrammatic representation, in Chapter 1.5. Chapters 2 and 3 provide elucidation of the first and second stage respectively and those aspects of the proposed approach that diverge from established norms are described in Chapter 3.5 where in addition, the subtleties of the proposed approach are indicated so as to provide the reader with warning as to the impact of Chapters 4, 5 and 6. In these chapters, the proposed approach is considered in respect of early Canadian computer program copyright cases, relevant U.S. approaches and leading Canadian cases. To provide normative context, the idea/expression dichotomy and requirement of originality must first be discussed.

[36] In the U.K., the approach applied in software copyright cases has diverged from Lord Diplock's approach to substantially accord with the approach put forth herein as the proposed approach to infringement analysis. See *IBCOS v. Barklays* (1994), 28 I.P.R. 25 (E.W. H.C.J.). See also *Cantor Fitzgerald International v. Tradition (UK) Ltd.*, [1999] E.W.J. No. 7301 at paras. 80 & 81 (H.C.J.) (QL) and Takach, *Computer Law*, *supra* note 29 at p. 151.

1.3 The Idea/Expression Dichotomy and Fixation

With respect to the subsistence of copyright in a work, originality is an explicit requirement under the *Copyright Act*[37], in the sense that a work must be original to the author. On the contrary, the idea/expression dichotomy is not explicitly found in the *Copyright Act*, but has developed into a further requirement for the subsistence of copyright. The two concepts are inextricably linked in that copyright protects original expression, not an original idea. In the context of literary works the idea/expression dichotomy has been explained as an "elementary principle of copyright law" by Thorson P. in *Moreau v. St. Vincent*:

> It is, I think, an elementary principle of copyright law that an author has no copyright in ideas but only in his expression of them. The law of copyright does not give him any monopoly in the use of the ideas with which he deals or any property in them, even if they are original. His copyright is confined to the literary work in which he has expressed them. The ideas are public property, the literary work is his own. Every one may freely adopt and use the ideas but no one may copy his literary work without his consent.[38]

At a fundamental level, the *Copyright Act* is focused on the protection of the way in which ideas are expressed by an author, not with the protection of the ideas themselves. This is the idea/expression dichotomy. McKeown explained the principle as follows.

> ... the Act is not concerned with the protection of ideas but with the expression of thought in concrete form. Ideas or opinions are not the subject of copyright but only the form in which those ideas or opinions are expressed. As a result, if the idea conveyed by or embodied in a copyright work is used without copying the form or language in which that idea is expressed, there will be no infringement.
>
> ...
>
> The distinction between an idea and the form in which it is expressed may be difficult to make in some cases [citations omitted].[39]

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[37] *Copyright Act*, *supra* note 4 at s. 5(1).
[38] *Moreau v. St. Vincent*, [1950] Ex. C.R. 198 at p. 203 (Can. Ex. Ct.).
[39] McKeown, *Fox on Copyright*, *supra* note 7 at pp. 21-5 to 21-6.

As McKeown put it, in order to be protected, an idea must be reduced to concrete form – "an idea is too nebulous to protect."[40]

It has been posited that the idea/expression dichotomy represents copyright law at its most basic level: "[a]t its most basic level, copyright protects the expression of ideas, but does not protect the ideas themselves. This separation is often referred to as the idea/expression dichotomy [citations omitted]."[41] However, putting the dictates into practical effect has been the bane of many judges, which has resulted in uncertainty, especially when copyright is being considered in reference to new classes of works.

> Finding the line that delineates idea from expression is not an easy task. For example, when dealing with computer programs which are, by their very nature, utilitarian works and hence intertwined with the ideas they seek to express, this task may become extremely complex.
>
> ...
>
> The essentially utilitarian nature of a computer program further complicates the task of distilling its idea from its expression. The difficulty inherent in creating a test that distills expression from idea is that, with an overly liberal view of expression, one risks granting monopoly protection over some ideas to the owners of works that embody them. This can, depending on the ethic underlying one's copyright regime, frustrate the very principles it seeks to uphold [citations omitted].[42]

It has been suggested that in drawing the line between idea and its expression, the focus points simply to whether the idea has been fixed, reduced, or embodied in a material form.[43] In this sense, it has been posited that the idea/expression dichotomy manifests as the unwritten requirement for fixation vis-à-vis every original work.[44] According to this proposition, it follows that the idea/expression dichotomy does not necessarily represent a clear break, and as a result, there exists some protection for ideas.

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[40] *Ibid.* at p. 4-4.
[41] Handa, *Copyright Law*, *supra* note 6 at p. 143.
[42] *Ibid.* at p. 144.
[43] Georges T. Robic & Jaques A. Léger, *Canadian Copyright Act Annotated* (Toronto: CIPS, 2004) at p. 2-230 [Robic & Léger, *Canadian Copyright Act*].
[44] *Ibid.* at pp. 2-243 to 2-245.

> However, care must be taken to distinguish between the definition of works in which copyright may subsist for the purposes of protection against infringement, and the array of rights, including derived rights, given to authors, by which they may exploit their work. It is submitted that the importance of "ideas" should not be overestimated: provided that a person's labour results in a work which meets the conditions of authorship, originality and fixation in one of the forms contemplated by the Act, the result deserves copyright protection. *Arguendo*, in the case of musical works, the distinction between ideas and expression becomes meaningless, since in music, the expression *is* the idea.[45]

However, it has been established that where there is only one, or a limited number of ways to express an idea, then the idea and its expression have merged, resulting in a product not protectable by copyright. This is commonly referred to as the doctrine of merger[46], and properly guards against the undue extension of monopoly rights to ideas.

There have been other explications of the requirement of fixation that do not directly involve the idea/expression dichotomy. It has been said that though not expressly found in all cases under the *Copyright Act*, in order to attract copyright, a work must be fixated.[47] In this sense, the requirement vis-à-vis the subsistence of copyright points to the expression of ideas in any material form. This conception of fixation, favoured by the proposed approach, recognizes that an idea may well be expressed and yet not be fixated, such as when an unwritten story is told; the ideas are expressed, but not necessarily fixated.

> The right [to produce or reproduce] only applies where the production or reproduction is "in any material form." As a general rule, copyright will subsist only in a work that is expressed ("fixed") in some material form. In *Canadian Admiral Corp. v. Rediffusion Inc.*, the Exchequer Court determined that a work must be expressed in some material form, capable of identification and having a more or less permanent endurance to be subject to copyright protection. At what point a work is sufficiently fixed in a material form is often cause for debate. For instance, questions have been raised as to whether computer memory ships, which can produce fleeting images on the screen, can be considered as fixed for the purposes of the Act [citations omitted].[48]

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[45] *Ibid.* at p. 2-243.
[46] Handa, *Copyright Law*, *supra* note 6 at p. 146; *Delrina (C.A.)*, *supra* note 2 at p. 306.
[47] Handa, *ibid.* at pp. 234 to 243.
[48] *Ibid.* at p. 197.

At the end of the day it is clear that there are no precise directions on how to draw the line between idea and its expression. According to Learned Hand "[n]obody has ever been able to fix that boundary, and nobody ever can."[49] However, in drawing the line assistance can be found through analogies with well-established examples in which protection has been denied on the basis of the idea/expression dichotomy, such as the following of a recipe[50], or the non-protection of facts[51], schemes, systems or methods.[52] In this sense, it may be easier to determine what does not attract copyright protection on the basis of guidance provided by the case law and categorical exceptions provided by the doctrine of merger.

In addition, it has been suggested by Handa that the scènes à faire doctrine also provides guidance in respect of drawing the line between idea and expression in that expression dictated purely by external factors will not be protected.

> Related to the doctrine of merger is the doctrine of scènes à faire. Scènes à faire states that where elements of a work are necessarily incorporated into the expression of a work, not because of creativity of selection and expression but because of external factors, copyright protection will not be granted [citations omitted].[53]

Indeed, it is evident that this doctrine, though not expressly relied upon, impacted Justice O'Leary's decision in *Delrina*, which will be reviewed in detail herein.

However, it is likely more correct to note under the proposed approach to infringement analysis that the scènes à faire doctrine arises as a result of the requirement of originality, rather than as a result of the dictates of the idea/expression dichotomy. This is because under the scènes à faire doctrine there is no grievance regarding whether or not there is expression. Rather, the objection

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[49] *Nichols v. Universal Pictures Corp.*, 45 F.2d 119 at 121 (2d Cir. 1930), cert. denied, 282 U.S. 902-903
[50] *Tri-Tex Co. v. Ghaly* (1999), 1 C.P.R. (4th) 160 (Que. C.A.).
[51] Handa, *Copyright Law*, *supra* note 6 at p. 150.
[52] McKeown, *Fox on Copyright*, *supra* note 7 at p. 4-6.
[53] Handa, *Copyright Law*, *supra* note 6 at p. 146.

stems from the fact that the author's expression did not require the exercise of skill and judgment. Therefore, when elements of a computer program are included purely because of external factors, then such elements do not meet the requirement of originality. It will be seen that under the proposed approach to infringement analysis, the practical result of this explication of the scènes à faire doctrine is that such elements cannot be considered to constitute "any substantial part" of the whole under s. 3(1) of the *Copyright Act*.

1.4 The Requirement of Originality

In *CCH Canada*[54], a full bench of the Supreme Court of Canada dealt with the issue of originality as a requirement for the subsistence of copyright in elements of court decisions. These decisions were published by publishers who asserted ownership of copyright therein. Additionally they were made available to the public through various services offered by the Law Society of Upper Canada's Great Library at Osgoode Hall in Toronto. The copyright infringement action was based upon the specific photocopying services offered by the Great Library through the provision of self-copy photocopiers as well as a custom copying service whereby materials were delivered to requesters. A unanimous court held that there was no copyright infringement based on the activities of the Law Society of Upper Canada. However, of particular interest is the Court's analysis of the subsistence of copyright in elements of the reported court decisions; the issue was initially framed by McLachlin C.J.: "Are the publishers'

[54] *CCH Canada*, *supra* note 13.

materials 'original works' protected by copyright [emphasis added]?"[55]; but then re-stated as: "Are the Publishers' Materials 'Original works' Covered by Copyright [emphasis added]?"[56]

When considering the law on the issue, McLachlin C.J. made specific reference to s. 5(1) of the *Copyright Act* and stated that "[a]lthough originality sets the boundaries of copyright law, it is not defined in the *Copyright Act*."[57] She then noted that, as a result of the idea/expression dichotomy, the requirement of originality applies with respect to expression and not the underlying idea.[58]

The tension relating to the standard of originality is exemplified in the case law wherein some courts have indicated that "a work that originates from an author and is more than a mere copy of a work is sufficient to ground copyright."[59] However, "[o]ther courts have required that a work must be creative to be 'original' and thus protected by copyright."[60] Indeed, Knopf noted that the extension of copyright to non-traditional classes of works has been a contributing factor to the ever-increasing standard of originality.

> As more and more attempts are made to bootstrap high technology and commercial information of no particular aesthetic value into the copyright system, courts seem to be applying a higher and higher threshold of originality in order to preserve some sense of the original purpose of copyright law, which was to encourage literary, artistic, dramatic and musical creativity.[61]

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[55] *Ibid.* at para. 4.
[56] *Ibid.* at para. 13.
[57] *Ibid.* at para. 14.
[58] *Ibid.* at para. 14: "Since copyright protects only the expression or form of ideas, 'the originality requirement must apply to the expressive element of the work and not the idea': [Handa, *Copyright Law*, *supra* note 6 at p. 209]."
[59] *Ibid.* at para. 15.
[60] *Ibid.* at para. 15.
[61] H.P. Knopf, "Limits on the Nature and Scope of Copyright", in G.F. Henderson, *Copyright and Confidential Information Law of Canada* (Toronto: Carswell, 1994) 229 at 241.

In addition, with respect to this tension Handa considered the impact of the development of information technology vis-à-vis the requirement of originality and wrote as follows.

> The notion of originality, a basic, stable and long-lasting tenet of copyright law, has also been thrown into flux by the development of information technologies. Recent case law and legislation concerning database protection has eschewed the accepted tests for when a work is to be considered original under the law. The uncertainty created has the potential to upset the very core of why we protect works to begin with.[62]

Handa's comments were written prior to the release of Chief Justice McLachlin's judgment in *CCH Canada*. Through her judgment the flux has been stabilized, at least for the time being, with the establishment of equilibrium. In explicating this middle ground, McLachlin C.J. referred to two Canadian cases as demonstrative of the opposite poles creating the tension: *U & R Tax Services v. H&R Block*[63] vis-à-vis the standard of originating from the author; and *Tele-Direct*[64] vis-à-vis the standard of creativity.

U & R Tax Services v. H & R Block was a copyright infringement case dealing with income tax forms. The plaintiff created its T1 General tax form in response to significant changes required as a result of amendments to Canadian tax laws. It was alleged that the defendant infringed the plaintiff's copyright in the form.

With respect to the issue of whether copyright subsisted in the plaintiff's form, Richard J., characterized the form as a literary work and embarked upon a discussion of the requirement of originality. Richard J. correctly pointed out that, according to the idea/expression dichotomy, it

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[62] Handa, *Copyright Law*, *supra* note 6 at p. 22.
[63] *U & R Tax Services Ltd. v. H & R Block Canada Inc.* (1995), 62 C.P.R. (3d) 257 (F.C.T.D.).
[64] *Tele-Direct (Publications) Inc. v. American Business Information, Inc.* (1997), 76 C.P.R. (3d) 296 (F.C.A.), leave to appeal refused, [1997] S.C.C.A. No. 660 (QL).

is the originality of the expression of the ideas embodied in a literary work that is of relevance to the issue of the subsistence of copyright.

> By the terms of the *Copyright Act* a literary work includes maps, charts, plans, tables and compilations. The [*Copyright*] *Act* makes no requirement as to the value of the literary work; it requires an original literary work and it is sufficient if there has been labour, skill, time, ingenuity, selection or mental effort expended in the production of same. The *Copyright Act* is not concerned with the originality of ideas, but with the expression of the thought in print or writing.[65]

In the result, Richard J. concluded that copyright subsisted in the plaintiff's form as an original literary work. The evidence established that the creation of the form by the plaintiff "involved labour, skill and judgment".[66] According to McLachlin C.J., the decision of Decary J.A. in *Tele-Direct* can be found at the opposite end of the spectrum.

In *Tele-Direct*, the plaintiff claimed copyright infringement in relation to its Yellow Pages directory, for which the subsistence of copyright in the whole was conceded by defendant's counsel. However, the issue was narrowed at trial in that the plaintiff asserted copyright in the selection and arrangement of certain information contained within the copyrighted Yellow Pages. In writing the judgment for the Federal Court of Appeal, Decary J.A. characterized the plaintiff as asserting copyright in a sub-compilation of data contained within the larger Yellow Pages compilation. It would appear from the judgments that what was alleged was that the defendant copied from the sub-compilation. However, the issue of infringement was not dealt with by Decary J.A., as it was found that the plaintiff did not have copyright in the sub-compilation due to a lack of originality.

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[65] *U & R Tax Services v. H & R Block*, *supra* note 63 at p. 264.
[66] *Ibid.*

In *Tele-Direct*, originality could not be established, according to the trial judge, because the plaintiff did not exercise the requisite level of skill, judgment or labour in generating the sub-compilation. With respect to the conclusion on this point by the trial judge, Decary J.A. commented as follows.

> The Trial Judge went on to conclude as follows:
>
> > In conclusion, [the plaintiff] arranged its information, the vast majority of which is not subject to copyright, according to accepted, commonplace standards of selection in the industry. In doing so, it exercised only a minimal degree of skill, judgment or labour in its overall arrangement which is insufficient to support a claim of originality in the compilation so as to warrant copyright protection. In my opinion, the defendant has successfully displaced the presumption in favour of copyright created by s. 34(3)(a) of the [*Copyright*] *Act*.
>
> I find no error in that conclusion.[67]

It is notable that there was no mention of creativity in the above quote. In fact, it was not until later in Justice Decary's decision that the standard of creativity was mentioned vis-à-vis the requirement of originality under the *Copyright Act*.

The notion of creativity was considered in light of certain amendments made in 1993 to the *Copyright Act* as a part of the implementation of the North American Free Trade Agreement. Such amendments included the addition of the term "compilation" in a number of provisions. Specifically, it is apparent from Justice Decary's decision that originality was only being considered in terms of compilations, and not works in general.[68] After explaining that prior to the 1993 amendments the common law recognized the subsistence of copyright in compilations

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[67] *Tele-Direct*, *supra* note 64 at p. 300.

[68] That is not to say copyright law principles established in relation to differing classes of works should not be transposable with principles relating to other classes of works. General principles should be ubiquitous. Rather, the point is made to highlight that in some cases, specific jurisprudential machinations may be limited in scope to the particular circumstances considered and as a result, due consideration is required before something is elevated to the level of general principle.

that could only be considered "literary works", Decary J.A. considered the effects of the 1993 amendments.

> The 1993 amendments may not be without significance, even though they were down-played by counsel who considered them to be a mere codification of the existing law. Prior to these amendments, "compilations" were seen as "literary works" and courts had therefore to find a way to relate them to literary works. Since the amendments, "compilations" may be related to artistic, dramatic and musical works as well as to literary works, with the result that earlier cases which examined compilations of data as being part of literary works must now be applied with caution: it could be that compilations which did not qualify for copyright protection because they could not be related to literary works, would qualify under the new definition.
>
> More importantly, the addition of the definition of "compilation" in so far as it relates to "a work resulting from the selection or arrangement of data" appears to me to have decided the battle which was shaping up in Canada between partisans of the "creativity" doctrine -- according to which compilations must possess at least some minimal degree of creativity -- and the partisans of the "industrious collection" or "sweat of the brow" doctrine - - wherein copyright is a reward for the hard work that goes into compiling facts.[69]

Commenting on the so-called "creativity doctrine" Decary J.A. examined the NAFTA provision dealing with the subsistence of copyright in compilations of data noting that there were two requirements: (1) that they embody original expression; and (2) constitute intellectual creations.[70] In addition, it was noted that the NAFTA provision made reference to the Berne Convention, and Decary J.A. stated:

> The use of these last two words ["intellectual creation"] is most revealing: compilations of data are to be measured by standards of intellect and creativity. As these standards were already present in Anglo-Canadian jurisprudence -- as we shall see later -- I can only assume that the Canadian Government in signing the Agreement and the Canadian Parliament in adopting the 1993 amendments to the *Copyright Act* expected the Court to follow the "creativity" school of cases rather than the "industrious collection" school.[71]

Decary J.A. concluded that the requirement of originality means that a compilation of data must display a minimal level of skill, judgment and labour in its overall selection or arrangement; however, there was no mention of a need for novelty or uniqueness.

> Essentially, for a compilation of data to be original, it must be a work that was independently created by the author and which displays at least a minimal degree of skill, judgment and labour in its overall

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[69] *Tele-Direct*, *supra* note 64 at p. 302.
[70] *Ibid.* at pp. 302 to 304.
[71] *Ibid.* at p. 303.

> selection or arrangement. The threshold is low, but it does exist. If it were otherwise, all types of selections or arrangements would automatically qualify, for they all imply some degree of intellectual effort, and yet the [*Copyright*] *Act* is clear: only those works which are original are protected. There can therefore be compilations that do not meet the test.[72]
>
> ...
>
> It is conceded that, if the work, labour and skill required to make the selection and to compile the tables which form its items are negligible, then no copyright can subsist in it. Whether enough work, labour and skill is involved, and what its value is, must always be a question of degree.[73]

The tension evidenced by the cases considered above has purportedly been eliminated through the decision of McLachlin C.J. in *CCH Canada*. A middle ground has been selected and put forth as a panacea for the level of originality required under the *Copyright Act* in relation to all works. McLachlin C.J. adopted a position between the two poles whereby the requisite originality stems from the author's exercise of skill and judgment through which intellectual effort is necessarily involved, but the work need not be novel or unique.

> I conclude that the correct position falls between these extremes. For a work to be "original" within the meaning of the *Copyright Act*, it must be more than a mere copy of another work. At the same time, it need not be creative, in the sense of being novel or unique. What is required to attract copyright protection in the expression of an idea is an exercise of skill and judgment. By skill, I mean the use of one's knowledge, developed aptitude or practiced ability in producing the work. By judgment, I mean the use of one's capacity for discernment or ability to form an opinion or evaluation by comparing different possible options in producing the work. This exercise of skill and judgment will necessarily involve intellectual effort. The exercise of skill and judgment required to produce the work must not be so trivial that it could be characterized as a purely mechanical exercise. For example, any skill and judgment that might be involved in simply changing the font of a work to produce "another" work would be too trivial to merit copyright protection as an "original" work.[74]

Therefore, to give a work the necessary quality of originality under s. 5(1) of the *Copyright Act*, in creating the work there must be the exercise of skill and judgment, which necessarily involves intellectual effort characterized as something more than a purely mechanical exercise, but does not require a minimal degree of creativity.[75] Though not expressly considered by McLachlin C.J., this same standard of originality ought to be applied under the proposed approach to

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[72] *Ibid.* at p. 307.
[73] *Ibid.* at p. 308.
[74] *CCH Canada*, *supra* note 13 at para. 16.
[75] *Ibid.* at para. 22.

infringement analysis vis-à-vis the determination of whether a given element of a copyrighted computer program alleged to be produced or reproduced is protected by copyright.

In her decision, McLachlin C.J. applied this standard of originality to determine whether copyright subsisted in the headnotes, case summaries, topical indices and reported judicial decisions that were at issue. The Court held that copyright subsisted in all works, but specifically pointed out that the reported judicial decisions were properly viewed as copyrighted compilations of headnotes and edited judicial reasons noting that "the judicial reasons in and of themselves, without the headnotes, are not original works in which the publishers could claim copyright."[76] This indicates that a copyrighted work may in fact be made up of a number of other copyrighted works, which will be of significance when the issue of the substantiality of a part produced or reproduced by an alleged infringer is considered under the proposed approach.

Interestingly, as a result of the above, McLachlin C.J. also held that "[i]t would not be copyright infringement for someone to reproduce only the judicial reasons."[77] This pithy conclusion was not made in the express context of determining the substantiality of the judicial reasons under s. 3(1) of the *Copyright Act*, but its implications are important. This conclusion stems from the Court's finding that the reported judicial decisions were copyrighted compilations of independently copyrighted headnotes and the non-copyrighted edited judicial reasons. Therefore, the Court's holding of non-infringement through the copying of the edited judicial reasons implied that the edited judicial reasons did not constitute a substantial part of the copyrighted compilation of reported judicial decisions. The reason for which is that the edited

[76] *Ibid.* at paras. 27 to 36.
[77] *Ibid.* at para. 35.

judicial reasons did not meet the standard of originality under the *Copyright Act* when viewed from the perspective of the publishers, rather than that of the judges writing the decisions.

Chief Justice McLachlin's holding regarding the non-infringement of copying from the edited judicial reasons is consistent with the judgment of Morden J.A. in *Delrina (C.A.)* and explainable under the proposed approach to infringement analysis. The proposed approach recognizes that a part of a copyrighted computer program alleged to be produced or reproduced by the defendant cannot constitute a substantial part thereof if it is not capable of copyright protection.[78] The reason for the consistency between the holdings of McLachlin C.J and Morden J.A. is the relationship between the idea/expression dichotomy and the requirement of originality, in that copyright only protects original expression.

As a result, the scope of copyright in a work only extends to protect those parts of the copyrighted work that constitute original expression, whether independently copyrightable or not. Therefore, if an element produced or reproduced by an alleged infringer cannot be said to constitute original expression, it also cannot be said to constitute a substantial part of a copyrighted computer program in and of itself; for if it were otherwise, the scope of copyright would be broadened beyond justification. Under this proposed methodological approach it is apparent that in *CCH Canada*, even though the edited judicial reasons formed a quantitatively large portion of the copyrighted compilation, it could not be said that the reasons formed a substantial part of the whole due to a lack of originality from a qualitative perspective.

[78] *Delrina* (C.A.), *supra* note 2 at p. 301.

1.5 Diagrammatic Depiction of the Proposed Approach

The categorical statutory definition of a "computer program" provided for by the *Copyright Act*, the idea/expression dichotomy and the requirement of originality, as viewed under the proposed approach, are visually presented by the Venn diagram in Figure 1, *infra*. In the diagram, each oval represents an area of consideration that has been discussed above: the statutory definition of a "computer program"; idea; the expression of an idea; and originality. In addition, there are numbered zones of overlap between these areas of consideration. Something falling within the area labeled "A 'computer program'" would be considered by a court to meet the categorical statutory definition of a "computer program" provided by the *Copyright Act*, detailed in Chapter 1.1, *supra*. Something falling within the area labeled "Idea" would be considered by a court to be an idea, rather than the expression thereof, in accordance with the dictates of the idea/expression dichotomy described in Chapter 1.3, *supra*. Likewise, something falling within the area labeled "Expression" would be considered by a court to be the expression of an idea, rather than merely an idea without expression. Finally, something falling within the area labeled "Original" would be considered by a court as having the necessary skill and labour associated with its development in order for it to be classified as original in accordance with the principles outlined in Chapter 1.4, *supra*.

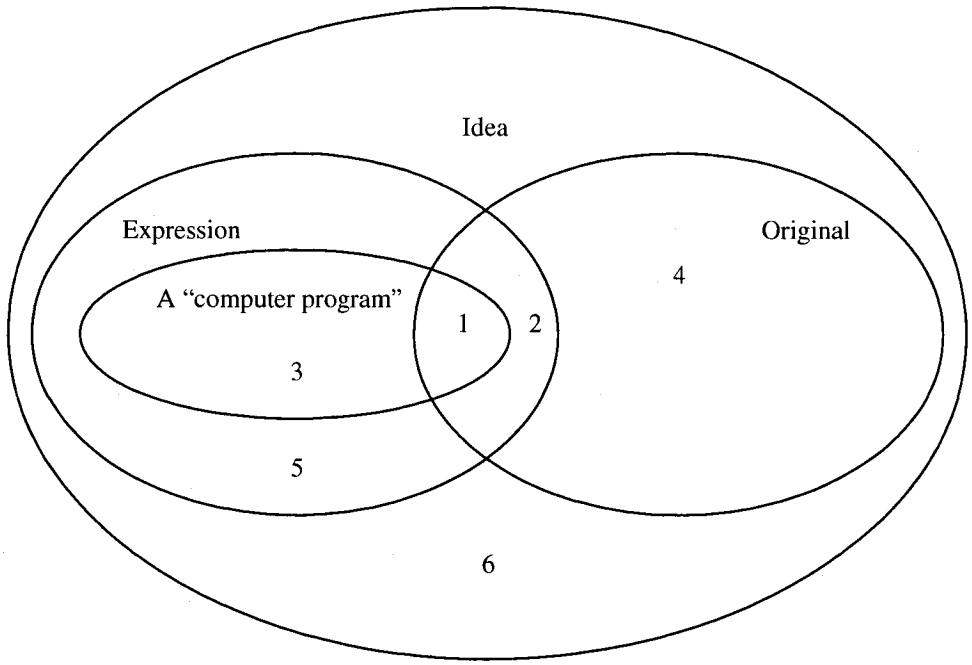

Figure 1: Venn-type diagram depicting the proposed approach

Under the proposed approach, in zone 1 original expression meets the categorical statutory definition of a "computer program", resulting in the subsistence of copyright (satisfaction of the other requirements of s. 5(1) of the *Copyright Act* being assumed). Something falling within zone 1 is considered to be "copyrightable", which is consistent with the dichotomy created by Morden J.A. in *Delrina (C.A.)* considered in Chapter 6.3.1, *infra*. For example, copyright would subsist in a computer program considered to be, as a whole, the original expression of the author. Under the proposed approach, the statutory presumption of the subsistence of copyright provided for in s. 34.1 of the *Copyright Act* militates against a court testing whether something truly falls within zone 1 unless evidence is led to rebut this presumption. If something that falls within this zone has been illicitly produced or reproduced, then under the proposed approach to

infringement analysis, the inquiry relates to the production or reproduction of a work *in toto*. As such, a court need not be concerned with the production or reproduction of "any substantial part" under s. 3(1) of the *Copyright Act*. This is not so in relation to something falling within zone 2.

Something falling within zone 2 would be considered the original expression of an idea, but would not meet the statutory definition of a "computer program". As a result, something falling within zone 2 is not copyrightable as a computer program. However, under the proposed approach to infringement analysis, something falling within this zone is considered to be "protectable by copyright" if it is associated with a copyrighted computer program. This is also consistent with Justice Morden's dichotomy. If something that falls within zone 2 has been illicitly produced or reproduced by an alleged infringer, then under the proposed approach, the inquiry relates to the substantiality of that which has been taken in terms of quality rather than quantity. That is to say, the consideration shifts to "any substantial part" in accordance with s. 3(1) of the *Copyright Act*.

Zone 3 represents an unoriginal set of instructions or statements, expressed, fixed, embodied or stored in any manner, that is to be used directly or indirectly in a computer in order to bring about a specific result. Source code taken from the public domain and included in a computer program is an example of something that would fall within zone 3. Zone 4 represent ideas that require a sufficient amount of skill and labour to develop, but as yet, are not expressed in any form. Someone's thoughts that required skill and labour to develop, such as a story not yet told or written, would fall within zone 4. Zone 5 represents the unoriginal expression of an idea that cannot meet the statutory definition of a "computer program". Something that is not capable of

classification as a set of instructions or statements, such as a poem, taken from the public domain would fall within zone 5. Finally, something falling within zone 6 would be considered an idea lacking originality and expression. Therefore, the illicit production or reproduction of something that falls within zone 3, 4, 5 or 6 would not amount to the infringement of copyright.

Thus, under the proposed approach to computer program copyright infringement, liability can only be found when there has been the illicit production or reproduction of something that falls within zone 1 or 2. Everything else is free for the taking. Under the proposed approach, zone 1 relates to the first part of s. 3(1) of the *Copyright Act* (i.e. "the sole right to produce or reproduce the work"), whereas zone 2 relates to the second part (i.e. "the sole right to produce or reproduce ... any substantial part thereof"). In either case, the two-stage proposed approach outlined above in Chapter 1.2 is to be applied. The two stages are now considered in further detail.

Chapter 2: Produce or Reproduce – Copying in Fact

2.1 "Produce or Reproduce": Has there been Copying in Fact?

As set out above in Chapter 1.2 the first element under the proposed approach is the determination of whether the alleged infringer has produced or reproduced something. The terms "produce" and "reproduce" found in s. 3(1) of the *Copyright Act* are loaded; full of pith and substance imparted by the common law developed over a fairly long period of time in the context of various types of works recognized under the *Copyright Act*. It must be remembered in this context that copyright infringement is based on the actions of the alleged infringer. There exists some controversy in the law with respect to the meaning ascribed to the terms "produce" and "reproduce" found in s. 3(1) of the *Copyright Act*. This controversy has been attributed to the conflicting decisions of Binnie J. and Gontier J. in *Théberge*, *supra*, where Binnie J. believed that there was no material difference between the terms "produce" and "reproduce".

Additionally, Binnie J. believed that "reproduction" implied an increase in the number of copies of a work, and Gonthier J. specifically disagreed.[79] On this point, Handa noted that traditionally, "production" of a work implies bringing it into existence, and "reproduction" "arguably" connotes the production of a work another time.[80] In addition, the term "reproduction" has been used synonymously with the term "copying": [b]roadly, reproduction means copying, and does

[79] For a good discussion of this controversy, see Tamaro, *Annotated Copyright Act*, *supra* note 5 at pp. 202 to 215.
[80] Handa, *Copyright Law*, *supra* note 6 at p. 196.

not include cases where an author or compiler produces a substantially similar result by independent work without copying."[81]

In any event, for the present discussion the resolution of the apparent conflict in *Théberge* will provide little guidance regarding the proposed approach to infringement analysis. The correctness of Justice Binnie's decision might be more apparent in a characterization of the facts indicating that, regardless of the meaning ascribed to the terms "produce" and "reproduce", the alleged infringer did not actually produce or reproduce anything. Rather, by lifting the inks from the original artistic work and placing them on a different medium, the alleged infringer committed and act of transfer in relation to the original work, which has not yet been recognized as an act worthy of sanction.

The following principles can therefore be drawn from the above vis-à-vis the proposed approach to infringement analysis. To say that an alleged infringer has produced or reproduced something associated with the plaintiff's copyrighted computer program, the plaintiff must prove that the alleged infringer has generated something similar to a part thereof, through making reference thereto.[82] The similarities cannot be the result of the alleged infringer making reference to other materials, or otherwise generating its material through the exercise of an original process of mind. In other words, it must be demonstrated that there has been copying in fact, in the sense that the alleged infringer followed the copyrighted computer program, or otherwise used it as a model in generating its material. This need not be accomplished with the plaintiff's copyrighted

[81] *Ladbroke (Football), Ltd. v. William Hill (Football), Ltd.*, [1964] 1 All. E.R. 465 at 469 (H.L.).
[82] McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-36 to 21-37. On a related point, although the copyrighted work must be the source from which the alleged infringer's materials were derived, it need not be the direct source: McKeown, *Fox on Copyright*, *supra* note 7 at pp. 21-19 to 21-20.

materials in front of the alleged infringer, as copying from memory, whether conscious or not, will suffice.[83] In this sense, there is a casual connection and sufficient similarity between the alleged infringer's materials and at least a part of the plaintiff's copyrighted computer program in order to conclude that the part has been produced or reproduced by the alleged infringer.

In the absence of direct evidence, copying in fact can be established as a rebuttable presumption when that which is generated by the alleged infringer is the same or substantially similar to a part of the copyrighted computer program and the alleged infringer had access thereto at some point in time.[84] One point of departure from the status quo with respect to demonstrating primary infringement is that under the proposed approach to infringement analysis the plaintiff's computer program and defendant's materials need not be viewed as a whole when making the assessment of copying in fact.[85] Rather, the court may have regard to whatever admissible evidence the plaintiff puts forth as establishing copying in fact, including limited portions of its computer program.[86]

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[83] This point was made by Morden J.A. in *Delrina (C.A.)*, *supra* note 2 at p. 296 based upon the authority of a number of cases including *Gondos v. Hardy*, *supra* note 28. However, it should be noted that in *Drynan v. Rostad*, [1994] O.J. No. 4253 (Small Claims) (QL), House D.J. expressed concerns with regard to the subconscious and the extension of Freudian considerations to the law of copyright.

[84] Handa, *Copyright Law*, *supra* note 6 at p. 262.

[85] To the contrary in support of the status quo see *ibid.* at p. 262, footnote 828.

[86] The absurdity of requiring the court to look at the plaintiff's entire computer program and defendant's materials is evident from the following hypothetical. If a plaintiff believed that a quantitatively small but qualitatively important part of its computer program had been reproduced by the defendant and the plaintiff was able to demonstrate access, then it would only need to demonstrate substantial similarity with respect to that small part to benefit from the rebuttable presumption of copying in fact. In such a case, why must experts, the parties, lawyers and the court waste the time viewing the materials as a whole? There would be no advantage in doing so. However, this does not mean that under the proposed approach, a court must dissect the plaintiff's computer program into component parts in order to assess similarity. It is a fact-driven exercise guided by the way in which the plaintiff chooses to tender its evidence of copying.

An interesting parallel in thinking in relation to the establishment of copying in fact results from the concept of "colourable imitation" found in the *Copyright Act*. The concept of colourable imitation arises under the *Copyright Act* through the definition of "infringing".

> "infringing" means
>
> (a) in relation to a work in which copyright subsists, any copy, including any colourable imitation, made or dealt with in contravention of this Act,[87]

This parallel was manifest in *Hager v. ECW Press*[88], where Reed J. was faced with a copyright infringement claim relating to the unauthorized pilfering of quotes obtained from a private interview with Canadian musical icon Shania Twain, which were allegedly taken from the plaintiff's book. The plaintiff wrote and published a literary work that contained, among other things, a chapter on Shania Twain. The chapter contained quotations taken during a private interview between the musician and plaintiff. The defendant subsequently published a book about Shania Twain, which Reed J. characterized as containing "approximately one third" of the plaintiff's chapter on Shania Twain.[89] Furthermore, according to Reed J.:

> Other than the direct quotes of Shania Twain's words, it was not often verbatim copying, but rather the rearrangement of sentences, with additional material interspersed, while following the same concepts, thought patterns and sometimes sentence structure.[90]

Noteworthy is the fact that Reed J. considered the non-literal elements of the plaintiff's chapter on Shania Twain (i.e. the concepts, thought patterns and sentence structure) to assess whether copying had in fact occurred. This was needed to evidence reproduction, as the defendant's material was not an exact duplication of the plaintiff's chapter, or the material contained therein.

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[87] *Copyright Act*, *supra* note 4 at s. 2 "infringing".
[88] *Hager v. ECW Press Ltd.* (1998), 85 C.P.R. (3d) 289 (F.C.T.D.).
[89] *Ibid.* at p. 298.
[90] *Ibid.*

Reed J. was of the opinion that copyright infringement could be effected through exact copying or by way of colourable imitation.

> Copyright is defined in the *Copyright Act*, as the right to produce or reproduce a work or any substantial part thereof. Infringement exists when the work is copied either exactly or by way of colourable imitation.[91]

On the facts of the case, copying in fact was found based on what Reed J. referred to as exact duplication and colourable imitation. Though it is true that the rendering of variations to the reproduction of a copyrighted computer program will not avoid liability for infringement, the concept of "colourable imitation" is best excluded from the test for copyright infringement.

The judgment of Reed J. is not an anomaly in Canadian copyright law. There is some support for an analysis of infringement of the reproduction right through the rendering by the infringer of exact copies as well as copies that constitute colourable imitations of the copyrighted work. As pointed out by Tamaro:

> Of all the forms of infringement, infringement of reproduction rights is the most difficult to analyze. However without this exclusive right, anyone would be able to "re-fix" a protected work in the same or in a different medium. At s. 3(1), the [*Copyright Act*] refers to the sole right to reproduce a work or a substantial part thereof in any material form. The definition of "infringing" includes any copying or colourable imitation of a protected work. Thus, it is illegal not only to copy a work integrally, but also to use a substantial part thereof, trying to disguise the borrowing.[92]

Tamaro indicated that the analysis of infringement with respect to a colourable imitation allows for copying to be established not only based on similarities between the plaintiff's copyrighted work and the defendant's materials; rather, it is the appropriation of the fruits of the plaintiff's

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[91] *Ibid.*

[92] Tamaro, *Annotated Copyright Act*, *supra* note 5 at p. 438. See also *Copinger and Skone James on Copyright*, *supra* note 27 at pp. 185 to 187.

labour that is at issue: "[t]he finding [of infringement] is based not so much on any similarity between the two works as on the appropriation of the fruits of the plaintiff's labours."[93]

However, this proposition must be viewed with caution, as there still must be the production or reproduction of at least a substantial part of the copyrighted work, if not the whole of it, in order for there to be a finding of infringement under the proposed approach.[94] The rendering of a colourable imitation might well result in liability for copyright infringement and it is clear that a defendant cannot escape infringement by what it does to camouflage or change its materials. Notwithstanding the above, the concept of colourable imitation is more properly applied to a consideration of whether materials are "infringing materials", rather than whether the alleged infringer's actions constitute an act of infringement vis-à-vis reproduction rights. This proposition is supported by McKeown, who wrote:

> While the right to produce or reproduce is limited to "the work or any substantial part thereof" the concept of "colourable imitation" may no longer be necessary although it may allow the court to take a broader view of the defendant's activities.[95]

Additionally, the appropriation of skill and labour referred to by Tamaro is likewise best left to the determination of whether what has been produced or reproduced constitutes "any substantial part" of the whole.

Indeed, the term "infringing" is only found in the *Copyright Act* under s. 38(1), which deals with the recovery of possession of copies, plates, etc.[96] This provision allows a copyright owner to recover possession of all infringing copies of their work as well as all physical objects used or intended to be used for the making or constructing of illicit material. In this sense, the copyright

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[93] *Ibid.* at p. 105.
[94] McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-19.
[95] *Ibid.* at p. 21-19.
[96] *Copyright Act*, *supra* note 4 s. 38(1) & s. 2 "infringing", "plates".

owner has traditional property rights in the things associated with its copyrighted work and may commence an action for recovery of possession of these physical things regardless of whether there has been an act of infringement. The idea that a person cannot escape through imparting trivial variations is the normative dictate underlying both the concept of colourable imitation and reproduction. However, the concept of the former is better left to the recovery of possession of physical objects, whereas the concept of the latter is applied to the act of infringement encompassed by ss. 3(1) and 27(1) of the *Copyright Act* under the proposed approach to infringement analysis. Thus, the assessment of copying in fact is the focus of the inquiry under the first stage of the proposed approach.

2.2 Factors to be considered in Assessing Copying in Fact

Since as early as 1901, factors such as substantial similarity, access and the time taken to render the illicit materials have been considered in Canada when determining whether there has been copying in fact.[97] Canadian cases dealing with the issue of substantial similarity vis-à-vis copyright infringement demonstrate similarities with U.S. case law. At the heart of the proposed Canadian approach is the recognition that without similarity between aspects of the copyrighted work and the alleged infringer's materials, there can be no production or reproduction. However, at the stage of establishing copying in fact, the U.S. approach is in general more narrowly focused on the alleged infringer's copying of the author's original expression, without reference to other elements that might evidence copying in fact.

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[97] *Beauchemin v. Cadieux* (1901), 31 S.C.R. 370 at p. 372; *Stevenson v. Crook*, [1938] Ex. C.R. 299 at p. 307 (Can Ex. Ct.).

Under the proposed Canadian approach, in order for it to be said that there has been the production or reproduction of something, the similarities identified must be a result of the defendant copying from the copyrighted computer program. That is, the defendant's reference to, or modeling of, the plaintiff's copyrighted computer program caused the similarities. What is meant by the term "substantial similarity" is that the similarities identified are so compelling that the objective person, to whom the work is directed, would conclude that the similarities, more likely than not, are a result of the defendant's copying. This combined with the fact of access leads to the rebuttable presumption of copying in fact. If the similarities are not so compelling to be considered substantial, but still exist, then factors such as the time taken by the defendant to generate the similar material in conjunction with access might support a finding of copying in fact.

In *King Features v. Lechter*[98], the plaintiff commenced a copyright infringement action in relation to the defendant's use, on watches it sold, of the word "Popeye" and its representations thereon of various characters from the plaintiff's copyrighted comic strip. The defendant admitted to infringement with respect to a certain series of watches, but denied infringement in respect of another for which the characters on the watches were not exact duplications. Cameron J. held that with respect to certain characters on the watches, due to the substantial similarity between the copyrighted work and the defendant's watches, there was evidence that the defendant copied the plaintiff's work (there was no issue of access). In addition, what the defendant reproduced was found to be a substantial part of the plaintiff's copyrighted work.

> That figure [on the watch] is not in all respects the same as the character "Popeye" in which the plaintiff has copyright. The bulging cheeks and the well-known pipe are missing, and a red necktie and arms akimbo have been added. But the amended version of "Popeye" still has many

[98] *King Features Syndicate, Inc. v. Lechter*, [1950] Ex. C.R. 297 (Can. Ex. Ct.).

> of its old characteristics the bulbous nose, the red cap and the large blue sailor jacket. But above all, the defendant has himself identified the character by the use of the word "Popeye." Could anyone doubt that it was intended to be a colourable imitation of the original character? I think not.[99]
>
> ... there can be no doubt -- in my mind at least -- that [the figure on the defendant's watch] is a colourable imitation of the features of the plaintiffs' work in which copyright subsists. ... it is a copy which comes so near to the original as to give every person seeing it the idea created by the original. The similarity here is sufficiently substantial to constitute prima facie evidence of copying; that evidence has not been refuted by any evidence of the defendant to establish that notwithstanding the similarity there was no copying but independent creation ... Moreover, I find that as the copying of the plaintiffs' work was substantial, that the use of that work with the title "Popeye" [on the watch] constitutes an infringement of the plaintiffs' rights for the reasons which I have stated above.[100]

In that case the work at issue was the character "Popeye" (classified as an artistic work) and infringement of the copyright therein could not be avoided by the defendant rendering alterations to the character as depicted on its watches. Copying in fact was based in part on substantial similarities of elements of the plaintiff's work and the defendant's materials, which could not be explained as arising due to circumstances other than copying. The substantial similarities resulted in the average person seeing the defendant's materials to be giving the idea created by the original.[101] It therefore follows from this decision that if an average person seeing the alleged infringer's materials is given the idea created by the plaintiff's copyrighted work, or elements thereof, then there is substantial similarity, which combined with the defendant's access to the original, leads to a rebuttable presumption of copying in fact.

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[99] *Ibid.* at p. 304.
[100] *Ibid.* at pp. 305 to 306.
[101] It should be noted that this reference may have been an explication of what a copy is considered to be in the eyes of the law: See McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-12.

2.3 Non-Literal Elements and Copying in Fact

When examining similarities, reference need not be restricted to literal aspects of the materials in question, as similarities between the non-literal elements of a copyrighted work and the alleged infringer's materials may aid in the establishment of copying in fact. In *Preston v. 20th Century Fox*[102], MacKay J. was faced with a claim for copyright infringement in respect of the plaintiff's script and the defendants' movie. The plaintiff alleged that he developed a draft manuscript dealing with a certain storyline, scene and characters named the "Ewoks". According to the plaintiff, he sent his draft manuscript to a friend for development into a movie or television script entitled "Space Pets", which was then sent via regular mail to George Lucas of Lucas Films Ltd. for consideration. The plaintiff alleged that the movie "Return of the Jedi", which incorporated a race of primitive human-like creatures named "Ewoks" living on the forest moon of Endor, infringed the copyright in his Space Pets script.

Though there was no finding of infringement, this case is of interest due to Justice MacKay's analysis of substantial similarity as well as the basis for the findings regarding the copyrightability of the Ewok characters found in the plaintiff's script and the reproduction of a substantial part. The Federal Court of Appeal added no substantive commentary regarding the issues considered herein and upheld Justice MacKay's judgment. As in most cases of alleged reproduction of a substantial part of the whole, the result in this case was largely fact-driven.

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[102] *Preston v. 20th Century Fox Canada Ltd.* (1990), 33 C.P.R. (3d) 242 (F.C.T.D.), aff'd (1993), 53 C.P.R. (3d) 407 (C.A.).

It is clear from Justice MacKay's reasoning that the allegation of copyright infringement did not deal with the unauthorized production or reproduction of the whole of the plaintiff's work. The allegation was restricted to the reproduction of a substantial part of the whole.

> Here there is no suggestion that the defendants simply reproduced by film the script Space Pets; rather the claim is that without the consent of the plaintiff they incorporated a substantial part of the script in Return of the Jedi. Thus the consideration of similarities claimed between the script and the film.[103]

According to MacKay J., in order to establish the reproduction of a substantial part of the whole (i.e. the character of the Ewok or significant other features of the script), the plaintiff had to first prove that, on a balance of probabilities, the defendants copied from the plaintiff's script.[104] To do this in the absence of direct evidence of copying, MacKay J. identified the plaintiff's requirement of establishing substantial similarities between the script and the defendants' movie as well as the defendants' access to the script.[105] MacKay J. framed the issues thusly:

> These circumstances raise a number of issues if the plaintiff is to succeed in his claim based on infringement of copyright. These are:
>
> 1) Did George Lucas copy the character of the Ewok or, as was argued at trial, significant other features from the script Space Pets? To conclude that there was copying it is essential to compare the similarities in the script and the film Return of the Jedi, which was the focus of discussion relating to the alleged copying. Of course, to conclude that the script Space Pets was copied it is also necessary to conclude by implication that the script was received by Twentieth Century-Fox at its Los Angeles address and that it found its way to George Lucas or one of his staff and was used without authorization in the film, that is, that the defendant Lucas had access to the script.
>
> 2) Can copyright exist in the name Ewok and the description of the Ewok character as depicted in the script? As a general rule, courts have not recognized copyright in a name itself, while recognizing that it may be possible to claim copyright in a name which has sufficient character delineation and is widely known.[106]
>
> ...
>
> Thus, the evidence of access by the defendants to the script "Space Pets" is not direct, but at best is circumstantial. Access may be inferred is such circumstances where the work complained of as copying is found to contain substantial similarity with a copyrighted work.[107]

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[103] *Ibid.* at p. 273.
[104] *Ibid.* at p. 247.
[105] *Ibid.*
[106] *Ibid.*
[107] *Ibid.* at p. 257.

It is seen from the foregoing quote that without explicitly stating so, MacKay J. was dealing with copyright infringement vis-à-vis the non-literal elements of the plaintiff's script, namely, the "character of the Ewok" and "significant other features from the script Space Pets". The consideration was being made in relation to the assessment of substantial similarity vis-à-vis the alleged reproduction of a substantial part of the script.

With respect to the assessment of substantial similarity, MacKay J. believed that both quantity and quality are to be considered. Though this statement leads to confusion, it was not impugned by the Federal Court of Appeal. Under the proposed approach to infringement analysis, consideration of the quality relates to that which has been produced or reproduced vis-à-vis the assessment of the substantiality thereof.

> There appears to be a dearth of Canadian jurisprudence on the test for assessing substantial similarity. Authorities from England and from the United States are helpful for, though the legislation differs in some respects from the [*Copyright*] *Act* in Canada, it appears in both cases to be based on similar concepts and principles. Substantial similarity is not to be measured only by the quantity of matter reproduced from a copyrighted work, though that may be a significant factor ... Of more import may be the quality of matter reproduced. At least in the case of literary or dramatic works assessing similarities may depend upon a number of factors.[108]

The above demonstrates that MacKay J. erred in equating the assessment of substantial similarity between the material alleged to be misappropriated and the allegedly misappropriated material, with the assessment of whether the materials misappropriated represent a substantial part of the whole of the copyrighted work. The former being an evidentiary exercise for demonstrating copying in fact, and the latter being the determination as to whether what the alleged infringer produced or reproduced constitutes a substantial part of the plaintiff's copyrighted work.

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[108] *Ibid.* at p. 273.

Notwithstanding the above conceptual error, MacKay J. took from U.S. case law certain factors to be considered in the assessment of substantial similarity, which all relate to the non-literal elements of the plaintiff's work. As a result, MacKay J. resorted to the determination of whether, based upon the assessment of substantial similarity with respect to the non-literal elements of the allegedly copied script, the plaintiff could satisfy the mythical average person that copying in fact took place.

> From the two step test developed in the Ninth Circuit and from the single step test of the Second Circuit certain factors for assessing substantial similarity are suggested. These factors include plot, themes, dialogue, mood, setting or scenes, pace, sequence and characters, so far as these are within the recognized limits of copyright in the protected work. In assessing these factors, a decision ultimately for the trier of fact, the test is ultimately whether the average lay observer, at least one for whom the work is intended, would recognize the alleged copy as having been appropriated from the copyrighted work.[109]

Again, as was the case in *King Features v. Lechter*, *supra*, substantial similarity was assessed with a view to what the average person would recognize in relation to the alleged infringer's materials and the original. Under the approach taken by MacKay J., if the average person would view the material generated by the alleged infringer, or elements thereof, as being taken from the original, then there exists substantial similarity upon which a finding of copying in fact can be based.

The language adopted by MacKay J. is preferable to that used in *King Features v. Lechter*, and the proposed approach is consistent with this understanding of "substantial similarity". Though in the case of *King Features v. Lechter*, with respect to the average person, it is likely that what was being considered was the association generated by the alleged infringer's materials as compared to the plaintiff's work, rather than the ideas. However, the term "idea" was used and thus raises concerns with respect to the idea/expression dichotomy under the proposed approach

[109] *Ibid.* at p. 274.

to infringement analysis. Indeed, if all the alleged infringer did was produce or reproduce the ideas found in the plaintiff's computer program, then there can be no finding of infringement. However, under the proposed approach this determination is left for the consideration of whether that which has been produced or reproduced by the alleged infringer constitutes "any substantial part" of the copyrighted computer program, or of a copyrightable sub-component thereof. The material generated by an alleged infringer need not be a one-to-one duplication of the copyrighted computer program in order to say that it has been produced or reproduced. There need only be similarity resulting from copying, for otherwise an alleged infringer would escape liability by imparting trivial variations. At the first stage of analysis, it is the act of producing or reproducing that is of concern, rather than the nature of that which has been generated by the alleged infringer.

Therefore, under the proposed approach to infringement analysis, in terms of the establishment of copying in fact through evidence of substantial similarity, the inquiry must be directed to whether the objective person to whom the computer program is directed would conclude that the similarities are more likely than not a result of the defendant copying from the plaintiff's copyrighted computer program, notwithstanding differences imparted by the alleged infringer. This coupled with the alleged infringer's access to the plaintiff's copyrighted computer program leads to the rebuttable presumption of copying in fact.

Production or reproduction may also be established in the absence of substantial similarity. So long as there is similarity, access and some other factor indicative of copying, copying in fact may be established. An example of a factor indicative of copying is an unusually quick

development time, which might lead the objective person to conclude that the similarities identified are a result of the alleged infringer's reference to, or modeling of, the copyrighted computer program, rather than a result of the exercise of an independent process of mind. The question then remains in the second stage of the proposed approach as to whether that which has been produced or reproduced by the alleged infringer is (i) the plaintiff's copyrighted computer program *in toto*, (ii) a copyrightable sub-component thereof, or (iii) any substantial part of either. The second stage is now considered.

Chapter 3: Examining what the Alleged Infringer has Produced or Reproduced

When an alleged infringer has produced or reproduced a copyrighted work *in toto*, the methodology concerning the analysis of infringement presents no real controversy once copying in fact has been demonstrated. This comment does not ignore the complexities associated with a case in which the defendant calls into question the copyrightability of the plaintiff's computer program. In such a case, despite the fact that pursuant to s. 34.1(1) of the *Copyright Act* there exists the presumption of the subsistence of copyright, issues surrounding copyrightability must still be resolved if sufficient evidence has been led to rebut the statutory presumption. The analysis in later chapters demonstrates that in most cases, the subsistence of copyright in a computer program as a whole is generally unassailable due to the idiosyncratic nature of computer programming. However, it is important to note that when examining the subsistence of copyright, under the proposed approach, a court must look to the work as a whole, rather than dissect it into component parts, discarding that which does not constitute original expression. It is in this regard that the frequently cited comments of Lord Pearce in the U.K. case of *Ladbroke* are instructive.

> Did the appellants reproduce a substantial part of it? Whether a part is substantial must be decided by its quality rather than its quantity. The reproduction of a part which by itself has no originality will not normally be a substantial part of the copyright and will therefore not be protected. For that which would not attract copyright except by reason of its collocation will, when robbed of that collocation, not be a substantial part of the copyright and therefore the courts will not hold its reproduction to be an infringement. It is this, I think, which is meant by the one or two judicial observations that "there is no copyright" in some unoriginal part of a whole that is copyright. They afford no justification, in my view, for holding that one starts the inquiry as to whether copyright exists by dissecting the compilation into component parts instead of starting it by regarding the compilation as a whole and seeing whether the whole has copyright. It is when one is debating whether the part reproduced is substantial that one considers the pirated portion on its own.[110]

[110] *Ladbroke*, *supra* note 81 at p. 481.

Consistent with the foregoing dictum, under the proposed approach to infringement analysis, the dissection of a computer program only need occur when assessing the substantiality of a part produced or reproduced by the alleged infringer in terms of the copyrighted computer program as a whole, or a copyrightable sub-component thereof. As such, it is the issue of whether that which the alleged infringer produced or reproduced is a substantial part, that presents a significant challenge for courts and litigants alike. As Tamaro points out "[i]t is easy to establish infringement when the work is appropriated with only minor changes. When a work is almost identical to another work subject to copyright, there is obviously infringement."[111]

It is the analysis of infringement regarding works in general to which applies Tamaro's statement that "[t]he work need not be copied in its entirety to be infringed."[112] Indeed, from this high-level vantage point, "[i]nfringement of production and reproduction rights includes appropriation of a 'substantial part' of a work."[113] The simplicity of such statements disguises the complexities inherent in the methodologies presented in the judgments of various courts that have been faced with the analysis of computer program copyright infringement. To aid in managing the complexities, it is important to realize that a computer program may in fact be made up of a number of independently copyrightable sub-components, the illicit production or reproduction of which may result in copyright infringement regardless of considerations of substantiality.

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[111] Tamaro, *Annotated Copyright Act*, *supra* note 5 at p. 441.
[112] *Ibid.* at p. 440.
[113] *Ibid.*

3.1 Copyrightable Sub-Components

In *ITAL-Press v. Sicoli*[114], the plaintiff was the author of the "Guida", which may be described for simplicity as an Italian phone directory that was published from time to time; however a more detailed explanation of the work is found in the judgment.[115] The defendant was alleged to infringe the plaintiff's copyright in its various Guidas (literary works) as a result of the unauthorized appropriation of components thereof into the defendant's own directories. There is little doubt that Gibson J. found the defendant to be lacking in its evidence.[116] However, the legal issues of interest in that case were whether there was copyright in the Guidas of various years and if so, was there "copying such as to constitute infringement of the plaintiff's copyright."[117]

With respect to the type of "work" the Guidas would be classified as under the *Copyright Act*, Gibson J. held that the Guidas were "literary works that are compilations of literary works, artistic works and data."[118] The specific components identified in the judgment were the telephone listings and the block advertisements found within the Guidas. This demonstrates that Gibson J. properly recognized the fact that any given "work" may be comprised of various subset "works" under the *Copyright Act*, which themselves might be independently copyrightable.

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[114] *ITAL-Press Ltd. v. Sicoli* (1999), 86 C.P.R. (3d) 129, [1999] F.C.J. No. 837 (T.D.) (QL).
[115] *Ibid.* at paras. 66 to 71 (QL).
[116] *Ibid.* at paras. 49 to 53 (QL): it would appear as though the implication was that the witnesses who testified on behalf of the defendant were simply lying.
[117] *Ibid.* at para. 80 (QL).
[118] *Ibid.* at para. 90 (QL).

Certainly in *King Features v. Lechter, supra*, the plaintiff's comic book strip contained not only literary text copyrightable as an original literary work, it also contained drawings of "Popeye et al." constituting original artistic works subject to copyright. Indeed, in that case, it was the copyright in the latter that was found to be infringed. In addition, as was demonstrated above, the idea that a work may be comprised of a number of individual works is consistent with the decision in *CCH Canada, supra.*

In *ITAL-Press v. Sicoli*, Justice Gibson's recognition of the conceptual legal possibility that a copyrightable work might contain subsets of copyrightable works contributes to the development of the proposed approach to infringement analysis. Specifically, when dealing with the issue of the reproduction of a substantial part of the whole copyrighted computer program, the analysis of substantiality may be avoided if the copyright holder is able to demonstrate that what was taken is an individually copyrightable part of the whole computer program. In addition, the copyright holder may be able to demonstrate that the part taken represents a substantial part of the whole of a copyrightable subset work. Indeed, many computer programs could be dissected into a number of smaller computer programs, each independently copyrightable and when put together, represent a compilation of computer programs. Therefore, the analysis of infringement will, in some fashion, be shaped by the way in which the plaintiff chooses to lead its evidence.

With respect to his analysis of infringement, Gibson J. found that the Guidas were sufficiently original to be copyrighted as a whole.[119] However, not only did Gibson J. analyze the Guidas as a whole, he also examined the telephone listings contained therein[120] as well as the block

[119] *Ibid.* at para. 100 to 107 (QL).
[120] *Ibid.* at paras. 108 to 112 (QL).

advertisements[121] in terms of the subsistence of copyright therein. Both of these elements of the Guidas were characterized as compilations, but only the telephone listings were found to be a subcompilation within the Guidas.[122]

With respect to the white pages telephone listings in the Guidas, Gibson J. found that they were original compilations that required "elements of skills and judgment as well as labour."[123] Respecting the block advertisements Gibson J. held that they were compilations subject to copyright, as "sufficient skill, judgment and labour were exercised and invested in the design and layout of the block advertisements".[124]

Interestingly, with respect to the issue of ownership of copyright, Gibson J. held that ownership could be considered with respect to each individual work comprising the whole.[125] This finding buttresses the conclusion that, with respect to the analysis of copyright infringement, the plaintiff can rely on the production or reproduction of individual copyrightable parts of its copyrighted computer program, irrespective of the substantiality of the parts taken. However, under the proposed approach to infringement analysis it is apparent from Figure 1, *supra*, that the threshold for substantiality may be easier to establish than the threshold for copyrightability. This is because the proposed approach recognizes original expression as being protectable by copyright as "any substantial part"; there is no need for further satisfaction of the statutory definition of "computer program". Notwithstanding the lesser requirement, with regard to something falling within zone 1 of Figure 1, a court need not deal with the complexities associated with drawing

[121] *Ibid.* at paras. 113 to 120 (QL).
[122] *Ibid.* at para. 113 (QL).
[123] *Ibid.* at para. 110 (QL).
[124] *Ibid.* at para. 120 (QL).
[125] *Ibid.* at para. 121 (QL).

the line between idea and expression if the defendant is unable to lead evidence rebutting the statutory presumption of the subsistence of copyright.

With respect to his analysis of infringement, Gibson J. referred to, and waded through, a plethora of jurisprudence. In the end, though perhaps based on a questionable legal foundation due to his reliance on *U & R Tax Services v. H & R Block*, *supra*, Gibson J. properly found that the defendant infringed the plaintiff's copyright in the Guidas as a whole due to the defendant's copying of a substantial part thereof.[126] The assessment of substantiality was based both on quality and quantity, the former assessed with particular regard to the unique utility of the Guidas, and the latter being assessed with regard to the telephone listings contained therein.[127] Therefore, despite the defendant's reproduction of individually copyrightable sub-components of the Guidas, Gibson J. decided the issue based on the substantiality of those components in terms of the Guidas as a whole. Under the proposed approach, an individually copyrightable sub-component by definition constitutes a substantial part of the whole. If the alleged infringer has produced or reproduced the individually copyrightable sub-component, there need not be any consideration of its substantiality, as there has been production or reproduction of a work *in toto*: i.e. the copyrightable sub-component.

On this point, despite finding infringement of copyright in the Guidas as a whole, Gibson J. went on to consider infringement with respect to the plaintiff's copyright in the telephone listings portion of the Guidas as well as the block advertisements contained therein (both individually copyrightable sub-components of the Guidas). He found that the defendant had "copied or

[126] *Ibid.* at para. 126 (QL).
[127] *Ibid.* at para. 126 (QL).

substantially copied" the plaintiff's telephone listings[128]; in other words, there was a finding of copying in fact. With respect to the block advertisements, Gibson J. held that they were "copies or substantial copies" and the plaintiff's copyright in the block advertisements was infringed.[129]

When these pithy findings are unpacked, it is evident that Gibson J. felt it unnecessary to determine whether the defendant reproduced the telephone listings in their entirety, as the defendant reproduced a substantial part thereof. The same can be said about Justice Gibson's findings regarding the block advertisements, though in that case it was apparent that there was no exact duplication. In other words, Gibson J. found that the defendant's material was a reproduction of the plaintiff's copyrighted telephone listings and block advertisements, which were copyrightable sub-components of the Guidas. He also found that what was reproduced with respect to each individual element of the Guidas represented substantial parts thereof. It therefore follows that a copyrighted computer program may be comprised of individually copyrightable works[130], each of which represents a substantial part of the whole. The significance of this distinction under the proposed approach is that when dealing with the production or reproduction of a copyrightable sub-component of a computer program, a court need not consider the substantiality thereof. Additionally, this distinction may impact upon the nature and quantum of recovery awarded by a court.

Notwithstanding the above, in some cases the alleged infringer has only produced or reproduced parts of the plaintiff's copyrighted computer program, which do not constitute individually copyrightable sub-components, such as some non-literal elements that cannot fall within the

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[128] *Ibid.* at para. 133 (QL).
[129] *Ibid.* at paras. 135 to 136 (QL).
[130] See McKeown, *Fox on Copyright*, *supra* note 7 at p. 4-7.

statutory definition of "computer program". In such cases, a court must consider the substantiality of the parts produced or reproduced in relation to the copyrighted computer program as a whole, or the copyrightable sub-component thereof, with which the parts are associated. Under the proposed approach it is in this regard that the copyrighted computer program is dissected and the parts produced or reproduced are individually considered under the idea/expression dichotomy and the requirement of originality bearing in mind the doctrines of merger and scènes à faire.

3.2 The Substantiality of the Part Produced or Reproduced

As the case of *Hagar v. ECW Press*, *supra*, was not a case in which the plaintiff's entire copyrighted work was alleged to be reproduced (there was only one chapter dealing with Shania Twain), the issue was whether the defendant reproduced a substantial part of the whole of the plaintiff's copyrighted work. Sufficient to ground a finding of infringement, Reed J. held that there had been a reproduction by the defendant of a substantial part of the plaintiff's work in terms of quantity and quality, despite there being no exact duplication.

> ... the conclusion I draw from the facts is that in terms of quantity, a substantial amount of [the plaintiff's] work was taken. In addition, the parts of [the plaintiff's] book that are most valuable to her were taken: the direct quotes from Shania Twain. I conclude that qualitatively a very valuable and significant part of [the plaintiff's] work was taken.[131]
>
> ...
>
> In the context of this case, I consider the main factors that lead to a conclusion that a substantial part of the work was taken are the quantity of the material taken and the quality of that material (the direct quotes from Shania Twain). I conclude, on these facts, that the use made by the defendants of the plaintiff's work constituted the copying of a substantial part of that work (some directly, and some by colourable imitation).[132]

[131] *Hager v. ECW Press*, *supra* note 88 at para. 16 (QL).
[132] *Ibid.* at para. 18 (QL).

Consistent with the judgment of Lord Pearce in *Ladbroke*, Reed J. correctly recognized that a work should not be dissected into fragments in order to assess whether or not it is subject to copyright.

> It was made very clear in the *Slumber Magic* decision, referred to above, and in other cases, that when assessing copyright protection one must not dissect the work into fragments. It is not appropriate then to fragment [the plaintiff's] work and treat the quotes as independent parts. [The plaintiff's] work required each of (1) skill, (2) judgment and (3) labour for its creation.[133]

Justice Reed's reference in the above quote to skill, judgment and labour relates to the requisite originality vis-à-vis the subsistence of copyright, which was considered above in Chapter 1.4. Thus, based on the literary work being original, Reed J. was satisfied that when viewed as a whole, copyright subsisted in the literary work.

Reed J. did however perform some dissection of the plaintiff's literary work during her consideration of substantiality. Reed J. held that the plaintiff had copyright in her chapter on Shania Twain, of which the direct quotes from Shania Twain were protected by copyright, and from which the defendant copied a substantial part in terms of quantity and quality, both by exact duplication and through modification. This finding lends support to the proposition that under the proposed approach to infringement analysis a computer program as a whole may be dissected when considering whether "any substantial part" of the whole has been reproduced. If it turns out that what was taken was in and of itself copyrightable, then the issue of substantiality need not be considered, as the reproduction was of a work *in toto*. If however the part reproduced is not copyrightable, then, in accordance with *Ladbroke*, it is the quality rather than the quantity of the part that determines whether it is a substantial part of the whole. Under the proposed approach, if in quality the part considered is determined to be original expression, then it is a

[133] *Ibid.* at para. 69 (QL).

substantial part of the whole and protectable by copyright; it falls within zone 2 of Figure 1, *supra*.

The issue of substantiality has received further consideration in *U & R Tax Services v. H & R Block*, *supra*, where Richard J. explored the inconsistencies and apparent fabrications in the testimony of witnesses relating to the issue of whether the defendant had access to the plaintiff's copyrighted form. In the end, there was little doubt that the defendant reproduced the form completely, with the removal of a reference on the form to the plaintiff, and superimposition of its own logo on the reproduced form. A causal connection in that case did not pose a material issue, as there was direct evidence of copying.

However, Richard J. stated that "[i]n order to find copyright infringement, a plaintiff must prove copying of the work or a substantial part thereof and access to the copyright protected work."[134] However, there is no justification for requiring a plaintiff to prove access in addition to copying. In the absence of proof by way of direct evidence, a finding of copying in fact may be based on there being access and substantial similarity. Once copying in fact has been demonstrated, a plaintiff must additionally prove that the alleged infringer produced or reproduced the work *in toto*, a copyrightable sub-component thereof, or any substantial part of either. Indeed, Justice Richard's comment was likely an innocent misstatement, as the following comment demonstrates that access was implicit in the defendant's admission regarding copying.

> In this instance, the defendant has admitted to copying a portion of [the plaintiff's form] and the inquiry is therefore directed to whether the copying was "substantial" within the meaning given to that term by the courts: "[w]hat constitutes a 'substantial part' is a question of fact and, in this respect, the courts have given more emphasis on the quality of what was taken from the original work rather than the quantity" [citations omitted].[135]

[134] *U & R Tax Services v. H & R Block*, *supra* note 63 at p. 268.
[135] *Ibid.*

Richard J. then provided what was purported to be a list of five factors "that have been considered by the courts in the past" with respect to the issue of assessing what constitutes a "substantial part".[136] At least four of the five factors do not have a demonstrable source of reference in the judgment, and all but the third are derived from the first. The factors listed by Richard J., whose list is often cited in the case law, were:

> (1) the quality and quantity of the material taken;
> (2) the extent to which the defendant's use adversely affects the plaintiff's activities and diminishes the value of the plaintiff's copyright;
> (3) whether the material taken is the proper subject-matter of a copyright;
> (4) whether the defendant intentionally appropriated the plaintiff's work to save time and effort; and
> (5) whether the material taken is used in the same or a similar fashion as the plaintiff's.[137]

The second, fourth and fifth factors all reduce to the first.[138] However, Justice Richard's third factor raises concerns. The analysis of whether the material taken is the proper subject matter of copyright was the somewhat awkward approach favoured by both Guthrie and O'Leary JJ. in *Matrox v. Gaudreau*, *infra*, and *Delrina* respectively. It is in this sense that the respective plaintiffs' copyrighted computer programs were incorrectly dissected with a view to the determination of copyrightability and the weeding-out of that which was not found to be copyrightable.

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[136] *Ibid*

[137] *Ibid.* Note also that a similar list is presented by McKeown, *Fox on Copyright*, *supra* note 7 at pp. 21-14 to 21.15.

[138] The second factor properly fits within the first vis-à-vis the quality of the material taken, as evidence of adverse outcome due to use by the defendant indicates that the material taken was qualitatively important, though perhaps unimpressive in terms of quantity. The fourth factor also fits within the first with respect to both quality and quantity. It relates to quality in that the defendant's saving of time and effort demonstrates that the material taken represents the exercise of significant skill, judgment and labour on the part of the author, which supports the material as constituting a substantial part of the whole. Additionally, it relates to quantity in that the defendant's saving of time and effort demonstrates that without appropriation, the defendant would not have been able to make its reproduction in the timeframe that it did, which demonstrates the significance of what was taken. The fifth factor also reduces to qualitative considerations. The use of the part taken in the same or similar fashion indicates that the author exercised skill and labour in developing that part, as the alleged infringer would prefer to take someone else's original expression rather than go to the trouble of developing it herself.

Justice Richard's third factor is *prima facie* contrary to the above-cited comments of Lord Pearce in *Ladbroke*. In addition, under the proposed approach to infringement analysis, when assessing the substantiality of that which has been produced or reproduced, the proper question is whether the material taken is protectable by copyright, rather than being copyrightable. It is the computer program as a whole in which copyright subsists. In addition, that which has been produced or reproduced may be a copyrightable sub-component of the computer program. In the latter situation, the infringement analysis deals with the production or reproduction of a work *in toto*, and there need not be consideration of the substantiality of that which has been taken.

However, under the proposed approach there is no requirement for consideration of copyrightability when it is asserted that the part produced or reproduced by the alleged infringer is a substantial part of some copyrightable whole. Whereas substantiality is to be assessed in terms of quality rather than quantity[139], to be protectable by copyright, the material taken from the copyrighted computer program must in quality be the original expression of the author. For if it were otherwise, the scope of copyright would extend beyond the traditional normative dictates of the requirement of originality and the idea/expression dichotomy.[140] In Chapter 6,

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[139] *Ladbroke*, *supra* note 81 at p. 481. Handa has suggested that both quality and quantity are to be considered in terms of substantiality: Handa, *Copyright Law*, *supra* note 6 at p. 261. However, "quantity" under the proposed approach really has nothing to do with the idea/expression dichotomy and the requirement of originality. As such, quantity is not a factor in the assessment of substantiality. An example would be the mining of all the data in a compilation of data, without reproduction of the selection or arrangement. The proper role for quantitative considerations is in the determination of what, if any, relief will be granted once infringement has been proven. It may be the case that the common law concept of *de minimus* relied upon by O'Leary J. in *Delrina* will play a role in the assessment of damages when the infringement relates to something that is quantitatively insignificant.

[140] There is some recent U.K. authority standing for the proposition that any part of a computer program must be considered a substantial part given the fact that removal thereof will result in the computer program not working properly, if at all: see *Cantor Fitzgerald International v. Tradition (UK) Ltd.*, *supra* note 36 at paras. 80 & 81, and Takach, *Computer Law*, *supra* note 29 at p. 151. However, under the proposed approach to infringement analysis, although insightful, this reasoning will not stand alone. It may well be the case that the removal of a particular algorithm, for example, would render a computer program inoperable. However, if that algorithm cannot be considered to be the original expression of the author in respect of the dictates of the idea/expression dichotomy and

this aspect of the proposed approach is shown to be consistent with the decision of Morden J.A. in *Delrina (C.A.)*; a decision which has found subsequent contradictory and somewhat disconcerting purchase in the jurisprudence, as is considered in Chapter 7.

However, before considering such material, there is another aspect to substantiality that must be considered. Under the proposed approach to infringement analysis, the illicit production or reproduction of sub-components that in quality are not original expression may still constitute a substantial part of the whole when taken together. This concept recognizes that the selection or arrangement of non-protectable elements may itself represent the original protectable expression of the author.

3.3 Taking the Selection or Arrangement of Non-Protectable Sub-Components

Under the *Copyright Act*, a "compilation" is defined as follows.

> "compilation" means
>
> (a) a work resulting from the selection or arrangement of literary, dramatic, musical or artistic works or of parts thereof, or
>
> (b) a work resulting from the selection or arrangement of data[141]

According to the definition, a compilation may be comprised of the selection or arrangement of computer programs, or of parts thereof. Therefore it is possible that the selection or arrangement of parts of a computer program may constitute a compilation, subject to copyright, though the individual parts thereof may not themselves constitute original expression. In addition, the

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requirement of originality, then it also cannot be considered to be a substantial part of the whole. If it were otherwise, the protection afforded by copyright would be extended beyond established and accepted norms.

[141] *Copyright Act*, *supra* note 4 at s. 2 "compilation".

selection or arrangement of parts of a computer program may constitute original expression and therefore be protectable by copyright, even though the particular selection or arrangement might not be copyrightable in that it is not a fixated compilation (assuming fixation to be a requirement for the subsistence of copyright). As a result, it is necessary to consider the infringement of copyright in computer programs where what has been produced or reproduced by the alleged infringer is the selection or arrangement of non-protectable parts of a computer program, which selection or arrangement is considered to be the author's original expression.

In *B.C. Jockey v. Standen*[142], both the British Columbia Supreme Court and Court of Appeal were in agreement that the use of facts and information contained in a copyrighted compilation could constitute copyright infringement if the facts and information taken constitute a substantial part of the whole. In that case the plaintiff developed a sheet entitled the "Overnight", which contained specific information about horse racing. The defendant utilized some, but not all, of the information contained in the Overnight to publish its "Special News". As there was little doubt that the plaintiff had copyright in Overnight as a compilation, the issue was whether or not the defendant, by utilizing some of the information contained therein to generate the Special News, infringed the plaintiff's copyright.

The defendant tendered its submission on the basis that copyright does not exist in information or ideas and therefore the defendant's use of the information could not amount to copyright infringement. However, Legg J. of the Supreme Court took no real issue with this submission and focused the analysis on what the defendant appropriated.

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[142] *British Columbia Jockey Club et al. v. Stranden* (1983), 73 C.P.R. (2d) 164 (B.C.S.C.), aff'd (1985) 8 C.P.R. (3d) 283 (C.A.).

> But in my opinion the defendant in the case at bar has done more than copy information from Overnight. He has appropriated the results of the labour and skills of the [plaintiff] which has gone into the compilation of the information which the [plaintiff] has developed and published. The merit of the compilation of information in Overnight resides in the painstaking tasks which have been performed by the [plaintiff] in assembling that information.[143]

Legg J. then correctly noted that differences in language and alterations introduced into the defendant's material did not avoid infringement when a substantial part of the copyrighted work had been appropriated.

> Copyright may be infringed by appropriating a substantial amount of the material published by the original author, although the language employed by the infringer be different and the material be altered.[144]

Legg J. based his finding of infringement on the defendant's appropriation of a substantial part of the plaintiff's copyrighted Overnight compilation. The focus was placed on the plaintiff's work, skill, judgment and knowledge that went into making the compilation, rather than on what was taken, which seems to afford significant protection to ideas.

> It is my finding on the facts before me that there has been an appropriation by the defendant in his publication of the Special News of a substantial amount of the [plaintiff's] compilation of information published in Overnight and therefore of the fruits of the work and skill of the [plaintiff].[145]
>
> ...
>
> Although [the defendant] adopted that information to his own style and added information of his own, the defendant nevertheless appropriated a substantial amount of the work, skill, judgment and knowledge of the [plaintiff]. The copyright of the [plaintiff] does not reside solely in the order of the information which it has compiled. Although the defendant has rearranged and republished that information in a different style, he nevertheless continued to appropriate a substantial part of the [plaintiff's] original work.[146]

The defendant appealed based upon the familiar copyright doctrine that there is no copyright in ideas or information. According to Macdonald J.A. of the B.C. Court of Appeal, the question was whether the defendant took a substantial portion of the compilation of information, regardless of the fact that the defendant did not duplicate the literary form of the information. In

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[143] *Ibid.* at p. 173.
[144] *Ibid.*
[145] *Ibid.*
[146] *Ibid.* at p. 175.

the result, the B.C. Court of Appeal held that the trial judge made no error in law.[147] From a complete reading of both judgments it is apparent that the essential factual finding was that the information appropriated from Overnight was novel and the result of a substantial amount of work and labour. The appropriation of the information constituted the reproduction of a substantial part of the compilation so comprised, which resulted in copyright infringement.

The result in *B.C. Jockey v. Standen* may have gone too far in protecting ideas, original though they may have been. Under the proposed approach to infringement analysis, although the information comprising a copyrighted compilation may not itself be copyrightable, the production or reproduction of a substantial part of the compilation can be accomplished by the appropriation of elements thereof that taken together, represent the original expression of the author. Therefore, the production or reproduction of literal or non-literal elements of a copyrighted computer program, which are not independently copyrightable or protected by copyright, may support a finding of infringement if the selection or arrangement of those elements was produced or reproduced and constitutes original expression, whether or not the selection or arrangement is itself copyrightable. Such a situation would be covered by either zone 1 or zone 2 for Figure 1, *supra*.

[147] C.A. *ibid.* at p. 288.

3.4 Non-Literal Elements as Substantial Parts of the Whole

Another aspect to the determination of substantiality under the proposed approach is that not only can the non-literal elements of a copyrighted computer program be considered in the context of copying in fact, they may well constitute a substantial part of the work as a whole.

This was the case in *Zlata v. Lever Brothers*[148], where the defendant was alleged to have infringed the copyright subsisting in various literary works all containing the same character named "Becassine". The acts complained of were the defendant's inclusion of Becassine in a play broadcast over the radio. Salvas J. concluded that the defendants had infringed the copyright in the literary works. This conclusion was based on the finding that the defendant took the non-literal elements of the copyrighted literary works and included them in the play. Specifically, the "name, special expressions, distinguishing characteristics and part" associated with Becassine, as per the copyrighted literary works, had been taken by the defendant.[149] Furthermore, Salvas J. found that "the part of 'Becassine' is the most important character of the work of [the author] and the one which gives it its literary and artistic value".[150] As a result, these non-literal elements were found to be substantial parts of the copyrighted works, the reproduction of which attracted liability for copyright infringement.

Under the proposed approach to infringement analysis, the protectability of non-literal elements occurs if they are considered original expression falling within zone 2 of Figure 1, *supra*. Though the analysis in *Zlata v. Lever Brothers* did not directly consider the originality and

[148] *Zlata v. Lever Brothers Ltd. et al.* (1948), 9 C.P.R. 34 (Que. S.C.).
[149] *Ibid.* at p. 46.
[150] *Ibid.* at p. 47.

expressiveness of the non-literal elements, it is apparent that the ideas were sufficiently expressed in an original manner such that they were recognizable as being associated with the author's work. In this sense, the gap between idea and the expression thereof was bridged.

Similarly, in *Anne of Green Gables v. Avonlea*[151] Wilson J. considered the scope of copyright in literary works in which particular characters and situations were described. One of the issues was whether the copyright holder could licence two or three dimensional representations of the characters and situations found in the copyrighted works. Wilson J. concluded that the copyright in the books protected these non-literal elements as they constituted the original expression of the author as demonstrated by the delineation, distinctiveness, thoroughness and completeness thereof.

> It is clear from the above-quoted passages from L.M. Montgomery's Anne of Green Gables that the character "Anne" and the situations in which she finds herself in the book are clearly delineated, distinctive, thorough, and complete. The defendant has reproduced or translated these descriptions in her two- and three-dimensional representations of "Anne" and various other characters and situations from the text of the book. The literary work Anne of Green Gables contains a detailed verbal portrait that captures Anne's physical image and her personal qualities, a portrait which I conclude is protected by copyright. I conclude that, until copyright terminated on April 24, 1992, the copyright in the book Anne of Green Gables extended to the two- and three-dimensional images based on descriptions of characters and situations found in the book.[152]

Thus it is seen that the production or reproduction of non-literal elements may amount to infringement if the non-literal elements can be characterized as substantial parts of the whole. Under the proposed approach, the requisite substantiality rests on the characterization of the non-literal elements at issue being the author's original expression falling within zone 2 of Figure 1, *supra*.

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[151] *Anne of Green Gables Licensing Authority Inc. v. Avonlea Traditions Inc.* (2000), 4 C.P.R. (4th) 289 (Ont. S.C.J.).
[152] *Ibid.* at para. 121.

In drawing the line between idea and expression, Wilson J. considered the delineation, distinctiveness, thoroughness and completeness of the characters and situations. These factors were sufficient for the conclusion that the non-literal elements represented more than mere idea. As a result, the protection afforded to the non-literal elements of a copyrighted computer program, such as its structure, sequence and organization, is well-founded through the application of the idea/expression dichotomy and the requirement of originality. It is in this respect that Justice Binnie's "metaphorical copying", as mentioned in *Théberge*, manifests under the proposed approach to infringement analysis.[153]

3.5 Conclusions Regarding the Proposed Approach to Infringement Analysis

As a result of the preceding discussion, the key to understanding the proposed approach to the analysis of computer program copyright infringement is to recognize that the illicit material generated by the alleged infringer need not be an exact or one-to-one duplication of the copyrighted computer program, or any part thereof. The alleged infringer's generation of the same or a similar part of the copyrighted computer program, through copying in fact, constitutes the production or reproduction of that part. This aspect of the proposed approach to infringement analysis represents nothing new in the law. Rather it clarifies the existing methodology that has become clouded in the jurisprudence. However, what is new about the proposed approach is that in assessing whether copying in fact can be found, the court need not limit its analysis to those elements of a computer program that are either copyrightable or protected by copyright, nor must it look to the work as a whole. This proposition takes the proposed Canadian approach out of the

[153] *Théberge*, *supra* note 10 at para. 47.

realm of the U.S. abstraction-filtration-comparison test, which is described in more detail in Chapter 5. Thus, the proposed approach resolves any disaccord relating to whether the U.S. abstraction-filtration-comparison test has been or ought to be adopted in Canada.

Additionally, once the plaintiff has established that the alleged infringer has produced or reproduced something, the plaintiff must further demonstrate that what has been produced or reproduced is either the whole copyrighted work, a copyrightable sub-component thereof, or a substantial part of either. In this sense the proposed approach recognizes that a copyrighted computer program may be comprised of a number of copyrightable sub-components as well as parts that are not independently copyrightable; i.e. parts that would or would not respectively fall within zone 1 of Figure 1, *supra*. Similar to the consideration of copying in fact under the proposed approach, this aspect does not represent anything new in the law of copyright. However, it is when the substantiality of that which has been produced or reproduced is considered that the proposed approach diverges from recognized methodologies.

The issue of substantiality is only raised when what has been produced or reproduced by the alleged infringer is not independently copyrightable in that it does not fall within zone 1 of Figure 1, *supra*. This occurs when that which has been taken does not meet the categorical statutory definition of a "computer program" provided by the *Copyright Act*[154] thus falling outside zone 1 of Figure 1, *supra*. This situation may arise when dealing with the production or reproduction of certain non-literal elements of a computer program.

[154] Robic & Léger, *Canadian Copyright Act*, *supra* note 43 at p. 2-230.

Under the proposed approach to infringement analysis, the issue of substantiality is resolved through the dissection of the computer program in order to identify what has been produced or reproduced within the context of the computer program as a whole. Once the dissection has been accomplished, the final stage of the proposed approach consists of the assessment of substantiality vis-à-vis that which has been produced or reproduced. Under the proposed approach it is recognized that in order to be a substantial part, that which has been produced or reproduced need only constitute in quality the original expression of the author; quantitative analysis is reserved for the assessment of what, if any, recovery will be awarded. In other words, a substantial part of a copyrighted computer program is something that falls within zone 2 of Figure 1, *supra*. In such a case the part taken is protectable by copyright in the sense that the unauthorized production or reproduction of it will attract liability for copyright infringement.[155] That which is not original expression must be weeded-out from the analysis, as that which is not protectable by copyright cannot be said to constitute "any substantial part" of the whole. This conclusion stems from the idea/expression dichotomy and requirement of originality; both being fundamental doctrines of copyright law. The doctrines of merger and scènes à faire temper the determination of whether that which has been produced or reproduced by the alleged infringer is properly characterized as original expression protectable by copyright. As the proposed approach has been elucidated in detail, it is now examined in respect of early judicial analyses of computer program copyright infringement.

[155] Though there may be a finding of copyright infringement, the relief granted may not necessarily be analogous where different substantial parts have been taken. For example, the infringement may be so minor that the common law concept of *de minimus* might eliminate all hope of monetary recovery. This was touched upon by O'Leary J. in *Delrina*, as considered *infra*.

Chapter 4: Early Analyses of Computer Program Copyright Infringement

4.1 Computer Program Copyright Infringement and Non-Literal Elements

Gemologists v. Gem Scan[156] was an interlocutory injunction application relating to alleged infringement of copyright in computer programs. Montgomery J. did not deal with the subsistence of copyright, but rather commented on the infringement thereof in relation to the analysis of whether the applicant has a strong *prima facie* case. The applicant was an appraiser of jewelry and gems who had developed software to provide computer-aided appraisals, which was not a unique practice. The complaint in the case centered on a group of the applicant's former employees who resigned without notice and immediately competed against the applicant. While still employed with the applicant, the employees took steps to develop their own computer program to aid in the appraisal service that was to be performed through a competing company.

What is of interest is that this appears to be the first Canadian case to expressly verify the infringement of copyright in a computer program based on the unauthorized copying of the non-literal elements thereof.

> I am satisfied on the evidence before me that while still employed by [the applicant], [the ex-employees] infringed [the applicant's] copyright in [the applicant's computer programs] and program manuals by copying the over-all logical structure of the programs and substantially copying the program sequence of menus and menu options and by use of the applicant's flow chart.
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> I find that the computer program prepared for the respondents was created in large measure by using the applicant's programs and modifying them for the use of [the competitor].[157]

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[156] *Gemologists International Inc. v. Gem Scan International et al.* (1986), 9 C.P.R. (3d) 255 (Ont. H.C.J.).
[157] *Ibid.* at p. 257.

These non-literal elements of a computer program are often identified in the jurisprudence relating to computer program copyright infringement as "structure", "sequence", "organization" "graphical user interface" and "user interface". Justice Montgomery's decision is illustrative of the fact that there need not be one-to-one copying in order to prove the act of copyright infringement. Moreover, the term "copying" when used in this context implies that the sources for the respondent's materials were in large measure the applicant's copyrighted computer programs, rather than the respondent's own original process of mind. The latter would result in an independent creation, thus avoiding the act of copyright infringement.

At the end of the day, the significance of this case is that the copying by a defendant of non-literal elements of a copyrighted computer program may result in a finding of infringement. This approach properly recognizes that the alleged infringer's materials need not be an exact or one-to-one duplication of the original. In the world of computer programs, there are many different programming languages aiding an infringer in disguising his infringing activities from an eye looking for syntactical similarity. Thus, the approach used by Montgomery J. accords with the proposed approach to infringement analysis. However, under the proposed approach it would have been helpful if Montgomery J. identified whether the respondent reproduced the applicant's computer programs *in toto*, or substantial parts thereof. If it were the latter, then the proposed approach would have required the consideration of whether the non-literal elements reproduced by the respondent were original expression. The absence of such precise consideration may be attributable to the case being an interlocutory injunction application, rather than a full-blown trial.

Also noteworthy in *Gemologists v. Gem Scan* is that the modifications made by the respondents to their computer program were not of a nature that imported sufficient originality to save the respondent from a finding of copyright infringement. Indeed, the respondent's computer program was characterized as new. However, Montgomery J. was not about to allow the respondent to avoid culpability simply because a new computer program was developed. It was built from components copied from the applicant's computer programs in the sense that the applicant's computer programs were used by the respondent as the sources for its materials. As Montgomery J. stated:

> [t]heft of intellectual property is as serious as theft of any other property. Conversion of [the applicant's] software package is just as culpable as parking a truck into a loading dock and stealing its computer. Creating a new software package with stolen parts is akin to removing components from an employer's warehouse in a lunch pail and attempting to sell the assembled product.[158]

In the result, an injunction issued against the respondent requiring, among other things, the delivery up of all copies of the respondent's computer program.[159] Under the proposed approach, if a defendant produces or reproduces the non-literal elements of a copyrighted computer program, it will be liable for copyright infringement if the non-literal elements are found to be original expression; i.e. that they fall within zone 2 of Figure 1, *supra*.

4.2 Copyright Infringement and the Physical "Replication" of Software

Released twenty-two days following the release of Justice Montgomery's decision in *Gemologists v. Gem Scan* was the decision of Reed J. in *Apple Computer v. Mackintosh*

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[158] *Ibid.*
[159] *Ibid.* at pp. 259 to 260.

Computers[160], which spearheaded the issue of copyright infringement vis-à-vis computer programs towards consideration by the Supreme Court of Canada in the same case. The plaintiff, Apple Computer, alleged infringement by Mackintosh Computers of the plaintiff's copyright in computer programs stored on ROM chips contained in computers, which provided operating instructions thereto.

The computer programs were originally written by the plaintiff's programmers in assembly language, which was noted by Reed J. to be an intermediate level language, on a scale characterized by the ease in which the language can be read by humans.[161] Also on this scale are higher-level languages, i.e. languages more easily readable by humans, identified by Reed J. to include programming languages such as BASIC and PASCAL. Reed J. noted that machine language or object code could be found at the low-end of the scale, which included binary and hexadecimal notations. The plaintiff had published its computer programs as part of its reference manuals in both assembly form and hexadecimal form. The assembly form was the computer programs' source code and the hexadecimal form was generated through the use of another computer program known as an "assembler". The plaintiff's computer programs were physically encoded on its ROM chips consisting of integrated circuits, which reflected the on/off states of the computer programs' 1/0 binary form on a one-to-one basis.[162]

In respect of the originality of computer programs, it has been recognized that originality stems from the amount of labour and skill that goes into the creation of a computer program and the

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[160] *Apple Computer, Inc. et al. v. Mackintosh Computers Ltd. et al.* (1986), 28 D.L.R. (4th) 178 (F.C.T.D.), aff'd (1987), 44 D.L.R. (4th) 74 (C.A.), add'f (1990), 71 D.L.R. (4th) 95 (S.C.C.).
[161] *Ibid.* at pp. 184 to 186.
[162] *Ibid.* at pp. 187 to 189.

idiosyncratic tendencies of computer programmers. These factors inherent in the creation of computer programs, which support originality and may aid in the establishment of copying in fact, were recognized by Reed J.

> There is no doubt that the creation of a computer program requires a great deal of time, effort, and ingenuity...
>
> There is no doubt that computer programs are highly individualistic in nature and contain a form of expression personal to the individual programmer. No two programmers would ever write a program in exactly the same way (except perhaps in the case of the most simple program). Even the same programmer, after writing a program and leaving it for some time, would not write the program the same way on a second occasion. The sequence of instructions would most certainly be different. The possibility of two programmers creating identical programs, without copying was compared by the defendants' expert witness to the likelihood of a monkey sitting at a typewriter producing Shakespeare.[163]

Thus it would appear as though originality in respect of computer programs in not a high threshold and therefore the subsistence of copyright in a computer program as a whole is virtually unassailable.

Reed J. was not faced with the issue of establishing copying in fact through indirect evidence, as the defendant had utilized a device called an EPROM burner to duplicate the plaintiff's ROM chip, almost in its entirety. There was no doubt that the defendant made reference to the plaintiff's material in generating its own. In addition, the defendant conceded that copyright could subsist in a computer program's source code. However, what was at issue was whether the physical copying of the ROM chips constituted the reproduction of a work in which copyright subsisted. As explained by Reed J., the issue was as follows.

> The issue is whether a computer program which originates as a written text, in the normal and usual sense of those terms, but which has a dimension (as appears from the facts set out above) which it is not traditional to associate with such texts, continues to be covered by copyright when it is converted into its electrical code version, or more precisely in this case when it is embodied in a device designed to replicate that code.
>
> The defendants' argument that copyright protection does not so extend, has several facets: (1) the hexadecimal code version of the program is not a translation of the source code version; (2) since there

[163] *Ibid.* at p. 184.

> is a one-to-one relationship between the source code program and its embodiment in the chip there is a merger of the idea and the expression of the idea which copyright law does not cover; (3) the text of the *Copyright Act* does not cover computer programs in their chip form; (4) there are compelling policy arguments for refusing to extend copyright protection in the present case such as potential restrictions on commerce and a possible overlap with patent law.[164]

Thus in the development of the recognition of copyright in computer programs, though its subsistence was generally recognized in computer programs as literary works, the question was whether copyright subsisted in the electrical version of the machine language, or object code form of a computer program.

Reed J. characterized the representation of the computer programs at issue in machine language, or object code, as a "translation" of the source code under the *Copyright Act*, the production or reproduction of which being the exclusive right of the copyright holder.

> In my view the conversion of a work into a code, or the conversion of a work originally written in one code into another code constitutes a translation for the purposes of the [*Copyright Act*]. In addition, as noted above, a programmer, in creating a program, is not thinking in terms of the specifications of the ROM chip, either in writing the assembly code version or when the hexadecimal notation is prepared. What media is finally chosen for embodiment of the program is irrelevant to the programmer. Accordingly, I find it difficult to accept counsel for the defendants' argument that the hexadecimal form of the program is a different literary work and not a translation of the original. [165]

Reed J. then concluded that the ROM chip constituted a production or reproduction the computer program in a material form.

> I can see no difference at a physical level between a device such as a record which "contains" a musical work by virtue of the grooves impressed therein, and a ROM chip which "contains" a program by virtue of the pattern of conductive and non-conductive areas created therein. In my view the opening words of s. 3 [of the *Copyright Act*] clearly cover the plaintiffs' program as embodied in a ROM chip. Such embodiment is surely the production or reproduction of the work in a material form, just as a record or a cassette tape is a production or reproduction of a work in a material form. (I have not overlooked the fact that there is a separate section in the Act which covers copyright in records.)[166]

In the result, Reed J. held that the defendant committed an act of copyright infringement by reproducing the plaintiff's source code as translated into machine language or object code.

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[164] *Ibid.* at p. 197.
[165] *Ibid.* at p. 198.
[166] *Ibid.* at p. 208.

Justice Reed's decision was subsequently appealed to the Federal Court of Appeal, where Mahoney, Hugessen and MacGuigan JJ.A. each delivered their own judgments. Both Mahoney and Hugessen JJ.A. held that Reed J. erred in relation to her finding regarding translations, and held that the plaintiff's ROM chip was a reproduction of their copyrighted assembly version of the computer program. Though nothing turns on it, this finding may have been flawed in the sense that rather than a reproduction, the ROM chip was a production, as the source code had theretofore not been produced in the form of a ROM chip. MacGuigan J.A. held that there was no error, as either translation or reproduction would properly address the situation. All three justices agreed in the result: infringement had occurred.

On appeal to the Supreme Court of Canada, the judgment of the full Court was delivered by Cory J. in succinct fashion. He stated that "[t]he issue raised in this appeal is whether a computer program, originating in copyrightable written form, continues to be protected by copyright when it is replicated in the circuitry of a silicon chip."[167] Interestingly, Cory J. chose to use the terminology "replication", which was not found in the *Copyright Act*, rather than "produce", "reproduce", or "translate", which were. In conclusion Cory J. upheld the decision of Reed J. and substantially agreed with her reasoning. At the end of the day, infringement was found on the basis that copyright subsisted in the ROM chip as a reproduction of the copyrighted assembly code version of the computer program, *in toto*. However, as noted above, it may be more appropriate to consider copyright subsisting in the ROM chip as a production of the computer program in the material form of a chip, and the act of infringement to have occurred as a result of the defendant's reproduction thereof. In any event, the situation in respect of integrated circuits

[167] S.C.C. *ibid.* at p. 95.

is now expressly dealt with under the *Copyright Act*[168], and there is no doubt that copyright can subsist in both the source code and object code forms of a computer program.

4.3 Computer Programs and the Attribution of Similarities to Copying

Shortly before the release of Justice Cory's reasons, in *Solartronix*[169] de Blois J. of the Quebec Superior Court dealt with the alleged infringement of copyright in a computer program that was designed for the automation of a concrete factory. The plaintiff alleged that the defendant's computer program evidenced the plaintiff's copyright infringement due to it being functionally equivalent and having screen displays that provided the same information. Justice de Blois was quick to note that the information was not offered in the same order or format. The plaintiff's computer program was encoded in an EPROM chip and the defendant's allegedly infringing computer program was stored on a hard disk.

In conclusion, de Blois J. noted that the plaintiff's computer program encoded in the EPROM chip was copyrighted, but the issue remained as to whether there was copying in fact. The plaintiff failed in this regard as there were no facts that could support the plaintiff's contention of copying. Rather than being attributable to copying, all functional similarities between the computer programs could be attributed to the requirements of the equipment and purpose for which the computer programs were designed, which were independently within the knowledge of both the plaintiff and defendant. In the result, the plaintiff failed in its claim for copyright

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[168] *Copyright Act*, *supra* note 4 at s. 64.2(2).
[169] *Systemes Informatises Solartronix v. College d'enseignement general et professionnel de Jonquiere* (1990), 38 C.P.R. (3d) 143 (Que. S.C.).

infringement. Thus, *Solartronix* is consistent with the proposed approach to infringement analysis as the plaintiff was not able to establish copying in fact under the first step. The consideration of similarities was done without weeding-out those elements of the plaintiff's computer program not protected by copyright. Indeed, as the plaintiff could not attribute the similarities identified to copying, there was no need to consider the originality or expressiveness of any element of the plaintiff's computer program.

4.4 The "Copyrightability" of the Elements of a "Computer Program"

With respect to the analysis of copyright infringement vis-à-vis computer programs, there has been a push in Canada for the dissection of a computer program into its component parts in order to assess their individual copyrightability. In other words, some courts and commentators have suggested that a computer program is to be dissected in order to determine in which elements thereof copyright subsists. This push has gained momentum despite the long-established principles considered above in relation to Lord Pearce's judgment in *Ladbroke*. The assessment of the copyrightability of component parts does not accord with the proposed approach to infringement analysis. Such a procedure ignores the concept of "any substantial part" found in s. 3(1) of the *Copyright Act*. Notwithstanding the foregoing, it is understandable that there exists some push towards the assessment of copyrightability of the elements of a computer program. Such a procedure is similar to the U.S. approach, where many of the issues faced by Canadian jurists have been first considered and solutions pioneered. However, the proposed approach

heeds the aforementioned Canadian judicial warnings against too much reliance on U.S. copyright jurisprudence and provides a distinctively "Canadian" methodology.

In *Matrox v. Gaudreau*[170], Guthrie J. dealt with an application for a permanent injunction relating to the alleged infringement of copyright in the plaintiff's computer program. This decision was released in 1993; the same year in which the decision of O'Leary J. in *Delrina* was released. However, despite Justice Guthrie's decision being post-*Delrina*, his analysis of the former was minimal. His judgment leads to apparent inconsistencies with other paramount decisions regarding the appropriate methodological approach to computer program copyright infringement. Additionally, elements of his decision are inconsistent with the proposed approach.

In his judgment, Guthrie J. described the plaintiff's "IMPRESSION" computer program as an advanced graphics display controller and driver, based on the Microsoft Windows 3.0 platform, designed specifically for true colour desktop publishing and graphic art applications.[171] The defendants were all former employees of the plaintiff who had, in one way or another, dealt with the IMPRESSION product while in the employ of the plaintiff. After a series of terminations and resignations, the defendants started a company and developed their own advanced graphics display controller and driver, based on the Windows 3.0 platform, named "TRUC".[172] At the time of judgment, the 1988 amendments to the *Copyright Act* had explicitly included the term "computer program" under the "literary work" rubric, and this case was one of the first decisions

[170] *Matrox Electronic Systems Inc. v. Gaudreau*, [1993] Q.J. No. 1228 (S.C.G.D.) (QL).
[171] *Ibid.* at para. 9.
[172] *Ibid.* at paras. 14 to 22.

on copyright infringement under the new codified regime for which the result turned on the specific definition of "computer program" found therein.

Interestingly, this was not a case of direct copying of the plaintiff's computer program in its virtual entirety, as was the case in *Apple Computer v. Mackintosh Computers*, *supra*. The allegation of infringement rested on the scope of copyright in relation to the non-literal elements of the plaintiff's copyrighted computer program.

> The jurisprudence is consistent in identifying source codes and object codes as being ideas expressed (on disk or in chip) in a particular form and, therefore, protectable under copyright...
>
> The copyright issue in the present case is whether the steps between the "idea" (which is not protectable) of a particular computer program and the final expression of that idea in the form of source code can be protected under the *Copyright Act*.[173]

These steps between an idea and its expression were identified from the evidence of the plaintiff's expert as the computer program's logic and application, i.e. the goals achieved and the way in which the goals were achieved in the computer program.

> Plaintiff's expert, Professor Dudek, found that none of the source code used in the TRUC product is literally identical to the source code used in the IMPRESSION product and that only a "minuscule" fraction is identical at a non-literal but syntactical level. Nevertheless, Professor Dudek did state that, in his opinion, approximately 40% of the modified code in both the IMPRESSION product and TRUC product is "similar in logic and application", i.e., that it "achieves similar goals in a similar manner".[174]

The approach taken by the expert to identify the goals and the way in which they were achieved, or the problems and the way in which they were solved, would seem to be the appropriate vernacular in software copyright cases as far as the idea/expression dichotomy is concerned.

According to Guthrie J., the plaintiff asserted copyright in the "methodologies", used to develop the copyrighted IMPRESSION computer program, which were characterized by the plaintiff as the computer program's structure, sequence and organization.

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[173] *Ibid.* at paras. 28 to 29.
[174] *Ibid.* at para. 53.

> Plaintiff's counsel argued, in effect, that the methodologies which their client used to develop the IMPRESSION product are entitled to copyright protection. The crucial question is whether these methodologies constitute "expression" and hence are entitled to copyright protection, or whether, despite the fact that they have been characterized by such counsel as the structure, sequence and organization of the IMPRESSION product, they are more akin to "idea" which must remain in the public domain.[175]

The question Guthrie J. sought to answer therefore was whether the structure, sequence and organization of the computer program were original expression rather than mere ideas. This is in accordance with the proposed approach if the consideration was made after copying in fact had been established.

Curiously, in considering the difference between idea and expression, Guthrie J. found that there was no evidence by which the plaintiff could bring the structure, sequence and organization of its computer program within the explicit definition of "computer program" added to the *Copyright Act*.

> There is no doubt but that choices made among alternative factors in the development of a computer program will affect the ultimate structure of the program. In the present case, in the development of the IMPRESSION product, elections were made among various alternatives which, when taken as a whole, would dictate the functional specification of the IMPRESSION product. However, virtually no proof was made concerning the structure, sequence and organization of the IMPRESSION product's modules or subroutines. No evidence was presented by Plaintiff to indicate how the choices among the various alternatives open to it, i.e., the methodologies, would translate into "a set of instructions or statements" which could be used in a computer, either directly or indirectly, to bring about a certain specific result. Plaintiff has failed to prove that any substantial part of the "structure, sequence and organization" of the IMPRESSION product is copyrightable.[176]

In the result, the plaintiff's claim for copyright infringement failed. Guthrie J. found there was no copyright in what the plaintiff alleged to be reproduced by the defendants, as the non-literal elements at issue were not considered to be the expression of an idea rather than mere idea.

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[175] *Ibid.* at para. 54. Note this terminology may be a result of the translation from French to English.
[176] *Ibid.* at para. 55.

In drawing this conclusion, Guthrie J. incorrectly equated the definition of "computer program" provided by the *Copyright Act*, with the explication of what constitutes the expression of an idea. Under the proposed approach, structure, sequence and organization as well as graphical user interface and user interface may not meet the statutory definition of "computer program" and as such, fall outside zone 1 of Figure 1, *supra*. However, this does not mean that such non-literal elements cannot be considered to be original expression falling within zone 2 of Figure 1.

Justice Guthrie's equation was nevertheless applied to the non-literal elements of the computer program that were alleged to be reproduced. In this regard, Guthrie J. expressly rejected the U.S. concept found in *Whelan v. Jaslow*[177] that the "idea" of a computer program is its ultimate purpose or function and that everything not necessary to that idea would be part of its expression, including its structure, sequence and organization.[178] Notwithstanding Justice Guthrie's rejection of *Whelan v. Jaslow*, it would appear as though the decision in *Computer Associates v. Altai*[179] resonated with him. These U.S. approaches and relevant principles are now considered in respect of the proposed Canadian approach.

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[177] *Whelan Associates v. Jaslow Dental Laboratory*, 797 F.2d 1222 (3d Cir. 1986), *cert.* denied, 479 U.S. 1031 (1987).
[178] *Matrox v. Gaudreau*, *supra* note 170 at para. 44.
[179] *Computer Associates International, Inc. v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992).

Chapter 5: Relevant U.S. Principles

5.1 The U.S. Approaches to Infringement Analysis

In the U.S., a number of methodological approaches to the analysis of copyright infringement have found purchase at both the judicial and academic levels at various times. For the interested reader, Nimmer's work on copyright should be consulted to provide a historical backdrop to the current U.S. approaches.[180] However, two approaches are particularly relevant as regards the present discussion, which were considered by Guthrie J. in *Matrox v. Gaudreau*, and are further contemplated in this chapter. The two approaches are the singular idea concept introduced in *Whelan v. Jaslow* and the much considered abstraction-filtration-comparison test annunciated by Walker C.J. in *Computer Associates v. Altai*. It is the abstraction-filtration-comparison test that has gained prominence in the U.S.[181], and has in some instances been improperly recognized as being adopted into the anglo-Canadian methodology.

5.1.1 *Whelan v. Jaslow* and the Singular Idea Concept

In *Whelan v. Jaslow*, the Court of Appeals for the Third Circuit considered on appeal the scope of copyright protection in a computer program used in a dental lab. The main issue in this regard was whether the copyright in the computer program protected the non-literal elements thereof (i.e. the structure, sequence and organization), or whether the copyright only protected the literal

[180] Melville B. Nimmer & David Nimmer, *Nimmer on Copyright* (Newark: LexisNexis, 2004) Ch. 13 [*Nimmer on Copyright*].
[181] *Ibid.*

code.[182] In reaching a conclusion in the positive with respect to the protectability of non-literal elements and copyright infringement, Becker C.J. considered whether there was sufficient evidence of copying as between the structures of the two computer programs at issue. In this regard, Becker C.J. noted the test the plaintiff must meet in establishing copyright infringement.

> To prove that its copyright has been infringed, [the plaintiff] must show two things: that it owned the copyright on [its computer program], and that [the defendant] copied [the plaintiff's computer program] in making [the defendants computer program].[183]

As there was no dispute over ownership, the question to be answered by Becker C.J. was whether the defendant copied the plaintiff's computer program.[184] Becker C.J. noted that it was rare indeed that a plaintiff could establish copying though direct evidence and thus copying could be proven by way of inference through the defendant's access to the plaintiff's computer program and substantial similarity as between the defendant's computer program and the plaintiff's copyrighted computer program.[185] Thus the approach used in *Whelan v. Jaslow* is akin to the proposed Canadian approach in respect of the determination of copying in fact.

Becker C.J commented on established tests relating to the determination of substantial similarity and adopted "a single substantial similarity inquiry according to which both lay and expert testimony would be admissible."[186] Among other things, the Court thus considered *de novo* whether substantial similarity as between non-literal elements could satisfy this test, or whether the similarity must relate to literal elements.[187] The reason for this consideration was that there was no duplication of the source code or object code, in the sense that there were no syntactical

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[182] *Whelan v. Jaslow*, *supra* not 177 at pp. 1224 to 1225.
[183] *Ibid.* at p. 1231.
[184] *Ibid.*
[185] *Ibid.* at pp. 1231 to 1232.
[186] *Ibid.* at p. 1233.
[187] *Ibid.*

similarities.[188] To this end Becker C.J. referred to the idea/expression dichotomy first described by the U.S. Supreme Court in *Baker v. Selden*[189] and posited that "[i]t is axiomatic that copyright does not protect ideas, but only expressions of ideas."[190] As a result, if the structure of a computer program were simply its idea, then the structure would not be protected by copyright.

Becker C.J. noted the difficulty in distinguishing an idea from its expression.[191] Nevertheless, an ends-means test was developed in that the idea of the structure of the plaintiff's computer program was the purpose or function of the computer program, i.e. the efficient management of a dental laboratory. Given the fact that the purpose could be achieved in a number of different ways with a number of different structures, the structure was found to be a part of the computer program's expression, not its idea.[192] It is in this sense that the singularity of idea was developed in order to distinguish the idea associated with the structure of a computer program from its expression. As this analysis has relatively limited applicability (i.e the idea/expression dichotomy as it applied to the structure of a computer program), the numerous criticisms of Circuit Judge Becker's opinion might be unfounded. [193] In any event, the U.S. abstraction-filtration-comparison test eventually overshadowed the approach taken in *Whelan v. Jaslow*, despite the fact that the tests are not all that different; both holding true to traditional fundamental copyright doctrines.

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[188] *Ibid.*
[189] 101 U.S. 99 (1879).
[190] *Whelan v. Jaslow*, *supra* note 177 at p. 1234.
[191] *Ibid.* at p. 1235.
[192] *Ibid.* at footnote 29.
[193] Nimmer's criticism is particularly scathing and probably overzealous: *Nimmer on Copyright*, *supra* note 180 at pp. 13-42 to 13-44.

5.1.2 The U.S. Abstraction-Filtration-Comparison Test

In *Computer Associates v. Altai, supra*, the abstraction-filtration-comparison test was applied by Walker C.J. to address the substantial similarity of the structure of two or more computer programs, which had been defined by Walker C.J. to be an element of a computer program in which copyright could subsist.[194] Walker C.J. referred to a number of scholarly articles, as well as the expert evidence tendered in the case, to define what he meant when discussing the "structure" of a computer program. In doing so, Walker C.J. recognized that a computer programmer "decomposes" the ultimate function of a computer program into "modules".[195] The modules are then organized into flow charts, which "map the interactions between modules that achieve the [computer] program's end goal."[196] In order to properly effect interactions between the modules, a "parameter list" detailing the information sent to and received from a module, must be generated.[197]

Walker C.J. then quoted directly from one of the referenced scholarly articles and considered what is meant by the term "structure" as it is applied to a computer program.

> The functions of the modules in a [computer] program together with each module's relationships to other modules constitute the "structure" of the [computer] program. ... Additionally, the term structure may include the category of modules referred to as "macros." A macro is a single instruction that initiates a sequence of operations or module interaction within the [computer] program.[198]

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[194] *Computer Associates v. Altai, supra* note 179 at p. 706.
[195] *Ibid.* at p. 697.
[196] *Ibid.*
[197] *Ibid.*
[198] *Ibid.* at p. 698.

In sum, Walker C.J. stated that the structure of a computer program "includes its nonliteral [*sic*] components such as general flow charts as well as the more specific organization of inter-modular relationships, parameter lists, and macros."[199]

In addition to cementing the notion that the non-literal elements of a computer program are protectable by copyright, *Computer Associates v. Altai* is cited as explicating the so-called abstraction-filtration-comparison test. What is often misunderstood in Canada about this three-part test is its purpose and applicability. However, when *Computer Associates v. Altai* is read in its entirety, it is clear that Walker C.J. intended the test to be applicable to the analysis of copyright infringement vis-à-vis non-literal elements of a computer program and substantial similarity, as distinguished from the analysis under the proposed Canadian approach of "any substantial part".

> As discussed herein, we think that district courts would be well-advised to undertake a three-step procedure, based on the abstractions test utilized by the district court, in order to determine whether the non-literal elements of two or more computer programs are substantially similar.[200]

The three-step abstraction-filtration-comparison test was never intended to apply to the analysis of whether or not literal or non-literal elements of a computer program are copyrightable, without more. Nor was the test intended to apply to the analysis of whether that which has been produced or reproduced constitutes a substantial part of the whole of the plaintiff's copyrighted computer program. Rather, the test is used for the analysis of whether the non-literal elements of two or more computer programs are substantially similar, which then leads to a finding of copyright infringement under the U.S. statutory regime.

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[199] *Ibid.* at p. 702.
[200] *Ibid.* at p. 706.

When exploring Chief Judge Walker's explication of the abstraction-filtration-comparison test, it must be kept in mind that in his written opinion, he set out two distinct evidentiary methods of proving the defendant's copying in a copyright infringement action. The first is to establish copying through direct evidence.[201] The second is to rely on two things: (1) the defendant's access to the plaintiff's copyrighted work; and (2) that the defendant's material is substantially similar to the plaintiff's copyrighted work.[202] Finding that the structure of the plaintiff's computer program was indeed protected by copyright as a non-literal element of the copyrighted computer program itself,[203] citing *Whelan v. Jaslow*, Walker C.J. also observed that "the copyrights of computer programs can be infringed even absent copying of the literal elements of the program."[204]

It is within this context that the three-part abstraction-filtration-comparison test explicated in *Computer Associates v. Altai* is properly seen as an amalgam of the U.S. approaches to copyright protection and substantial similarity in relation to the non-literal elements of a computer program, which also leaves the door open to judicial modification as might be required by advances in computer technology. As Walker C.J. observed:

> This approach breaks no new ground; rather, it draws on such familiar copyright doctrines as merger, scenes a faire, and public domain. In taking this approach, however, we are cognizant of that computer technology is a dynamic field which can quickly outpace judicial decision making. Thus, in cases where the technology in question does not allow for a literal application of the procedure we outline below, our opinion should not be read to foreclose the district courts of our circuit from utilizing a modified version.[205]

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[201] *Ibid.* at p. 701.
[202] *Ibid.*
[203] *Ibid.* at pp. 702 to 703.
[204] *Ibid.* at p. 702.
[205] *Ibid.* at p. 706.

According to Walker C.J., the three-part test requires: (i) the plaintiff's computer program to be broken down into its non-literal "constituent structural parts"[206] (abstraction); (ii) the identification and elimination of those non-literal parts not protectable by copyright, leaving "a kernel, or possibly kernels, of creative expression"[207] (filtration); and finally (iii) the comparison of the remainder with the non-literal structure of the defendant's computer program[208] (comparison). Accordingly, "[t]he result of this comparison will determine whether the protectable elements of the programs at issue are substantially similar so as to warrant a finding of infringement."[209]

According to Walker C.J., taking into consideration the idea/expression dichotomy, it is the "abstractions" test that is utilized by U.S. courts in order to separate idea from protectable expression.[210] Adapting the abstractions test to computer programs was more palatable to Walker C.J. than was the approach utilized by the court in *Whelan v. Jaslow*, due to the fact that there may be a number of different ideas and expressions relating to a single computer program.[211] Through the application of the abstractions test to the structure of the allegedly copied computer program, the structure is parsed at varying levels of abstraction ranging from the level of source code to the level of ultimate function.[212]

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[206] *Ibid.* at p. 706.
[207] *Ibid.*
[208] *Ibid.*
[209] *Ibid.*
[210] *Ibid.*
[211] *Ibid.* at p. 707.
[212] *Ibid.*

Once parsed at various levels of abstraction, the non-literal structure of the allegedly copied computer program is separated into protectable expression and non-protectable material.[213] Under Chief Judge Walker's elucidation of the filtration portion of the three-part test, what constitutes "non-protectable material" are those aspects of the non-literal structure, at a given level of abstraction, that: (1) represent idea; or (2) were "dictated by considerations of efficiency, so as to be necessarily incidental to that idea"; or (3) "were required by factors external to the computer program itself"; or (4) were "taken from the public domain".[214] Therefore, it is through the filtration step that the scope of copyright is determined.[215] Under the proposed Canadian approach, these four factors are applicable to the assessment of the substantiality of that which has been produced or reproduced in relation to the determination of whether it constitutes original expression falling within zone 2 of Figure 1, *supra*.

Under the U.S. approach, once the scope of copyright has been determined and those non-literal elements of the allegedly copied computer program that constitute protectable expression have been identified, "the court's substantial similarity inquiry will focus on whether the defendant copied any aspect of this protected expression, as well as an assessment of the copied portion's relative importance with respect to the plaintiff's overall [computer] program."[216] The reason for this latter element is that in the U.S., the reproduction of only a small protectable amount of a copyrighted computer program may lead to a finding of infringement if that small amount is of

[213] *Ibid.*
[214] *Ibid.*
[215] *Ibid.*
[216] *Ibid.* at p. 710.

qualitative importance to the computer program as a whole.[217] This U.S. principle is in accordance with the proposed Canadian approach.

Though the abstraction-filtration-comparison test has been heralded as the standard test for the identification of substantial similarities in the U.S.[218], it is important to note that there has been some suggestion of moving around the order in which the steps are applied. In *Gates Rubber v. Bando Chemical*[219] the Court noted that in some cases the steps might be applied in a different order.[220] As a practical example of such a case, Takach suggested that "even unprotectable elements are useful to consider in carrying out the evidentiary analysis as to whether there has been copying."[221] Interestingly enough, in *Gates Rubber v. Bando Chemical*, Ebel C.J. noted:

> [i]n order to impose liability for copyright infringement, the courts must find that the defendant copied protectable elements of the plaintiff's program and that those protectable elements comprise a substantial part of the plaintiff's program when it is considered as a whole.[222]

Thus it would appear as though some U.S. courts, despite the U.S. abstraction-filtration-comparison test, are applying an analysis very similar to the proposed Canadian approach.

5.2 Reconciling the U.S. Approach and the Proposed Canadian Approach

It is evident that the singular idea concept and the U.S. three-part abstraction-filtration-comparison test are not all that dissimilar to the proposed Canadian approach to infringement analysis advocated herein. At the end of the day, the abstraction-filtration-comparison test is

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[217] See generally *Whelan v. Jaslow*, *supra* note 177 at pp. 1245 to 1246.
[218] *Nimmer on Copyright*, *supra* note 180 at p. 12-126.
[219] *Gates Rubber Company v. Bando Chemical Industries, Limited*, 9 F.3d 823 (10th Cir. 1993).
[220] *Ibid.* at footnote 12.
[221] Takach, *Computer Law*, *supra* note 24 at pp. 149-150, footnote 239.
[222] *Gates Rubber v. Bando Chemical*, *supra* note 219 at pp. 833 to 834.

used to determine whether any of the substantial similarities relate to a portion of the plaintiff's computer program that constitutes original expression. Finally, the inquiry assesses the importance of the elements copied in relation to the plaintiff's computer program as a whole. The proposed Canadian approach is akin to a reversal of the U.S. abstraction-filtration-comparison test without necessarily utilizing the abstraction stage. The proposed Canadian approach first determines whether the alleged infringer has in fact copied something from the plaintiff's copyrighted computer program. Copying in fact can be presumed from the alleged infringer's access to the plaintiff's computer program as well as substantial similarity as between the alleged infringer's materials and elements of the plaintiff's computer program. It matters not in Canada that the similarities are at the abstracted level of expression, as other similarities might point to the alleged infringer's copying.

The reason for the difference is that the U.S. concern of extending the scope of copyright to non-protectable elements of a computer program is addressed at the stage of identifying substantial similarities. This concern is addressed under the proposed Canadian approach after copying in fact has been established through the first stage of analysis. It is addressed during the second stage when that which has been produced or reproduced by the alleged infringer is assessed in terms of its substantiality vis-à-vis the copyrighted computer program as a whole, or a copyrightable sub-component thereof. In terms of substantiality under the proposed Canadian approach, that which has been produced or reproduced must in quality be the author's original expression falling within zone 2 of Figure 1, *supra*, and thus be protectable by copyright. The proposed Canadian approach therefore avoids the conceptual uncertainty associated with the abstraction step in the U.S. abstraction-filtration-comparison test.

Furthermore, the proposed Canadian approach satisfies concerns of obscuration; that too much is being filtered out at the filtration stage of the U.S. abstraction-filtration-comparison test, as all similarities are considered when determining whether there has been copying in fact. The Canadian equivalent to the U.S. filtration step does not occur until after the establishment of copying in fact, when the question becomes whether that which has been produced or reproduced in quality constitutes the author's original expression. This inquiry is only made if what has been produced or reproduced is not the computer program *in toto* or a copyrightable sub-component thereof. To answer this question, the computer program must be dissected in order to identify the relationship of a reproduced component with the computer program as a whole. If the answer to the question is in the negative, then that component is weeded-out from the analysis of substantiality vis-à-vis "any substantial part". If however the answer is in the affirmative, then the alleged infringer has committed an act of copyright infringement and is liable to the plaintiff. There is no need for a third step in the determination of copyright infringement. What is left is the issue of recovery.

The differences between the U.S. abstraction-filtration-comparison test and the proposed Canadian approach are attributable to disparity in the respective copyright regimes. In the U.S., there has been a traditional focus on substantial similarity being at the level of protectable expression, which is observed in the following excerpt from Nimmer.

> ... copyright law protects only an author's original expression, not ideas or elements taken from pre-existing works. Infringement is shown by a substantial similarity of *protectible expression* [*sic*], not just an overall similarity between the works. Thus, before evaluating substantial similarity, it is necessary to eliminate from consideration those elements of a [computer] program that are not protected by copyright [citations omitted].[223]

[223] *Nimmer on Copyright*, *supra* note 180 at pp. 13-105 to 13-106.

This focus stems from an application of the idea/expression dichotomy, which has equal purchase in both the U.S. and Canada. The difference in result of the application is that in the U.S., traditional dictates have required the establishment of substantial similarities at the level of expression in order to say there has been a reproduction under the U.S. statutory regime. While in Canada, the concern with respect to expression is focused on what has been produced or reproduced, rather than on whether or not there has in fact been a production or reproduction. Indeed, it is plausible that all an alleged infringer did was to produce or reproduce the plaintiff's ideas. Though there has been a production or reproduction in the sense that the ideas were taken by the alleged infringer from the plaintiff's copyrighted computer program, there has been no act of infringement, as the ideas are not independently copyrightable, nor are they a substantial part of the whole. Thus Morden J. A. was correct in *Delrina (C.A.)* when he stated that no "hard-edged question of law [was] necessarily involved"[224] in differentiating between the U.S. abstraction-filtration-comparison test and the so-called "anglo-Canadian" approach to infringement analysis. With regard to the idea/expression dichotomy, the underlying established copyright doctrines are analogous. However differences in the statutory regimes allow the proposed Canadian approach to avoid the practical pitfalls associated with the U.S. abstraction-filtration-comparison test.

[224] *Delrina (C.A.)*, *supra* note 2 at p. 306.

Chapter 6: Reconciling the Proposed Approach with Leading Canadian Cases

6.1 The Proposed Approach and *Prism Hospital*

Shortly after the release of Justice Guthrie's decision in *Martox v. Gaudreau*, came the lengthy and well-reasoned decision of Parrett J. in the B.C. *Prism Hospital*[225] case. In that case, the plaintiff's computer program dealt with the facilitation of electronic data collection and validation. The data related to abstracts taken from the medical records of patients from various hospitals. As a part of a research program, the hospitals submitted this data to the defendant, Hospital Medical Records Institute (HMRI). The plaintiff, Prism, developed the software and made modifications over time so that it would run on a variety of different operating systems. This led to Prism's development of its computer program called "Savoir-Faire", which was designed to work on a DOS platform for personal computers.

Over a period of time, Prism had developed six versions of Savoir-Faire, each of which had a number of releases relating to, among other things, additional functionality and bug fixes. The defendant alleged that the plaintiff did not live up to its contractual obligations relating to the Savoir-Faire computer program and asserted that its operation was poor. Eventually, among other things, the defendant stopped its marketing of the plaintiff's computer program. With the aid of a former employee of the plaintiff, HMRI developed its own computer program. This computer program was written using a computer programming language known as Q-Pro-4, which was different than BASIC – the programming language used by the plaintiff to write Savoir-Faire. The defendant used its new computer program to replace the plaintiff's Savoir-

[225] *Prism Hospital Software Inc. v. Hospital Medical Records Institute* (1994), 57 C.P.R. (3d) 129 (B.C.S.C.).

Faire system at a number of hospitals, who were a part of the HMRI's data collection program. The plaintiff commenced an action alleging, among other things, infringement by the defendant of its copyright in the Savior-Faire computer program through the unauthorized production or reproduction of both literal and non-literal elements thereof.

In embarking upon the daunting task of analyzing infringement, Parrett J. correctly realized that copying in fact must first be established and then secondly, it must be determined whether copyright infringement can be found through the general copying of the structure, sequence and organization of the plaintiff's computer program.

> The two broad issues arising under this head are whether [the plaintiff's former employee] in writing the Q-Pro-4 version of the software made use of Prism's source code and associated materials and whether if [the former employee] copied, generally, the structure, sequence and organization of Prism Savoir-Faire, a claim of copyright infringement is maintainable. While HMRI disputes Prism's claim to any proprietary rights in the screens, the "look and feel", and the "user interface" of Savoir-Faire, it acknowledges Prism's ownership in the source and object code of the software.[226]

In other words, Parrett J. was to analyze whether the defendant in fact reproduced non-literal elements of the plaintiff's copyrighted computer program by making use thereof and if so, whether the reproduction of non-literal elements amounted to copyright infringement. In contrast to the approach of Guthrie J. in *Matrox v. Gaudreau*, *supra*, Parrett J. was not concerned with the copyrightability of the non-literal elements alleged to be reproduced by the defendant. However, Parrett J. was concerned with expression in relation to those elements alleged to be reproduced.

With respect to the issue of copying in fact the defendant asserted that the former employee of the plaintiff, in writing the Q-Pro-4 version, did indeed have access to the plaintiff's source code in which there was no argument that copyright subsisted. However, the defendant denied

[226] *Ibid.* at p. 229.

copying, except in one instance where reference to the plaintiff's source code was made to obtain a formula that was allegedly available to the public.[227]

At the outset of the examination of the issue of infringement Parrett J. noted the inherent difficulty in the objective identification of similarities between computer programs written for the same overall purpose using different programming languages.

> In beginning the consideration of this aspect of this action two things must be recognized at the outset, first that both programs are designed in the broadest sense to do the same thing, namely, collect the data required by HMRI, format it in a manner specified by them and transmit it for entry into HMRI's mainframe computer; secondly, that Q-Pro-4 is classified as a "fourth generation language" whereas BASIC is a "third generation procedural language". The specific significance of this distinction will be touched on later in these reasons but at this point it is sufficient to say that the use of a fourth generation language (4GL) will, itself, introduce some differences into the programs because of the inherent structural differences between third and fourth generation computer languages.[228]

The significance of this comment is the recognition that syntactical similarities between computer programs will be rare particularly when an alleged infringer, to render its materials, utilized a different and possibly more modern computer programming language than used by the plaintiff. As a result, in proving and analyzing the infringement of copyright in a computer program when there is no one-to-one syntactical similarity between the plaintiff's computer program and the alleged infringer's material[229], plaintiffs and judges are respectively faced with a difficult task. It is in such instances that the non-literal elements of the plaintiff's computer program can provide valuable insights into the establishment of both copying in fact and the substantiality of that which has been produced or reproduced by the alleged infringer. The issue is to what extent a plaintiff may rely on these non-literal elements to establish the act of infringement.

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[227] *Ibid.*
[228] *Ibid.*
[229] As was the case in *Apple Computer v. Mackintosh Computers*, *supra* note 160 (albeit in binary format).

On the issue of copying in fact, Parrett J. found that the defendant did indeed have access to the plaintiff's source code. In addition, the plaintiff was able to provide compelling indirect evidence of copying. The plaintiff did this by overcoming the difficulty associated with the fact that a computer programmer could fairly easily study the plaintiff's computer program in operation and then write a computer program to duplicate most of its functionality without making reference to the plaintiff's underlying source code. This difficulty was overcome by the identification of the defendant's so-called "fingerprints" located in the source code of the defendant's computer program. In the following exchange between plaintiff's counsel and his witness the nature of the "fingerprints" was revealed.

> Q. Now, Mr. Jeffery [(plaintiff's witness)], before we go into the details, could you please describe in a general fashion for the Court your approach to trying to identify what we are calling fingerprints of code which appears in both Q-PRO-4 and Prism systems?
>
> A. It created quite a problem for me. The Prism programs and the SUPERMACS and Savoir-Faire were not designed with protection in mind, they were designed with functionality in mind, and consequently they are fairly open, and by utilizing the screens and the prompts and error messages as they exist within the Prism system, the underlying code can be written in another language fairly easily. In fact, in effect, the Prism programs are transparent in that the functionality can be obtained very easily by looking at the screens.
>
> What I had to look for to determine and to show the Court that access had been made to our source code, I had to look for anomalies, I had to look for data that is shown on the screen that is not stored in the record or is stored in a different manner. I had to show errors that might have occurred in the Prism system that reproduced themselves in the -- or appeared to be reproduced in the Q-PRO-4 code. I had to look essentially for those odd things, not the overall code, simply because the defence is that they copied the screens and the user interface, namely the messages and error messages and prompts. For me to find those differences was quite a battle, but we did find some, and we would like to show them to the Court today.[230]

The "fingerprints" therefore were akin to non-literal elements of the plaintiff's computer program that would not be apparent to a computer programmer through the examination of it in operation, for which similar elements were found in the defendant's material.

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[230] *Prism Hospital, supra* note 225 at pp. 232 to 233.

In addition, the plaintiff was able to provide Parrett J. with expert evidence demonstrating similarities between the plaintiff's computer program and the alleged infringer's computer program. These similarities focused mainly on the procedures utilized, as represented by the structure of the computer programs, and virtually all differences were attributable to the differences inherent in the programming languages used, rather than independent creation. At the end of the day the plaintiff's expert concluded that if the allegedly infringing computer program were to have been written in a so-called "clean room", in which the programmers had access to only a working version of the plaintiff's computer program, the result would then be "astonishing" and could only have been rendered by a "wizard" with the "same personality".[231]

Thus, it is through the establishment of the alleged infringer's access to the plaintiff's computer program and substantial similarity that a court may base its finding of copying in fact. When such similarities are found, and access has been shown, then there exists the rebuttable presumption of copying in fact; a presumption leading to the conclusion that the defendant produced or reproduced something. If substantial similarity is absent, then similarity plus other indicia of copying may support the same conclusion. This finding can be made despite the lack of syntactical similarities as between the plaintiff's computer program and the alleged infringer's materials.

Therefore, in conclusion on the issue of copying in fact, Parrett J. stated:

> The evidence in this case overwhelmingly supports the conclusion that [the defendant's programmer] in producing [the defendant's computer program] resorted to Prism's source code and copied Prism Savoir-Faire.

[231] *Ibid.* at p. 248.

> This conclusion does not flow from individual pieces of evidence viewed in isolation but from the entire body of evidence and the individual pieces of evidence viewed within it and in relation to the rest of the evidence.[232]

However, under the proposed approach to infringement analysis the question remains as to whether that which the defendant produced or reproduced constitutes a substantial part of the copyrighted computer program, if not the computer program *in toto* or a copyrightable sub-component thereof.

After finding that the defendant had copied from the plaintiff's computer program in creating its computer program, Parrett J. dealt with the issue of whether such copying constituted the infringement of the plaintiff's copyright. Parrett J. explicated his truncated version of the steps a plaintiff must take in order to succeed in an action for copyright infringement. As discussed above, copying need not be established by direct evidence, as circumstances will allow an inference of copying to be drawn. However, at the end of the day, what has been produced or reproduced must amount to at least a substantial part of the copyrighted computer program.

> In order to succeed in a copyright infringement action the plaintiff must demonstrate that the defendant has made an unlawful use of the plaintiff's copyright work. It is not necessary to demonstrate actual copying direct from the plaintiff's work if the surrounding circumstances are such as to meet the evidentiary test and permit the inference previously discussed to be drawn. In the end what must be demonstrated is that either directly or indirectly through his actions, the defendant has taken the fruits of the plaintiff's labour.[233]

When Justice Parrett's reference to the taking by the defendant of the fruits of the plaintiff's labour is decompiled, it is apparent that the plaintiff's labour must have resulted in a copyrighted computer program and what the defendant took was either the whole of the copyrighted work, a copyrightable sub-component thereof, or a substantial part of either. The substantiality of what was produced or reproduced by the defendant may be assessed with regard to the plaintiff's

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[232] *Ibid.* at p. 251.
[233] *Ibid.* at p. 271.

labour in developing the same. However, the essential ingredient under the proposed approach is that it must in quality constitute original expression.

Justice Parrett's finding of copyright infringement was based upon the reproduction by the defendant of certain non-literal elements of the plaintiff's copyrighted computer program through its copying therefrom.[234] There was simply no evidence of substantial similarities between the copyrighted computer program and the defendant's materials with respect to the literal or syntactical elements thereof. It therefore follows that non-literal elements may be relied upon as constituting a substantial part of a copyrighted computer program regardless of the definition of "computer program" found in the *Copyright Act*. However, under the proposed approach, such non-literal elements must still amount to original expression when identified through dissection and compared to the computer program as a whole, or to a copyrightable sub-component thereof. In this sense, those non-literal elements that are not original expression must be weeded-out from the analysis of whether what the alleged infringer produced or reproduced was a substantial part of the plaintiff's copyrighted computer program or of a copyrightable sub-component thereof. In sum, that which has been produced or reproduced must fall within zone 2 of Figure 1, *supra*, or it is to be excluded from the analysis of whether the defendant produced or reproduced "any substantial part".

[234] *Ibid.* at p. 274. Parrett J. seemed justifiably uncertain that the "look and feel", a non-literal element of the plaintiff's computer program, was "the subject of copyright protection" based upon U.S. jurisprudence, and declined to decide the issue, as the finding of infringement had already been made based on other non-literal elements: *Ibid.* at p. 279.

6.2 Reconciling *Matrox v. Gaudreau* and *Prism Hospital* under the Proposed Approach

This dissection of the copyrighted computer program to facilitate the so-called "weeding-out" approach is further developed through the judgments of O'Leary J. in *Delrina* and Morden J.A. in *Delrina (C.A.)*. However, similar to the approach taken by Guthrie J. in *Matrox v. Gaudreau*, Parrett J. commented on the proper methodological approach to be applied in the analysis of the requisite originality of expression. In this context, Justice Parrett's proscription with respect to the dissection of the computer program was associated with the analysis of originality of expression. However, his prescription with respect to dissection was in relation to the analysis of substantial similarity.

> In addressing the question of originality in this context it is not appropriate to dissect a work removing portions which may not be considered original before examining what remains; this is particularly so when the work is a form of compilation... It is important, however, to remember one significant distinction: when you turn from the consideration of the concept of originality of expression to determine whether two works are substantially similar, the court must exclude from its consideration the portions of the work which are not properly the subject-matter of copyright. The reason for this narrower approach on this issue is the requirement that the plaintiff demonstrate that his expression has been copied. The ultimate question for consideration is whether the expression of the author's idea has been taken.[235]

At the end of the day, Justice Parrett's proscription is consistent with the judgment of Lord Pearce in *Ladbroke*; however, it is his prescription that is questionable.

With respect to the application of the idea/expression dichotomy to the analysis of copyright infringement the judgments in both *Matrox v. Gaudreau* and *Prism Hospital* can be reconciled. Both Guthrie J. and Parrett J. were correct in concluding that in order to succeed in a claim for copyright infringement the plaintiff must establish the defendant's production or reproduction of the plaintiff's original expression. However, Guthrie J. surmised that to constitute expression,

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[235] *Ibid.* at pp. 272 to 273.

the non-literal elements must fall within the definition of "computer program" under the *Copyright Act*. To the contrary, in *Autodesk v. Dyason*[236] Dawson J. of the High Court of Australia noted that a substantial part of a computer program need not be itself a computer program as defined in the legislation. Disparately, Parrett J. noted that in assessing substantial similarities, the copyrighted computer program must be dissected to identify those elements that are expressive. The assessment of expression must certainly be made and the mechanics of how that is accomplished under the proposed approach relate to the substantiality of that which has been produced or reproduced. Rather than being applied to a determination of substantial similarity, the assessment of original expression ought to apply to the analysis of whether the part produced or reproduced by the alleged infringer constitutes a substantial part of the plaintiff's copyrighted computer program or of a copyrightable sub-component thereof.

That is not to say the definition of "computer program" has no import into the analysis. Despite the 1988 amendments to the *Copyright Act* Parrett J. referred to the dictates of the U.S. Court of Appeals for the Ninth Circuit in *Johnson Controls v. Phoenix*[237] for an explication of the constitution of a computer program, and in what circumstances copyright is extended thereto.

> A computer program is made up of several different components, including the source and object code, the structure, sequence and/or organization of the program, the user interface, and the function, or purpose, of the program. Whether a particular component of a program is protected by a copyright depends on whether it qualifies as an "expression" of an idea, rather than the idea itself.[238]

However, at that point in time, a computer program was defined as "a set of instructions or statements, expressed, fixed, embodied or stored in any manner, that is to be used directly or indirectly in a computer in order to bring about a specific result."[239] In this definition, there is no

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[236] *Autodesk Inc. v. Dyason*, [1992] R.P.C. 575 (Aust. H.C.).
[237] *Johnson Controls v. Phoenix Central Systems Inc.*, 886 F.2d 1173 (1989, 2d Cir.).
[238] *Ibid.* at p. 1175.
[239] *Copyright Act*, *supra* note 4 at s. 2 "computer program".

mention of structure, sequence, organization, graphical user interface, user interface, function or purpose of the program. In addition, notwithstanding Justice Parrett's statement that it was "settled law that once a computer program reaches the point of source code or object code, it represents a form of expression which is subject to the protection afforded by copyright"[240], at this point in time it was certainly settled law that copyright only protected original expression, not expression of any type.

These observations are not made to demonstrate that the Court of Appeals or Parrett J. got it wrong. With the exception of the inclusion of the program's function or purpose, a computer program may indeed have as its constituent elements, among other things, structure, sequence, organization, graphical user interface and user interface. These are non-literal elements that may, or may not, be associated with a computer program. Rather, these observations are made to point out that when considering the issue of copyrightability, quite apart from the issues of originality and expressiveness, non-literal elements are not copyrightable as "computer programs". This is because the non-literal elements of a computer program cannot, by definition, fall within the codified meaning ascribed to "computer program" under the *Copyright Act*. They cannot be characterized as a set of instructions or statements, expressed, fixed, embodied or stored in any manner, that is to be used directly or indirectly in a computer in order to bring about a specific result. In order to be protected by the copyright that subsists in the computer program, non-literal elements must therefore fall within zone 2 of Figure 1, *supra*. Justice Guthrie's linking of non-literal elements to the definition of "computer program", as was done in *Matrox v. Gaudreau*, is to be eschewed.

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[240] *Prism Hospital*, *supra* note 225 at p. 272.

However, non-literal elements of a copyrighted computer program may indeed be protectable by copyright, and might also be independently copyrightable as another form of "work".[241] It is from this perspective that originality and expressiveness factor into the analysis. Under the proposed approach to infringement analysis, non-literal elements may constitute a substantial part of the whole copyrighted computer program or of a copyrightable sub-component thereof. It is when considering whether a non-literal element of a computer program is substantial that the computer program is dissected and the non-literal elements thereof that do not constitute original expression are weeded-out from the analysis of whether what was produced or reproduced by the defendant is "any substantial part". An element of a copyrighted computer program, literal or not, may be substantial when it constitutes the original expression of the copyright holder (zone 2 of Figure 1, *supra*), the unauthorized production or reproduction of which constitutes copyright infringement.

[241] In *British Columbia Automobile Assn. v. O.P.E.I.U., Local 378* (2001), 10 C.P.R. (4th) 423 (B.C.S.C.) the Court dealt with alleged copyright infringement in relation to the reproduction of a substantial part of the plaintiff's website, which was characterized as an artistic work. Noteworthy is the fact that there was a positive finding in relation the defendant's copying of the plaintiff's HTML code, which code dictates the visual appearance and functionality of the website by providing instructions to the computer. It could have been argued that the HTML code constituted a copyrighted computer program and the website was the graphical user interface, or GUI associated therewith. In such a case, the "look and feel" of the website would be put in issue as a non-literal element of the HTML computer program. This line of analysis was avoided, as the website was considered to be itself copyrightable as an artistic work. This case is thus an example of where something may be considered a non-literal element of a computer program as well as an individually copyrighted work. As a further example, it could be argued that the structure, sequence and organization associated with a copyrighted computer program are in essence, the selection or arrangement of a number of sub-programs. It therefore follows that structure, sequence and organization might be copyrightable as a compilation of computer programs – the issue of fixation would need to be addressed.

6.3 Considering *Delrina* and *Delrina (C.A.)* under the Proposed Approach

In *Delrina*, *supra*, O'Leary J. of the Ontario Court did not follow the proposed approach. Rather, he assessed each element alleged to be copied by the defendant in terms of whether each element was itself copyrightable. The judgment of O'Leary J. and the appeal decision of Morden J.A. have become the leading authorities in Canada in relation to computer program copyright infringement. These decisions, almost 10 years apart, have been the subject of consideration by Canadian courts and academics, which has resulted in varying and often incorrect explanations of the proper methodological approach to be applied to the assessment of infringement of copyright in computer programs. What makes things worse is that the Supreme Court of Canada chose not to grant leave to appeal; however their choice is defensible, given that both O'Leary J. and Morden J.A. were likely correct in their result. It is argued herein that despite the consideration tendered by courts and academics, the proposed approach to infringement analysis is consistent with the judgment of Morden J.A. in *Delrina (C.A.)*.

In *Delrina*, Duncombe (the defendant) was one of Carolian's (the Plaintiff's) former "low-level" employees, who by all accounts was a skilled computer programmer. He had left the employ of Carolian and set up a competing business. While in the employ of Carolian, Duncombe worked on a software product called "Sysview", which was "a performance monitoring tool that Carolian had developed for use on a Hewlett-Packard computer known as the HP3000."[242] According to O'Leary J. the purpose of the Plaintiff's computer program was to provide efficiency monitoring of a HP3000 computer system.

[242] *Delrina*, *supra* note 1 at p. 5.

> The Sysview program assisted a user of it to determine whether a HP3000 computer was being used efficiently, and, if not, how to improve its efficiency. Carolian licensed the use of its Sysview program to the owners of HP3000 computers. Carolian also contracted to assist or "support" licensees in their use of Sysview.[243]

Shortly after leaving the employ of Carolian, Duncombe, through his company Triolet, developed and marketed a software product called "Assess 3000". According to Carolian, Asses was remarkably similar to Sysview in terms of functionality, appearance and operation. Carolian commenced an action for copyright infringement at the Ontario Court and obtained an interlocutory injunction restraining the defendant from marketing its product. However, Carolian was unable to succeed in proving copyright infringement at trial, and the Ontario Court of Appeal upheld the result of Justice O'Leary's decision.

As this case turned largely on the facts, in sum, O'Leary J. held that, on a balance of probabilities, the defendant did not copy any substantial portion of the Plaintiff's computer program, whether literal or not; that there was no copying in fact.

> Carolian has not satisfied me that it is probable that Duncombe in creating Assess copied any substantial portion of the Sysview program. While I cannot and do not exclude the possibility that Duncombe copied portions of Sysview's structure, source code, and user interface ..., I am not convinced that it is more likely than not that he did. Assess and Sysview are so similar that the possibility of copying cannot be excluded. Sysview and Assess are performance monitoring tools designed to work on the HP3000 computer. They have then the same purpose or function. Duncombe's memory, experience, and idiosyncratic programming methods and habits, plus the limitations on variation imposed by the Hewlett-Packard HP3000 computer, can account for all similarities.[244]

It is therefore apparent that the trial judge found that there was no copying by the defendant of the plaintiff's computer program regardless of its copyrightability. On a balance of probabilities the similarities between the plaintiff's computer program and the defendant's

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[243] *Ibid.*
[244] *Ibid.*at pp. 5 to 6.

computer program could be accounted for by explanations that, in Justice O'Leary's opinion, did not evidence the defendant's copying.

When dealing with evidence of reproduction, being a requisite to copyright infringement, O'Leary J. used the word "copying" in its literal sense. That is, whether or not the defendant had a copy of the computer program, including its source code, in front of him when creating Assess.[245] O'Leary J. specifically excluded from his definition of "copying", copying from memory.[246] O'Leary J. stated that "[s]ince copying by Duncombe has not been established, Carolian has not proved that Duncombe infringed any copyright it holds in the computer program, Sysview."[247] Due to Justice O'Leary's definition of "copying", it is apparent that he did not consider the evidence of copying in light of the possibility of Duncombe copying from memory, conscious or otherwise.

On appeal, Morden J.A. made it clear that "copying", under the law of copyright, "includes copying from memory, even subconscious memory".[248] He explained away any apparent error of law presented by Justice O'Leary's definition of "copying" on the basis that Justice O'Leary's essential findings did not exclude the possibility of copying from memory.

> It is a troublesome point but I am satisfied that, when the reasons are read as a whole, it can be seen that the trial judge's essential findings were not based on the view that copying from memory could not be a basis of copyright infringement.[249]

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[245] *Ibid.* at p. 9.
[246] *Ibid.*
[247] *Ibid.* at p. 6
[248] *Delrina (C.A.), supra* note 2 at p. 296.
[249] *Ibid.* at p. 297.

Though Morden J.A. eventually found no palpable or overriding error in Justice O'Leary's decision[250], had O'Leary J. been open to the possibility that copying from memory, conscious or otherwise, could lead to copyright infringement, then the evidence put forth to establish copying might have been more compelling. Of significance to this point is the conclusion reached by Morden J.A. that the deliberate design of similarities was no justification for copying.[251] Furthermore, copying cannot be justified on the basis that the author of both the plaintiff's software and the defendant's software is one and the same.[252] Though they are certainly no justification for copying, under the proposed approach such factors may help to rebut the presumption of copying resulting from the defendant's access to the plaintiff's computer program and substantial similarities as between elements thereof and the defendant's material. However, it must be remembered that Carolian apparently lost this case at the trial level due to it leading insufficient evidence of copying such that it could not establish the defendant's reproduction. The defendant was able to account for the similarities with reasons that did not evidence copying in fact. It is in this finding that the correctness of the result is manifest.

However, what is of interest for the present discussion are Justice O'Leary's comments and judgment relating to substantial reproduction and the favoured dissection of the copyrighted computer program under the so-called "weeding-out" approach. These issues were examined on appeal by Morden J.A. and when both judgments are read together, the proposed approach is consistent with the principles established therein. There is little doubt that the jurisprudential controversy created by these decisions stems from the

[250] *Ibid.* at p. 314.
[251] *Ibid.* at pp. 297 to 298.
[252] *Ibid.* at p. 298.

"general 'weeding-out' observation" of O'Leary J. and its adoption into the law of copyright infringement by the explicit approval, without explicit elucidation, of Morden J.A.[253]

In particular, it is apparent from Justice O'Leary's decision that the only finding of copying in fact could have been made with respect to less than 60 lines of source code, the copying of which O'Leary J. characterized as being *de minimus*.[254] Interestingly, this finding was made without substantive analysis of whether or not these 60 lines represented a substantial part of the plaintiff's computer program. In this regard, what was troublesome to plaintiff's counsel, and indeed the Court of Appeal, was Justice O'Leary's further comment that "it is questionable that such lines of code have the necessary originality of expression to be copyrightable."[255] This of course was one aspect of Justice O'Leary's judgment that plaintiff's counsel correctly appealed.

Justice O'Leary's reference to "copyrightability" related to the elements of the plaintiff's computer program that were considered in respect of the establishment of copying in fact through proof of substantial similarity in addition to access. On appeal, Morden J.A. explained away this apparent error in law with some skillful hand-waving, which likely contributes to the lasting jurisprudential confusion generated by *Delrina* and *Delrina (C.A.)*.

To deal with this apparent error, Morden J.A. distinguished between something that is "copyrightable" (a word with no dictionary meaning) and something that is "protectable by copyright", without providing a clear explanation of the difference. As a result, the proposed

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[253] *Ibid.* at p. 305.
[254] *Delrina*, *supra* note 1 at pp. 18 to 19.
[255] *Ibid.*

approach has accounted for this distinction respectively through zones 1 and 2 of Figure 1, *supra*. Justice Morden's unexplained distinction has been accounted for under the proposed approach and is now considered in more detail.

6.3.1 The Judicial Distinction between "Copyrightable" and "Protectable by Copyright"

Despite finding that the defendant did not copy Carolian's computer program, notwithstanding the fact that the defendant may well have copied something less than 60 lines of the plaintiff's source code (albeit unwittingly)[256], O'Leary J. went on to consider whether copyright subsisted in the plaintiff's computer program as well as elements thereof.

> The fact that Duncombe did not copy Sysview in creating Assess means, of course, that the plaintiff's claim for an injunction must fail. But the defendants have raised a further defence, that Sysview is not copyrightable and that defence must now be addressed. For Carolian to succeed on its copyright infringement claim, it must, of course, first establish it has a copyright which subsists in Sysview or some material portion of it. Duncombe, for reasons I will spell out later, questions whether Carolian has such copyright.[257]

This, despite Justice O'Leary's previous finding of non-infringement due to a lack of copying and the codified presumptions respecting copyright and ownership under s. 34.1 of the *Copyright Act*.[258]

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[256] *Ibid.*

[257] *Ibid.* at p. 27.

[258] *Copyright Act*, *supra* note 4 at s. 34.1(1) provides as follows.

> 34.1(1)Presumptions respecting copyright and ownership – In any proceedings for infringement of copyright in which the defendant puts in issue either the existence of the copyright of the title of the plaintiff thereto,
>
> (a) copyright shall be presumed, unless the contrary is proved, to subsist in the work, performer's performance, sound recording or communication signal, as the case may be; and
>
> (b) the author, performer, maker or broadcaster, as the case may be, shall, unless the contrary is proved, be presumed to be the owner of the copyright.

O'Leary J. reviewed a fair amount of jurisprudence relating to copyright in computer programs, including Chief Judge Walker's explication of the three-part U.S. abstraction-filtration-comparison test set out in *Computer Associates v. Altai, supra.* Then, in relation to the Canadian legal test to be applied to the analysis of whether copyright subsists in a computer program, or some part of it, O'Leary J. concluded as follows.

> Whether a Canadian court should adopt the abstraction filtration-comparison method in deciding an action for copyright infringement or some other similar method, it seems clear that before a computer program or some part of it can be held to be copyrightable, some method must be found to weed out or remove from copyright protection those portions which, for the various reasons already mentioned, cannot be protected by copyright. After the portions that are not copyrightable have been filtered out, there may or may not be any kernels or golden nuggets left to which copyright can attach.[259]

Indeed, O'Leary J. concluded that much of Sysview was not copyrightable; including the user interface and portions of the source code.[260] Yet, he finally remarked: "[l]ittle will be accomplished by identifying those portions of Sysview source code that are not copyrightable since I have concluded that in any event none of it was copied by Duncombe."[261] O'Leary J. therefore thought it necessary to dissect the plaintiff's computer program with a view to weeding-out those portions to which copyright cannot attach from the analysis of substantial similarity. In contrast, under the proposed approach to infringement analysis, dissection and weeding-out are not to occur in respect of the evidence relating to whether there has been copying in fact.

On appeal, Morden J.A. was satisfied to assume that copyright subsisted in Sysview as a whole.[262] There was no need to identify, through dissection of the plaintiff's computer program,

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[259] *Delrina, supra* note 1 at p. 37.
[260] *Ibid.* at p. 46.
[261] *Ibid.*
[262] *Delrina (C.A.), supra* note 2 at p. 301.

"kernels" or "golden nuggets" to which copyright attached. Morden J.A. dealt with the "copyrightability" issue by considering O'Leary J. to have been talking about the components of Sysview being not "protectable by copyright", rather than being not "copyrightable", as the word "copyrightable" is better left to describing the computer program as a whole.[263] This distinction caused Morden J.A. to substantively differentiate between the term "copyrightability" and the phrase "protectable by copyright". This differentiation was made in the context of determining whether the individual components alleged to be reproduced in the defendant's materials represented a substantial part of the plaintiff's copyrighted computer program.[264] As understood through the proposed approach, the distinction made recognizes that to be "protectable by copyright", a component need not be "copyrightable". Indeed, if a component that was reproduced by the defendant was copyrightable in and of itself, then the court would not need to consider whether that component was protected by copyright, as there would be reproduction by the defendant of a copyrighted work *in toto*: i.e. reproduction of the copyrightable component. Under the proposed approach to infringement analysis a component that is protectable by copyright is a component that constitutes "any substantial part" of the copyrighted computer program, or of a copyrightable sub-component. To be "any substantial part" under the proposed approach, the part in question must constitute the author's original expression. Thus under the proposed approach, zones 1 and 2 of Figure 1, *supra*, represent the distinction between "copyrightable" and "protectable by copyright", respectively.

Whether correct or not, Morden J.A. characterized Justice O'Leary's analysis as being done in contemplation of articulating the analytical approach to determining whether something was a

[263] *Ibid.* at p. 300.
[264] *Ibid.* at p. 301.

substantial part and not whether it was capable of copyright. In that sense, dissection and weeding-out is appropriate under the proposed approach, as the reproduction of a part of a computer program that is not protectable by copyright cannot be said to be the reproduction of "any substantial part". Therefore, in considering whether an alleged infringer's reproduction is of a substantial part of a copyrightable whole, the court must weed-out from analysis those reproduced components that are not protectable by copyright. Of course, Morden J.A. correctly recognized that there may be cases when the reproduction of a number of components that are not individually protected by copyright may constitute the reproduction of a substantial part, as the selection or arrangement of those components might represent the original expression of the author. [265]

Returning to his assessment of "copyrightability", O'Leary J. provided a listing of what he called "some general principles applicable to the law of copyright"[266], citing as authority U.S. case law and Sookman, who appeared on behalf of the Respondents before the Ontario Court of Appeal.

> 1. An author has no copyright in ideas or information, but only in his expression of them.
>
> 2. Copyright subsists in original literary works. There is no copyright in what the author has copied from something already in the public domain or from a work in which another holds the copyright.
>
> 3. Even if the expression originated with the author, the expression of the idea is not copyrightable if the expression does no more than embody elements of the idea that are functional in the utilitarian sense.
>
> 4. If an idea can be expressed in only one or in a very limited number of ways, then copyright of that expression will be refused for it would give the originator of the idea a virtual monopoly on the idea. In such a case it is said that the expression merges with the idea and thus is not copyrightable.
>
> 5. Copyright does not subsist "in any arrangement, system, scheme, method for doing a particular thing, procedure, process, concept, principle, or discovery, but only in an author's original expression of them. Consistent with accepted thinking in copyright law, therefore, a particular expression of a mathematical algorithm or other procedure for solving a problem or accomplishing some end in the

[265] *Ibid.* See also the discussion in part 3.3, *supra.*
[266] *Delrina*, *supra* note 1 at p. 41.

> form of sets of instructions or statements may be protected by copyright, but the mathematical algorithm or other procedure as such cannot be protected by copyright" [citations omitted].[267]

Without comment on the correctness of these five principles, it is evident that they are derivatives of the requirement of originality and the attempts of the courts over the years to draw the line between non-protectable idea and protectable expression. Most, if not all of these principles, can be reduced to the doctrines of merger and scènes à faire as well as a few other principles established in the case law, which were considered in Chapter 1.

Under the proposed approach to infringement analysis, these principles are taken into account when the substantiality of that which has been produced or reproduced is considered, which is done after copying in fact has been established. The determination of whether that which has been produced or reproduced by the defendant constitutes "any substantial part" of the copyrighted computer program is to be made with reference to its qualitative significance, rather than quantitative significance, in relation to the copyrighted computer program as a whole, or a copyrightable sub-component thereof. This significance is understood by dissecting the computer program to determine the relationship between it and that which has been produced or reproduced. In terms of quality, what is said to be a substantial part of the whole must be protectable by copyright in the sense that it constitutes the author's original expression and falls within zone 2 of Figure 1, *supra*. Otherwise, the dictates of the idea/expression dichotomy and the requirement of originality would be meaningless.

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[267] *Ibid.*

Chapter 7: Considering the Proposed Approach in Respect of the Jurisprudence

7.1 *Delrina* and *Delrina (C.A.)* Interpreted and Applied

Likely owing to the judgment of Morden J.A. on behalf of the Ontario Court of Appeal, both *Delrina* and *Delrina (C.A.)* have been interpreted and applied by a number of courts and authors in disparate fashion. Some believe that the judgments represent the Canadian adoption of the U.S. abstraction-filtration-comparison test, while others more correctly recognize that the issue was not resolved. The disparate treatment considered herein demonstrates the need for clarification regarding the proper approach to infringement analysis vis-à-vis computer programs.

In the recent *VS Visual*[268] case, Crawford J. of the B.C. Supreme Court considered, among other things, the infringement of copyright in a computer program. In that case the plaintiff developed a computer program to be used by insurance claim adjusters and tried to sell it to the defendant. The defendant initiated a pilot project dealing with the plaintiff's computer program, to which the plaintiff made substantial modifications in order to port the computer program into the defendant's Microsoft Windows 95/NT operating system environment.[269] Without going into significant factual detail, during the plaintiff's development of its computer program the defendant began development of a computer program that performed a similar function.

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[268] *VS Visual Statement Inc. v. Insurance Corp. of British Columbia*, [2003] B.C.J. No. 1175 (S.C.) (QL).
[269] *Ibid.* at paras. 33 to 35.

When dealing with the issue of copyright infringement Crawford J. held that there was no evidentiary basis to support a claim for copyright infringement[270] and pointed out that the issue of copyright infringement was not vigorously pursued by the plaintiff.[271] However, Crawford J. did make reference to the judgment of O'Leary J. in *Delrina* to support the assertion that, post-*Delrina*, a plaintiff asserting copyright infringement vis-à-vis computer programs has no easy task. In addition, Crawford J. was of the opinion that O'Leary J. utilized the U.S. abstraction-filtration-comparison test to determine what parts of the computer program at issue in *Delrina* were subject to copyright.

> But the hurdles are now set high for those advancing a claim for breach of copyright in software programming: see the Ontario judgment of Leary, J. in [*Delrina*], and affirmed on appeal, [*Delrina (C.A.)*] where the Court took the three step process of abstraction, filtration, and comparison to distinguish the idea from its expression, in determining what parts of the software program were subject to copyright.[272]

Justice Crawford's statement demonstrates a misunderstanding of the judgment of O'Leary J. and the judgment of Morden J.A., as well as a misconception of the U.S. abstraction-filtration-comparison test and its import into the Canadian law of computer program copyright infringement. Indeed, even Handa incorrectly noted that the U.S. abstraction-filtration-comparison test has been adopted in Canada through *Delrina* and *Matrox v. Gaudreau* in respect of the distinction between idea and its expression.[273]

With respect to *Delrina*, O'Leary J. remained "on the fence" vis-à-vis the import of the U.S. abstraction-filtration-comparison test, but nonetheless favoured a "weeding-out approach" that

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[270] *Ibid.* at para. 191.
[271] *Ibid.* at para. 192.
[272] *Ibid.* at para. 190.
[273] Handa, *Copyright Law*, *supra* note 6 at p. 149, footnote 63. See also, *British Columbia Automobile Assn. v. O.P.E.I.U.*, *supra* note 241 where it was incorrectly noted that the U.S. abstraction-filtration-comparison approach was adopted in *Prism Hospital*, *supra* note 225.

was similar in concept.[274] Morden J.A. noted Justice O'Leary's indecision regarding the import of the U.S. abstraction-filtration-comparison test, but took no issue with the general "weeding-out approach"[275], commenting that in his opinion, no "hard-edged question of law [was] necessarily involved."[276] Certainly, the U.S. abstraction-filtration-comparison test was not intentionally adopted and applied in *Delrina*, contrary to Justice Crawford's interpretation of the judgments. O'Leary J. did not perform the step of abstraction to identify whether the similarities pointed to by the plaintiff related to its original expression. Rather, O'Leary J. concluded that each similarity pointed to did not relate to a copyrightable element of the plaintiff's computer program. Justice O'Leary's methodology did not accord with the proposed approach to infringement analysis advocated herein. On appeal Morden J.A. noted the conceptual difficulties presented by the judgment of O'Leary J. In any event however, the methodology used by O'Leary J. did not result in a palpable and overriding error. Morden J.A. believed that Justice O'Leary's conclusion was not based on the lack of copyright in the elements alleged to be produced or reproduced. Rather, it was a lack of sufficient evidence vis-à-vis the establishment of copying in fact that won the day for the defendant.

Notwithstanding Justice Crawford's interpretation and application of *Delrina* and *Delrina (C.A.)*, Searle D.J. of the Small Claims Court in London more aptly noted that *Delrina (C.A.)* stood for the following proposition.

> The proposed approach was to consider whether the original system as a whole was entitled to copyright and then determine whether the quality and the quantity of the reproduction was a substantial part of the whole.[277]

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[274] *Delrina*, *supra* note 1 at p. 37.
[275] *Delrina (C.A.)*, *supra* note 2 at p. 305.
[276] *Ibid.* at p. 306.
[277] *Dolmage v. Erskine*, [2003] O.J. No. 161 (Small Claims) (QL).

However, in accordance with the statutory presumption of the subsistence of copyright, the proposed approach to infringement analysis recognizes that the copyrightability of the whole computer program is not always in issue. To call into question the copyrightability of a computer program a defendant must be able to lead evidence that rebuts the statutory presumption.

Conexsys Systems v. Aime Star[278] was, among other things, a copyright infringement action relating to the alleged copying of non-literal elements of the plaintiff's computer program including its structure, sequence, organization and user interface.[279] The plaintiff's computer program related to an event management system, which allowed for the entry of data relevant to events and could generate reports based on the data. The defendant's program was for a similar purpose and accomplished a similar result. The defendant's expert was Dr. Sunny Handa, who was of the opinion that there were significant differences in the non-literal elements associated with the computer programs in issue. The Court disagreed.

Consistent with the proposed approach to infringement analysis, the Court first considered whether there had been copying in fact and then looked to the issue as to whether that which had been copied was protectable by copyright.[280] The court found that there had been copying in fact in relation to the non-literal elements.[281] This finding was made despite there being no evidence of the defendant's access to the plaintiff's source code.[282] It was based on the fact that there

[278] *Conexsys Systems Inc. c. Aime Star Marketing Inc.*, [2003] J.Q. No. 11296 (C.S.) (QL).
[279] *Ibid.* at para. 251 & 254.
[280] *Ibid.* at para. 328.
[281] *Ibid.* at para. 250.
[282] *Ibid.*at para. 250.

were a large number of points in common that could not result from chance or the creativity of the programmers, there must have been copying.[283]

The Court took into consideration the judgments in *Delrina* and *Delrina (C.A.)*, despite the latter decision not being released until after the hearing.[284] The Court correctly noted that O'Leary J. did not adopt the U.S. abstraction-filtration-comparison test, but rather looked to the elements alleged to be copied with a view to weeding-out non-protectable elements.[285] With respect to the determination of whether that which had been copied was protectable, the Court looked to the plaintiff's computer program as a whole.[286]

The Court properly recognized that copyright only protects original expression, noting that the expression of an idea is the concrete representation of the way in which the author expresses the idea.[287] This case was decided without the benefit of the Supreme Court of Canada's disposition in *CCH Canada*. As a result, the Court considered the issue of originality on a standard akin to the creativity doctrine commented upon in *Tele-Direct*.[288] Notwithstanding this somewhat higher standard, the Court concluded that non-literal elements of a computer program could be protected by copyright[289], and on the evidence in the case, they in fact were.[290] In addition, it was found that copyright subsisted in the plaintiff's computer program as a whole, which was found to be the author's original expression.[291] However, inconsistent with the proposed

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[283] *Ibid.*at para. 333.
[284] *Ibid.*at para. 260.
[285] *Ibid.*at para. 269.
[286] *Ibid.*at para. 333.
[287] *Ibid.*at paras. 230 & 232.
[288] *Ibid.*at paras. 237-238.
[289] *Ibid.*at para. 249.
[290] *Ibid.*at paras. 331 to 332.
[291] *Ibid.*at para. 328.

approach, the Court did not look to those non-literal elements that were reproduced with a view to determining whether they constituted original expression. In this regard, the Court seemed to focus more on the skill and labour that went into the creation of the plaintiff's entire computer program, than with the individual parts reproduced. As a result, the Court concluded that copyright in the entire computer program had been infringed.[292] There was no real analysis of whether that which was reproduced constituted a substantial part of the whole. However, on this point the Court noted that it was inappropriate to break the computer program down into its individual parts when there is a whole system involved.[293] At the end of the day, this judgment accords fairly well with the proposed approach, but did not consider whether the non-literal elements reproduced by the defendant were the author's original expression either independently or as a selection or arrangement. However, it is evident from the facts that had this inquiry been properly made, the answer would likely have been in the affirmative.

In his treatise on Canadian copyright law, Hughes had the opportunity to interpret the judgments of O'Leary J. and Morden J.A. He drew from the judgments a general principle of law regarding a concept he identified as the determination of "substantial taking". Hughes wrote that *Delrina (C.A.)* stands for the proposition that "[i]n determining whether substantial copying has taken place, the Court must exclude from consideration any part of the work not properly the subject matter of copyright".[294] However, what is clear from the judgment of Morden J.A. is that when "weeding-out", the exclusions are not based upon the copyrightability of the material in question; i.e. whether or not the material in question is "properly the subject matter of copyright". Rather, consistent with the proposed approach to infringement analysis, Morden J.A. correctly

[292] *Ibid.* at paras. 333 to 335.
[293] *Ibid.* at para. 333.
[294] Roger T. Hughes, *Hughes on Copyright and Industrial Design* (Toronto: Butterworths, 2004) Section 44.

recognized that the issue is whether the material in question is protectable by copyright. In addition, under the proposed approach this analysis is not to be made at the stage of assessing "substantial copying", as Hughes puts it. Rather, if that which has been produced or reproduced by the alleged infringer is not the plaintiff's original expression, then it is to be excluded from the analysis of whether or not the defendant has produced or reproduced "any substantial part".

A similar misinterpretation of *Delrina* can be found in McKeown's revamping of Dr. Fox's treatise on Canadian copyright law. In his text, McKeown indicates that O'Leary J. "applied the [U.S.] abstraction-filtration-comparison test ... and dismissed the action."[295] In addition, McKeown asserted that the process mandated by the U.S. abstraction-filtration-comparison test is inconsistent with the judgment of Lord Pearce in *Ladbroke*.

> This process is different from that of *Ladbroke* which states that it is inappropriate to start the inquiry as to whether copyright exists by dissecting the compilation into component parts instead of starting it by regarding the compilation as a whole and seeing whether the whole has a copyright. It is when one is debating whether the part reproduced is substantial that one considers the pirated portion on its own.[296]

Though the comment is insightful, this comparison is unfortunate and contributes to the jurisprudential confusion surrounding the proper Canadian approach to the analysis of infringement of the copyright in computer programs. In *Ladbroke*, Lord Pearce was considering the issue of copyright in a compilation and the reproduction of a substantial part thereof. In *Computer Associates v. Altai*, Walker C.J. was considering the issue of substantial similarity vis-à-vis the non-literal elements of a computer program, which elements he had already determined could be copyrightable under U.S. law. It is therefore evident that Lord Pearce and Walker C.J. were considering dissimilar issues in considerably different contexts.

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[295] McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-46.
[296] *Ibid.* at p. 21-47.

McKeown commented on what is purported to be Justice Morden's vision of the applicability of the U.S. abstraction-filtration-comparison test.

> ... the court noted that [the] abstraction-filtration-comparison method is applied in the context of determining whether a part of a work is entitled to copyright protection in the process of deciding whether a defendant has substantially reproduced a plaintiff's work.[297]

In conclusion, McKeown indicated that "[i]t remains to be seen how much weight should be given to the abstraction-filtration-comparison test."[298] However, as was demonstrated in Chapter 5, the principles underlying both the U.S. abstraction-filtration-comparison test and the proposed Canadian approach to infringement analysis are in accord, though the former has not been adopted in Canada. At the end of the day, differences in the respective statutory regimes militate against the Canadian adoption of the U.S. approach. Rather, the proposed Canadian approach elucidated herein avoids the complexities associated with the U.S. abstraction-filtration-comparison test, accords with the leading Canadian software copyright judgments as well as the paramount judgment of Morden J.A. in *Delrina (C.A.)*, and holds true to the dictates of the idea/expression dichotomy and the requirement of originality.

With respect to the judgment in *Delrina (C.A.)*, Takach wrote that although there was no wholesale embracing of the U.S. abstraction-filtration-comparison test, the Ontario Court of Appeal adopted the concept of filtration as a part of software copyright infringement analysis under the *Copyright Act* regarding the idea/expression dichotomy.

> The concept of filtering out unprotectable elements of a software program as a part of the infringement analysis has been adopted in the important *Delrina* case in Canada ... After a lengthy review of the *Altai* case, the [Ontario Court of Appeal] concluded that whether or not the U.S. "abstraction-filtration-comparison" method should be followed by a Canadian Judge, some filtering process should be undertaken under the Canadian *Copyright Act* as well, when separating protectable expression from unprotectable idea in a software case.[299]

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[297] *Ibid.*
[298] *Ibid.* at p. 21-49.
[299] Takach, *Computer Law*, *supra* note 24 at p. 145.

Under the proposed Canadian approach to infringement analysis it has been demonstrated herein that the filtering or "weeding-out" process occurs during the analysis of whether that which has been produced or reproduced by the alleged infringer constitutes a substantial part of the copyrighted computer program, or of a copyrightable sub-component thereof. If a court is dealing with a situation where there is the production or reproduction of a copyrighted work *in toto*, then no "weeding-out" is needed under the proposed approach.

According to Mann and Symons, the judgment of O'Leary J. in *Delrina* stands for the proposition that the use of non-protectable elements of a copyrighted work or similarities caused by external constraints cannot constitute copyright infringement.

> **(g) Non-protectable Elements**
>
> It would not be an infringement of copyright to use common elements which are not sufficiently original to be protected by copyright, or where two works are similar due to external constraints. The principle was stated as follows by the trial judge in [*Delrina*]:
>
> > Similarities attributable to the nature of the product, the limited ways in which an idea can be expressed, stock devices and common tools of the trade, the use of common sources, knowledge and information, constraints imposed by the nature of the product, are not indicators of copying or of substantial similarity between the copyright and allegedly infringed work [citations omitted].[300]

However, as is evident in the quote from the judgment of O'Leary J. provided above, there is no indication by O'Leary J. that the use of non-protectable elements of a copyrighted computer program cannot constitute infringement. Rather, O'Leary J. limited his comments to the establishment by the plaintiff of copying in fact, which is a requirement for a finding of infringement of copyright in a computer program under the proposed approach.

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[300] J. Fraser Mann & M. Elizabeth Symons, "Copyright and E-Commerce" in Alan M. Gahtan, *Electronic Commerce: a Practitioner's Guide* (Toronto: Thomson Canada Limited, 2003) 1-1 at 1-28.

What O'Leary J. correctly pointed out was that, based on the factual matrix in *Delrina*, the evidence of similarities on which the plaintiff relied to establish copying in fact, could be explained away and attributed to causes other than copying. Moreover, the specific evidence of similarities relied on by the plaintiff could not indicate substantial similarity and thereby the elicit act of copying could not be inferred solely from the similarities alleged. Indeed, on appeal Morden J.A. correctly observed that "the reproduction of a particular arrangement of elements that are not themselves protectable can constitute copyright infringement if that arrangement is original."[301] Additionally, the potential for copyright infringement under the proposed approach, through the taking of non-protectable elements, has been elucidated above in Chapter 3.3 – the selection or arrangement thereof must be considered.

7.2 Normative Considerations and the Proposed Approach

7.2.1 The Worth of Computer Programs

Copyright in computer programs was not codified under the Canadian *Copyright Act* until 1988 when certain amendments thereto were made. Prior to the 1988 amendments, the subsistence of copyright in computer programs had been recognized by the courts under the rubric of copyright in literary works.[302] The protection of software through copyright has been characterized by Takach as a quick-fix wrought with difficulties, but beneficial in certain respects.

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[301] *Delrina (C.A.)*, *supra* note 2 at p. 301.
[302] *International Business Machines Corp. et al. v. Ordinateurs Spirales Inc., Spirales Computers Inc. et al.* (1984), 12 D.L.R. (4th) 351 (F.C.T.D.) [*IBM v. Spirales*].

> The *Copyright Act* has always been an uncomfortable home for software. Affording copyright protection to computer programs by calling them literary works has been an effective and efficient way of combating wholesale piracy, the practice of reproducing all or almost all of a computer program and selling the illegal copy on a bootleg basis. By amending the definition of literary work in the *Copyright Act* to cover computer programs in 1988, software developers were given quick protection in Canada and abroad through Canada's participation in the Berne Convention. The alternative of crafting a separate legal regime for software, as has been done with chip topography technology, would have resulted in a much slower pace of protection both domestically and globally.[303]

Indeed, the prolix judgments in *Delrina* and *Delrina (C.A.)* could be put forth as working examples of the difficulties associated with protecting software under the *Copyright Act.*

The discomfort noted by Takach may be explained by conflicting normative perspectives that have been articulated by various academics and judges regarding the appropriate rubric of copyright law. Takach himself attempted to distinguish computer programs from traditional literary works by measuring the worth of the former against the worth of the latter in terms of purpose; the worth of the latter being more easily understood by the un-initiated.

> It is, nonetheless, something of a fiction to call software a "literary work". Novels, plays, art and music, the traditional core copyright works, are communicative vehicles intended to express artistic or aesthetic values. The real genius in these types of works is their expressive flair.[304]
>
> ...
>
> In contrast, a computer program that runs a company's payroll is a utilitarian device that controls a machine to perform certain predetermined functions. Other software processes documents, sorts data, performs calculations; these are very different activities than the purpose of a book, which is simply to convey information. Even maps and charts, which have long been covered by copyright, merely convey information – they do not operate machines.[305]

It may be true that "a picture says a thousand words", or that "beauty is in the eye of the beholder"; however, the subsistence of copyright is not dependent upon the worth or purpose of a work. What of the author of a personal journal or logbook, or a family genealogy; works never intended to be published or convey information; works that are likely devoid of "expressive

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[303] Takach, *Computer Law*, *supra* note 24 at p. 145.
[304] *Ibid.*
[305] *Ibid.* at p. 146.

flair", "artistic or aesthetic values"?[306] In such works there is no "purpose of communication". However, such works are indeed protectable by copyright recognized under the proposed approach to infringement analysis, as it is the originality of expression that attracts copyright protection (zone 2 of Figure 1, *supra*). It is the additional satisfaction of the categorical statutory definition of a "computer program" that engenders the subsistence of copyright (zone 1 of Figure 1, *supra*); it is not worth or purpose that commands copyright and nor should it be.

7.2.2 Elements of a Computer Program Found in the Public Domain

There exists an issue with respect to the proper analysis of copyright infringement surrounding the treatment of elements of a computer program that are found in the public domain. In *Delrina*, O'Leary J. pointed out that "[t]here is no copyright in what the author has copied from something already in the public domain or from a work in which another holds the copyright".[307] The reason for this observation is that originality is a requisite to the subsistence of copyright. Furthermore, under the proposed approach to infringement analysis, an element that has been copied from the public domain cannot be said to be a substantial part of the copyrighted computer program, due to a lack of originality.

This principle impacted upon Justice O'Leary's analysis of the evidence in *Delrina* when he observed that although parts of the source code driving some of the screen displays was the same as between the computer programs at issue, the source code was also the same as publicly

[306] For comment on this issue see the judgment of Reed J. in *IBM v. Spirales*, *supra* note 302 at pp. 359 to 360.
[307] *Delrina*, *supra* note 1 at p. 41.

available third party source code.[308] This observation was used by O'Leary J. to conclude that those parts of the plaintiff's computer program were not copyrightable. Under the proposed approach to infringement analysis, the fact that parts of the plaintiff's computer program are also found in third party publicly available sources impact both the establishment of copying in fact, as well as the proof that a part found in the public domain constitutes "any substantial part" (i.e. original expression); it is not a question of copyrightability.

With respect to the establishment of copying in fact, the rebuttable presumption resulting from proof of access and substantial similarity arises as a result of copying being more likely than not the reason for the similarities. This presumption rests on the implicit fact that there is no other reasonably probable explanation for the presence of the similarities when access has been demonstrated. However, if the similarities can also be found with respect to elements in the public domain to which the alleged infringer had access, then, under the proposed approach, the rebuttable presumption does not apply without something more tipping the scales in favour of copying from the plaintiff's copyrighted computer program as being the cause for the similarities.

Additionally, if a part of the plaintiff's computer program, or something substantially similar thereto, can be found in the public domain to which the author had access, then under the proposed approach, there exists a rebuttable presumption that the author copied its part from the publicly available source. This acts to nullify the statutory presumption provided by s. 34.1 of the *Copyright Act*. In such a case it cannot be said that the part taken from the public domain by the plaintiff constitutes a substantial part of the plaintiff's copyrighted computer program, as it in

[308] *Ibid.* at p. 44.

quality does not meet the requirement of originality. Of course, this presumption may be rebutted by the plaintiff in demonstrating that even though it had access, the part resulted from independent creation rather than copying. For example, the plaintiff's development-time might demonstrate that there was no copying in fact vis-à-vis the public source, despite the plaintiff's access thereto and substantial similarity therewith.

Some of these considerations were brought to bear in the non-computer program copyright infringement case of *Preston v. 20th Century Fox, supra.* MacKay J. concluded that, not only were there no similarities as between certain non-literal elements of the script and the movie, some of the other non-literal elements, for which similarity may have existed, were not protected by copyright as they were drawn from the public domain and were therefore not the plaintiff's original expression.

> In my view it is helpful to consider these factors in assessing substantial similarity alleged here in the script and the film. I have already noted that there is no claim to similarity in plot or dialogue, and the previous outlines of the two production, I believe, clearly indicate no similarity in themes, in mood, pace or sequence. Similarity is claimed in relation to setting or scenes, those involving a net trap of vines, the forest habitat and houses of the Ewoks in both, but it is my view that those scenes in themselves are not subject to copyright or protected by it for they are standard aspects of productions concerning primitive species or primitive humans, drawn from a common pool of folklore.[309]

As viewed under the proposed approach to infringement analysis, the elements drawn from the public domain cannot be considered substantial, due to the lack of originality resulting from the scènes à faire doctrine. Therefore, even if these elements were produced or reproduced by the alleged infringer, such an act would not constitute copyright infringement under the proposed approach. This result correctly takes into account the requirement that in order for an element of a copyrightable computer program to be protected by copyright, it must constitute the author's original expression. This proposition holds true to the dictates of the idea/expression dichotomy

[309] *Preston v. 20th Century Fox Canada Ltd., supra* note 102 at p. 274.

and the requirement of originality; it matters not whether the elements themselves are individually copyrightable. However, if the plaintiff asserts that the element taken is itself a discrete copyrightable work found within the context of a larger copyrighted computer program, then the question is one of copyrightability, which is resolved in the same manner with the additional consideration of the requirements for the subsistence of copyright associated with zone 1 of Figure 1, *supra*.

7.2.3 Reverse Engineering

It has been suggested by Handa that reverse engineering ought to be considered an exception to copyright infringement under, *inter alia*, the already-established fair use doctrine.[310] Though Handa believed it unlikely that the courts would apply the fair use doctrine in such a manner due to their narrow application of the doctrine[311], the recent liberal application of the doctrine in *CCH Canada* might change the likelihood. Indeed, the U.S. equivalent to the fair use doctrine was successfully applied in the reverse engineering case of *Sega v. Accolade*[312] on the basis that "the intermediate copying was only for the purpose of discovering the underlying ideas and functions where no alternative method of discovery is available."[313] Curiously, this approach seems to consider the intention of the defendant in search of an illicit *mens rea*.

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[310] Sunny Handa, "Reverse Engineering Computer Programs Under Canadian Copyright Law" (1995) 40 McGill L.J. 621 [Handa, "Reverse Engineering"].
[311] Handa, *Copyright Law*, *supra* note 6 at pp. 297 to 298.
[312] *Sega Enterprises Ltd. v. Accolade Inc.*, 977 F.2d 1510 (9th Cir. 1992).
[313] Handa, *Copyright Law*, *supra* note 6 at p. 298.

Regardless of the exception to infringement relied upon by reverse engineers, if the only thing being reproduced at the end of the day amounts to ideas, then under the proposed approach to infringement analysis, there can be no finding of infringement. This is the correct boundary within which reverse engineers are permitted to work. If the current technology does not allow a reverse engineer to "decompile" a computer program without making intermediate copies of it *in toto*[314], then the law correctly provides little sympathy. As the defendant was able to successfully accomplish in *Théberge*, reverse engineers must find a way to do what needs to be done without rendering a production or reproduction of a copyrighted computer program if they are to escape infringement. As pointed out by McKeown with respect to reverse engineering of copyrighted computer programs, "to the extent that reproduction occurs, it would be logical to conclude that infringement occurs."[315]

7.2.4 The Open Source Movement

In his article entitled "A New Paradigm in Intellectual Property Law? The Case Against Open Sources"[316], Strasser takes a "sober" look at copyright law as it is applied to computer programs and considers the merits of what is called the "open source movement", which has gained strength in the U.S., more so than it has in Canada. The open source movement has a number of manifestations, but generally stands for the proposition that intellectual property laws grant

[314] Handa, "Reverse Engineering", *supra* note 311: "The difficulty with reverse engineering a computer program lies in the fact that the program must be put into memory for decompilation. The act of reverse engineering is thus not in itself a violation of copyright, but rather the means which it employs are."
[315] McKeown, *Fox on Copyright*, *supra* note 7 at p. 21-53.
[316] Mathias Strasser, "A New Paradigm in Intellectual Property Law: The Case Against Open Sources" (2001) Stan. Tech. L. Rev. 4.

computer programmers too much protection resulting in the stagnation of the industry. The proposed solution is to force programmers to make their source code open and available to others; computer programs ought to be distributed freely and the underlying source code ought to be available for viewing. To the contrary, Strasser points out that the present application of copyright to computer programs results in a benefit to society with the right amount of power placed in the hands of software developers. In his view, the open source movement is "diametrically opposed" to the copyright framework vis-à-vis computer programs.[317] At the end of the day, the open source movement asserts arguments that deal directly with the normative aspects of whether or not computer programs should be afforded protection under intellectual property law.

The proposed approach to the analysis of infringement vis-à-vis computer programs in Canada satisfactorily addresses some of the concerns of the open source movement without violating the fundamental dictates of the idea/expression dichotomy and the requirement of originality. The proposed approach addresses the concerns of the open source movement with respect to the monopolization by one person of open source written by another. The requirement of originality, as applied to the substantiality of a part of a computer program, means that the unauthorized reproduction of parts of a copyrighted computer program that the copyright holder took from the public domain will not attract liability. The reason is that the open source components are not original to the copyright holder who took them from the public domain and included them in her computer program. Therefore, if the author of a computer program chooses to makes its source available to the public, no other person will be able to monopolize that source code simply through its inclusion in another software product. In this sense, if an author chooses to licence

[317] *Ibid.* at para. 56.

its software with no restrictions, or through the extraction of covenants requiring that no restrictions be placed on future distributions of computer programs made by using open source[318], then that author need not be concerned with future commercialization of any computer programs substantially similar thereto, unless the author thereof can demonstrate independent creation. As a practical result, the proposed approach to infringement analysis allows room for proponents of the open source movement to co-exist with those opposed.

[318] Such licensing regimes have been utilized under a manifestation of the open source movement through what has been dubbed "copyleft". See Severine Dusollier, "Open Source and Copyleft: Authorship Reconsidered" (2003) 26 Colum. J. L. & Arts 281.

Conclusion

Though the Supreme Court of Canada was presented with the opportunity to clarify the appropriate analytical approach to software copyright infringement in Canada, it chose not to by refusing to grant the plaintiff leave to appeal from the judgment of Morden J.A. in *Delrina (C.A.)*. Perhaps given the facts of that case, it was not the appropriate forum for the Supreme Court of Canada to voice its opinion. At the time leave was applied for, the issues presented in this thesis had not fully crystallized and the debate surrounding Canadian software copyright infringement had not yet matured to the point of adjudication by the Supreme Court of Canada. However, due to the ever-increasing confusion found in the jurisprudence, it is apparent that the issue is ripe for appraisal by the Supreme Court of Canada.

In addition, McLachlin C.J. made it clear in *CCH Canada* that copyright does not protect ideas, it protects the expression of ideas. Her statement accords with the idea/expression dichotomy, which in part drives the proposed approach to infringement analysis explicated herein.

> Copyright law in Canada protects a wide range of works including every original literary, dramatic, musical and artistic work, computer programs, translations and compilations of works: see ss. 5, 2 and 2.1 of the *Copyright Act*. Copyright law protects the expression of ideas in these works; it does not protect ideas in and of themselves.[319]

It would therefore follow that any protection that may have been afforded by Canadian jurists to ideas based on the skill and labour associated therewith is now definitively foreclosed. As a result, the following dictum of Morden J.A. in *Delrina (C.A.)* highlights the potential dangers associated with a methodology that follows too closely to his judgment.

> Although the idea/expression dichotomy is a common feature of copyright law in the three countries, it has been observed that it is applied with greater rigour in the United States, with the

[319] *CCH Canada*, *supra* note 13 at para. 8.

effect of enlarging the idea aspect of a work and, correspondingly, reducing the expression aspect. The result is a narrowing of the scope of copyright protection. The submitted wider protection afforded under the English/Canadian approach is based on some recognition of the skill and labour in the creation of the work:

> While Anglo-Canadian copyright law also places significant emphasis on the idea/expression distinction, this principle has not been applied with the same rigour. Canadian and British courts have been willing to depart from this principle and grant copyright protection based on the skill and labour used in the creation of a work. This departure has created some doctrinal tension. In choosing to protect skill and labour, British and Canadian courts have accorded a certain degree of protection to ideas.[320]

However, under the proposed approach to infringement analysis, it is not mere skill and labour that is protected by copyright. It is the expression resulting from the exercise of skill and labour that is protected.

Indeed, under the proposed approach, the non-protectable idea aspect of a computer program is not enlarged as it is in the U.S. In rejecting the U.S. abstraction-filtration-comparison test, the scope of copyright rights and the placement of the line between idea and protectable expression are preserved under the proposed Canadian approach. This is a result of the novel aspect of the proposed approach whereby the assessment of production or reproduction is made without regard to the copyrightability or protectability of that which evidences copying in fact. Thus, elements of a computer program falling within any of the zones depicted in Figure 1, *supra*, are available for consideration under the proposed approach vis-à-vis the establishment of copying in fact, as well as other factors not covered by the diagram.

Moreover, in determining whether that which has been produced or reproduced by an alleged infringer constitutes "any substantial part", the proposed approach safeguards the recognized and well-established principles with respect to the difficult task of separating non-protectable idea

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[320] *Delrina (C.A.), supra* note 2 at pp. 302 to 303 citing Michael F. Morgan, "Canadian Copyright and Computer Software: Back to the Future?" (1995), 12 C.I.P.R. 162 at pp. 173 to 174.

from protectable expression. In this regard, the novel aspect under the proposed approach of basing the assessment of substantiality on whether that which has been produced or reproduced constitutes in quality the author's original expression, helps to ensure that courts will not afford copyright protection to ideas. Thus, if that which has been produced or reproduced by an alleged infringer does not fall within zone 2 of Figure 1, *supra*, then under the proposed approach it must be weeded-out from the analysis of substantiality. Additionally, in such a case, that which has been produced or reproduced cannot be relied upon in support of a claim for copyright infringement vis-à-vis the production or reproduction of a copyrightable work *in toto*. The only use that can be made of such an element is its selection and arrangement with respect to other such elements, if that selection or arrangement constitutes original expression thereby bringing that which has been produced or reproduced back into zone 1 or 2 of Figure 1, *supra*.

As a result, the proposed approach strikes a reasoned and justifiable balance between the copyright holder's rights afforded by the *Copyright Act* and the public interest in the free exchange of ideas embodied in the idea/expression dichotomy. In addition, the proposed approach accounts for much of the *dictum* found in the leading cases dealing with software copyright infringement and also provides a suitable forum for the judicial determination of issues such as the protection afforded to non-literal elements of a copyrighted computer program as well as the implications of technology's ever-increasing trend towards the ease of reverse engineering. In this regard, the proposed approach allows the courts to adapt to changes in technology associated with advancements in information technology.

With respect to the impact of the development of information technology on the analysis of copyright infringement, Handa believed that the result was the creation of a large number of contentious questions. These questions are detailed in the following thought-provoking quote.

> The doctrinal tests used in determining where and whether an infringement of copyright has occurred are also challenged by technology. Whether the works are substantially similar and whether there has been access mean new and different things in a digital world. Substantial similarity, for example, is measured in terms of quantitative and qualitative elements. What do these mean for digital works? Are the underlying 0s and 1s relevant, or does one look solely at the representation of the digital information? Similarly, what is the test for access? Does one need to see the digital information? Take a computer screen. Is it sufficient to copy the layout of the screen? Is this access or is something more required? This also raises questions as to what is copyrightable. This has never been a stable element of copyright. While it is clear that the words on a page cannot be copied verbatim, what about the plot of a story? Or, the character of a drama? The same problems arise in the digital world. Is a copy of a digital image where the colour scheme has been changed a copy for the purposes of copyright? Should it be? Does it violate the moral rights of the author?[321]

Under the proposed approach to infringement analysis, most of these questions are answerable. At the end of the day, the essential question becomes: did the alleged infringer produce or reproduce something that is protectable by copyright? In other words, is that which has been produced or reproduced the author's original expression?

Armed with an understanding of the proposed approach to infringement analysis, plaintiffs will at least be able to better prepare their case, gather evidence and submit cogent and justifiable lines of argument in software copyright infringement actions. In addition, defendants will be in a better position to understand the case against them. Likewise, courts will be able to understand the implications of the evidence tendered by litigants, and draft decisions with a well-reasoned and transparent logic that will only increase judicial credibility.

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[321] Handa, *Copyright Law*, *supra* note 6 at p. 23.

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