TRADE SECRECY
IN A
KNOWLEDGE-BASED ECONOMY

BY
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for the degree of Master of Laws
Graduate Department of Law
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Knowledge production and distribution are increasingly recognized as key determinants of economic growth in what has come to be known as the “knowledge-based economy”. Trade secrecy law confronts the tension between allowing skilled employees in high technology industry to freely utilize their knowledge, while at the same time protecting their former employers’ investments in innovation. This thesis reviews the efficiency of trade secrecy law in the employment context in England and Canada. Some comparative perspective is added by an overview of United States law. An economic framework is developed to support the retention of trade secrecy protection. Special consideration is given to the objectives and insights of endogenous growth theory. Existing law is justified by the provision of incentives to innovate and the reduction of transaction costs associated with the protection, misappropriation and exchange of information. However, some modification to existing doctrine is suggested. In particular, this thesis advocates a shift in remedial focus from undivided property rules and injunctive relief, to liability rules and monetary relief. These shifts in focus ensure that constraints on the productive use of information and knowledge that are imposed in the employment context are limited to safeguarding incentives to innovate and do not unnecessarily stifle technological change and innovative growth.
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This thesis is completed in August 2001 in memory of the life of Oliver Douglas Walesby and in celebration of the life of Eva Rose Williams.

ANA KIRSTEN RAWLINGS
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Knowledge production and distribution are increasingly recognised as key determinants of economic growth. The extent to which firms can create and apply information through innovation determines their competitive advantage in what has become known as the "knowledge-based economy". As a result, the role of intellectual property rights in maximising the efficiency of information markets has taken on new significance.

The broad network of intellectual property rights available to producers of information includes patent and copyright law. It also includes the less frequently discussed common law protection of trade secrets. Like other protections, trade secret law must balance the classic intellectual property trade-off between protecting information and controlling the costs of protection. Intellectual property protection provides incentives to invest. On the other hand, exclusionary rights create a monopoly that reduces output and diffusion as compared with the output and diffusion that would exist without protection. Trade secrecy influences investment, industrial innovation and growth through the balance it strikes between these competing concerns.

The impact of trade secrecy on economic performance is heightened in the employment context because the scope of protection impacts on the productivity of labor, itself a vital input for economic growth. The protection of trade secrets fetters the ability of employees to freely transfer knowledge between firms. Employees who are restrained from applying the full range of their knowledge are less than fully productive. The considerations that influence the protection of information are overlaid in this context with additional obligations and policy considerations that shape the employment relationship. This includes the threat that an employer's greatest competitive asset is capable of becoming its strongest competitor.

The connection between information and labor markets has not been explored in detail previously. It provides the focus for this thesis. Those authors who have made the connection between legal infrastructure, employee mobility, the diffusion of information
and economic growth have suggested that weaker intellectual property rights may promote the transfer of tacit knowledge. This in turn promotes economic growth.

However, this thesis demonstrates that trade secrecy law may be retained without the need to choose between allowing free productive use of information and granting producers exclusive rights to it. A flexible trade secrecy doctrine provides a responsive continuum of protection that meets the different requirements for protection faced by different technologies in a range of industries. Legal doctrine developed in an older industry context is not necessarily redundant in a new environment. It may simply require modification to take account of evolving industry practices and structures. This thesis looks at the extent to which this is true for trade secrecy law.

Questions of whether and when to provide protection for trade secrets, and the scope of that protection, bring into play a range of economic and legal considerations. Previous justifications for trade secrecy have been in the broader context of justifying the enforceability of covenants not to compete. Some commentators rely on an employer's right to privacy, or a fairness, restitution or unjust enrichment perspective that prevents an employee from unfairly benefiting from investment by an employer. Others focus on concerns, supported by the judiciary, that trade secrecy should balance interests in freedom of trade and freedom of contract. Key concerns have included encouraging the

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4 See ibid., at 283-284 (Explaining justifications from a rights and fairness perspective).

5 See for example Blake, H.M., “Employee Agreements Not to Compete”, (1960) 73 Harv. L. Rev. 625 at 681-684 (Concerned with employees’ economic mobility, personal freedom and potential to diminish competition); See also Herbert Morris Limited v Saxelby, [1916] AC 668 (HL) at 699 per Lord Atkinson (Concerned with freedom of trade and freedom of contract); at 717-718 per Lord Shaw of Dunfermline (Concerned with the effect on the employee’s ability to earn a livelihood if restrained).
widespread application of trade-based skills through employee mobility, while at the same time protecting employers’ investments in employees and the information that those employees seek to exploit. The literature and case law has been infused with assumptions of unequal bargaining power and the need to protect employees against employer opportunism.

These perspectives have included consideration of the social interest in information diffusion as an aspect of monopoly cost. However, they have largely been insensitive to concerns surrounding information diffusion that have come to the fore with endogenous growth theories. These theories give primacy to information and knowledge as a valuable input for production and growth. They acknowledge the dynamic characteristics of the knowledge-based economy. As innovative industry is increasingly seen as a driver of economic growth, the benefits of information diffusion rise to the fore in any discussion of intellectual property protection.

This thesis attempts an economic analysis that more explicitly accounts for the contribution of endogenous growth theory to traditional economic justifications for information protection within the employment context. As a result, highly skilled employees in innovative, high technology industry form the focus of the discussion. The perspective represented in this thesis is also influenced by changes in the physical form of valuable information and the ease with which it may be recorded, automated, stored, retrieved and copied, thus simplifying and hastening the task of misappropriation. This context provides new challenges for a form of protection that depends on secrecy and non-disclosure. This thesis attempts to address these new challenges within the paradigm of an old protective doctrine.

The justifications that support trade secret protection in this thesis draw on contractarian arguments – that firms and employees would agree to the default provided by trade secrecy law if the bargaining environment allowed them to reach agreement. Consideration is given throughout to the contribution trade secrecy makes to economic

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6 See text at 10, below.
welfare. When conflicts arise over whether one legal principle ought to be applied in preference to another, an economic analysis helps to determine which, if either, principle ought to be preferred from an efficiency perspective.

The economic framework adopted draws on both positive and normative aspects. First, it describes the likely economic impacts of various trade secrecy doctrines given the likely reactions of profit-maximizing firms and self-interested employees to those doctrines. Normative conclusions about the value of trade secrecy protection are informed by an assumption about the value of incentives in encouraging innovation. Second, a welfare economics perspective leads to conclusions about the form of legal ordering that maximizes social welfare by encouraging private bargaining and internalizing transaction and enforcement costs and other socially costly externalities.

An economic framework is applied to the problem of co-ordinating the classic intellectual property trade-off between protecting information and limiting the costs of protection within the employment relationship, while giving special consideration to the objectives and insights of endogenous growth theory. The theoretical conclusions that emerge from this analysis provide a basis for the assessment of the efficiency of the common law of trade secrets in England and Canada. Some comparative perspective is added by an overview of United States law.

Part II provides an economic framework of analysis. Within Part II, Chapter 1 describes the classic intellectual property trade-off faced by any information protection regime and the special monopoly cost of restricting information diffusion that is emphasised in endogenous growth theory. The implications of addressing these perspectives in the employment context are also reviewed. Chapter 2 addresses whether the protection of trade secrets is justified in light of the restrictions on information diffusion that may result, and if so, the boundaries that ought to be placed on efficient protection. Using the framework for balancing competing interests that is provided in Chapter 1, it is concluded that trade secret protection is justified by the provision of incentives to innovate and the reduction of the transaction costs associated with the protection, misappropriation and exchange of information. This conclusion is supported throughout with examples of the
way in which trade secrecy advances these socially beneficial objectives while at the same time limiting the costs of monopoly that accompany protection. The flexibility of trade secrecy doctrine is emphasised to illustrate that efficient protection is not limited to a choice between granting and denying protection. Chapter 3 addresses the further question of what form of protection, or the remedy available for breach of trade secret protection, is most efficient in different circumstances. In the light of the discussion in earlier chapters, Chapter 4 explores some suggestions for reform and provides a proposal for an efficient trade secrecy doctrine. Attention is given not only to determining substantive liability, but also to choosing an efficient remedial framework. Chapter 5 provides a final measure of the efficiency of protection by exploring the inter-relationship between trade secret protection and other forms of information protection available to employers, namely patent protection and the enforceability of express contractual covenants not to compete. It concludes that nothing in the economic or social justifications offered for these protections undermines the efficiency of trade secret protection. Indeed, the flexibility and complementarity of these means of protection provide a generally efficient regime.

Parts III and IV review current trade secret doctrine in practice in England and Canada with some comparative reference to the United States. Part III reviews the legal principles applied to determine substantive liability. Part IV evaluates the efficiency of remedies relied on by the courts when compared against the remedial framework described in Part II. This review highlights the fact that current practice is largely consistent with the economic objectives and optimal trade secret doctrine outlined in Part II. Areas where reform of current practice would better advance efficiency objectives are identified. Most significantly, this analysis highlights the fact that the courts should have greater regard for factors that impact directly on incentives to innovate when determining whether trade secret protection is justified. Less significance should be attached to the culpability of employees. The characteristics of high technology industry should militate against any presumption that employees are only able to effectively compete with their former employers by using trade secrets. Damages should be preferred as a remedy over injunctive relief. These subtle shifts in the focus of existing trade secret doctrine ensure that constraints on the productive use of information and knowledge are limited to
safeguarding incentives to innovate and do not unnecessarily stifle technological change and economic growth.
1. Identifying Influential Perspectives

This chapter provides a framework for developing a more in-depth understanding of the efficiency of trade secret protection in the chapters that follow. The first section reviews neoclassical economic justifications for intellectual property protection. The tension between providing adequate incentives to produce valuable information, and making it available for public use is emphasized. The second section looks at endogenous growth theory, including the work of Paul Romer. This leads to consideration of the particular relevance of these theories to the protection of information in the employment context.

A. The Classic Intellectual Property Protection Trade-Off

All intellectual property regimes face a well recognized trade-off between the social value of providing incentives to generate innovative information, and the costs of monopoly associated with the grant of an exclusive right.

A primary justification for intellectual property protection lies in the public goods problem. Information as a commodity is unique as compared with tangible property. It has the character of a public good in that it is both non-rivalrous and non-excludable.\(^7\) It may be used again and again without leaving any less for use by any person in the future. Costs of copying are usually low and almost always less than the price set by a producer to recover his or her production costs. In addition, it is difficult to exclude people from using information once it enters the public domain.

The qualities of non-rivalry and non-excludability allow free-riding by users of information. Information can be easily copied and used, or copied and resold, diverting rents from the original producer. Non-legal mechanisms such as lead-time and learning

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curve advantages help to delay free-riding.\(^8\) However, the profit derived from these natural advantages rarely bears any proportion to the investment made in developing information. The costs of excluding free-riding are assumed to be so high that no private profit-maximizing firm would produce information products.\(^9\) The free market is thus likely to produce inefficiently small amounts of information.\(^10\)

Assuming that some information is still produced, a world without protection of information does not force its disclosure or facilitate its free use. In the absence of some form of mandatory disclosure, a producer of information is likely to attempt to retain its secrecy and contract to facilitate its exchange. If successful, the producer's return on investment will yield monopoly profits.

The costs of maintaining secrecy are likely to be high because information is otherwise non-rivalrous and non-excludable. Legal protection of information may avoid the social cost of firms' excess expenditure on protection.\(^11\) In addition, the cost of strategic planning for misappropriation designed to overcome these protective measures may be avoided.\(^12\)

Finally, even if producers of information are able to protect it from dissemination so that they can trade it, in a world without information protection, private bargaining to facilitate trade is impeded. The high transaction costs of bargaining for non-rivalrous and non-excludable information make private bargaining unlikely.\(^13\) Transaction costs are

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\(^8\) See Bone, *supra* note 3 at 264; Kitch *supra* note 2 at 711-712; See also footnote 42 at 15, below.


\(^10\) Cooter and Ulen, *ibid.* at 126.

\(^11\) See for example Kitch, *supra* note 2 at 697-699; Rubin and Shedd, *supra* note 2 at 97-98; See also text at 21, below.

\(^12\) See text at 24, below.

\(^13\) Cooter and Ulen, *supra* note 9 at 90. Trade secrets are likely to exhibit many of the factors associated with increased transaction costs. These include unique goods and services, uncertain and complex rights, hostile parties, numerous contingencies, high costs of monitoring and costly punishments. Cooter and Ulen contrast these criteria against indicia of lower transaction costs including standardized goods and services, clear and simple rights, friendly and familiar parties, reasonable behaviour, no contingencies, low costs of monitoring and cheap punishments. The more complex and technical the information used in an exchange the higher the transaction costs of striking a bargain are likely to be, if a bargain is possible at all.
likely to exceed the surplus gained from an exchange and no rational firm or individual will bargain at a loss.

Transaction costs are high because of information asymmetries regarding the information under exchange.\textsuperscript{14} Potential purchasers have difficulty in assessing the utility of information. Its value cannot be assessed before the purchaser knows it. However, knowing the information removes the purchaser’s willingness to pay for it. It can be easily appropriated without paying the price required by the producer to recover its investment in its creation.\textsuperscript{15} Without legal rights in information to convert it into an appropriable commodity, its technical character as a public good prevents bargaining to achieve efficient transfers of use.\textsuperscript{16} Without the opportunity to make a profit from trading information, incentives to produce it are diminished. In addition, the failure of private agreements that would move information to a higher valued use results in a social loss of the surplus that would otherwise be obtained through exchange. Therefore, the efficient use of information will depend on how entitlements to the information are assigned by law.\textsuperscript{17}

Intellectual property rights, including copyright, patent and trade secrecy laws, attempt to correct the market failures caused by the public nature of information by regulating its use and duplication. Incentives for creation are restored through the grant of rights of exclusive use to producers. This implicitly includes a right to exclude others from using or enjoying the information and a right to charge a price for its use. In addition, the costs associated with misappropriation and protection of information are reduced. The ability to exclude others also promotes efficient use of information by facilitating private voluntary exchange as if it were a private good.\textsuperscript{18}

Despite these corrections of the market failures otherwise associated with information markets, conferring exclusive rights on information producers is not cost-free. It results

\textsuperscript{14} Arrow, \textit{supra} note 7 at 615.
\textsuperscript{15} \textit{Ibid.}; See also Cooter and Ulen, \textit{supra} note 9 at 109; at 126.
\textsuperscript{16} Cooter and Ulen, \textit{ibid.} at 107; See also Kitch, \textit{supra} note 2 at 709.
\textsuperscript{17} Cooter and Ulen, \textit{ibid.} at 85; See also text at 34, below.
\textsuperscript{18} \textit{Ibid.} at 107; See also text at 29, below.
in monopoly – a form of market failure of its own. Without close substitutes for innovative information, an exclusive right causes the deadweight loss of monopoly pricing that occurs when the price charged by a producer of information is greater than the cost of copying that would be possible in the absence of the right.\textsuperscript{19} Administrative, enforcement and transaction costs increase when potential users must bargain to use information under a monopoly compared with the alternative of free use.\textsuperscript{20} The dissemination and application of information to future innovation is made more difficult because users are forced to acquire permission to use protected information.\textsuperscript{21}

Any protective intellectual property regime must attempt to find an optimal balance between the advantages of protection, including creating an incentive for information production, and the public interest in minimizing the social costs of monopoly highlighted above. In essence, an optimal regime ought to internalise just enough of the social value of the information so that producers will invest optimally in creation given the social costs.\textsuperscript{22}

\textbf{B. AN ADDED DIMENSION – THEORIES OF ENDOGENOUS GROWTH}

Costs of monopoly rights in information such as reduced competition, higher prices, restricted output and the increased transaction costs associated with licensing, are easily recognised. Friedman, Landes and Posner have acknowledged that where the social costs of enforcing information secrecy through the legal system are high, the social benefits of shared information may exceed the net benefit of legal protection.\textsuperscript{23} However, the economic interest in shared information can be extended beyond this transaction-cost perspective. The diffusion of information, particularly within high technology industry

\textsuperscript{19} Bone, \textit{supra} note 3 at 263-264; See also Landes, W.M. and Posner, R.A., "An Economic Analysis of Copyright Law" (1989) 18 J. Legal Stud. 325 at 33-43 [hereinafter Landes and Posner, "Copyright"] (Applying these factors in relation to copyright); In a perfectly competitive market goods will be traded at a price where marginal cost equals marginal price. A monopolist can price above marginal cost. The "deadweight loss" results when too little of the product is produced at too high a price.

\textsuperscript{20} Bone, \textit{ibid.} at 263-264; See also Landes and Posner, "Copyright", \textit{ibid.} at 33-43 (Applying these factors in relation to copyright).

\textsuperscript{21} Cooter and Ulen, \textit{supra} note 9 at 128.

\textsuperscript{22} Bone, \textit{supra} note 3 at 265.

sectors, is increasingly regarded as crucial to economic growth. As a result, the potential for intellectual property rights to stifle diffusion warrants particular attention.

The changing nature of innovation and information markets has contributed to increasing debate concerning determinants of growth in the knowledge-based economy. The OECD describes the knowledge-based economy as “an economy directly based on production, distribution and use of knowledge and information”.24 The concept recognises an international trend towards growth in high technology investments and industries, more highly skilled labor and associated productivity gains. Emphasis on technical capability, creativity and flexibility has replaced the significance previously attributed to experience and tradition.25

At the same time innovation has been reframed as an interactive process. New information is created as a result of formal and informal exchanges within networks of producers and users of information. Knowledge generation is a cumulative process. New opportunities for research and development are created and defined by existing technologies. Imitation has become a necessary aspect of competitive strategy and part of the innovative process. The success of firms is perceived to lie not only in their productive capacity but also in their ability to gather and utilise information.26 For these reasons, the diffusion of information through formal and informal means may be as important for technological development as single acts of heroic discovery by lone inventors. Information spillovers provide positive externalities for other innovative firms and minimise wasteful duplication of research effort. The ability to distribute knowledge and ensure timely access by innovators to relevant stocks of knowledge is of key importance to economic growth.

25 Ibid. at 230.
26 Ibid. at 233.
Many years ago, Arrow recognized:27

From the viewpoint of welfare economics, the determination of optimal resource allocation for invention will depend on the technological characteristics of the invention process and the nature of the market for knowledge.

Changing trends in the knowledge-based economy have led new growth or endogenous growth theorists to reassess the contributions that knowledge and technology make to productivity and economic growth.

Earlier growth models tended to treat economic growth as dependant on traditional inputs such as labor and capital. Knowledge was treated as a force that impinged from outside an economic system. For example, knowledge has been treated as an unexplained and exogenous public input to be provided by government,28 or privately provided as a side effect of private investment in regular production.29 In contrast, endogenous growth theory emphasises intentional private investment in knowledge creation as an internal factor of production that increases the productive capacity of traditional inputs such as labor and capital. Knowledge forms a key determinant of economic growth. For this reason, both incentives for the creation of knowledge and for its distribution throughout the economy form a focus of enquiry for endogenous growth theory.

Paul Romer is a key proponent of endogenous growth theory.30 Romer describes his theory as based on three central premises.31 First, technological change lies at the heart of economic growth. Second, technological change arises in large part because of the intentional actions of firms responding to market incentives. Technological change is thus endogenous - effort within the economic system generates discovery. The final and

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27 Arrow, supra note 7 at 609.
29 Romer, “Endogenous Technological Change”, ibid. at S77.
31 Romer, “Endogenous Technological Change”, supra note 28 at S72; See also Romer, “Endogenous Growth”, ibid. at 12-13 (Including these three factors in five observable facts that endogenous growth attempts to address).
most fundamental premise is that technology is inherently different from other economic goods because it is non-rivalrous and non-excludable. Romer takes these qualities as the defining characteristics of technology. They also underpin the classic intellectual property trade-off described above. Although Romer does not apply his theory to intellectual property protection, it is argued below that his conclusions support limited forms of protection such as those provided by trade secrecy.\(^{32}\)

According to Romer, growth models have struggled to recognise adequately that firms intentionally innovate or that information is a unique good. In particular, growth theorists have failed to account for the fact that private firms undertake privately funded research and development despite information being largely non-excludable and non-rivalrous.\(^{33}\) Romer argues that when these two characteristics are acknowledged together they negate the possibility of an equilibrium with price-taking firms.\(^{34}\) Some form of incentive must exist to encourage firms to innovate under these conditions.

Romer’s observations lead him to a more complex understanding of the public goods problem.\(^{35}\) Rivalrous information has a limited life because it is specific to individuals. It is useful only as long as a person lives or works. In contrast, technological information exists independently of individuals. It is non-rivalrous and can grow without limitation. However, it is not completely non-excludable. It is excludable to the extent that firms can control information for some period of time. This excludable aspect gives an incentive for information production.\(^{36}\) At the same time, to the extent that information is non-excludable, it may spill over to be used by other firms at no cost because it is non-rivalrous. Its use does not preclude future use. Some firms will invest in the production of non-rivalrous information even if others cannot be excluded from its use because they can still charge more than cost for their own products and it increases the productivity of

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\(^{32}\) But see generally Hyde, “High-Velocity Labor Market”, *supra* note 1 (Noting the significance of Romer’s theory but implying that it may support more restricted trade secrecy protection).


\(^{34}\) Romer, “Endogenous Technological Change”, *supra* note 28 at S72; See also *ibid.* at 13.

\(^{35}\) Romer, “Endogenous Growth”, *supra* note 30 at 16.

\(^{36}\) Romer, “Endogenous Technological Change”, *supra* note 28 at S74; at S84.
other factors of production. In Romer's model it is the generation of non-rivalrous, partly excludable information in the private sector that provides the key to economic growth.

In this way, Romer allows for both monopolistic competition and the external benefit of knowledge spillovers. He identifies an equilibrium that accounts for growth in a market where the potential to earn monopoly profits motivates discovery while at the same time allowing for information diffusion. He clearly illustrates that an explicit model of imperfect competition may promote economic growth.

Romer summarizes the appropriate equilibrium thus:

Both spillovers and price setting seem essential to capturing the features of knowledge in a model of growth. There is little doubt that much of the value to society of any given innovation or discovery is not captured by the inventor, and any model that missed these spillovers would miss important elements of the growth process. Yet it is still the case that private, profit-maximizing agents make investments in the creation of new knowledge and that they earn a return on these investments by charging a price for the resulting goods that is greater than the marginal cost of producing the goods.

Romer's model has some vital implications for trade secret protection. Hyde argues that his theory indicates that some firms will produce non-excludable information without protection. This may militate against the need for legal intervention to provide incentives to create information.

However, Romer's theory also supports the protection of valuable information. He illustrates that a firm's willingness to invest in non-rivalrous information is derived from market incentives that make it at least partially excludable. Partial excludability might

38 Romer, "Endogenous Technological Change", ibid. at S73; Romer, "Endogenous Growth", supra note 30 at 18.
39 Romer, "Endogenous Growth", ibid. at 18.
40 Romer, "Endogenous Technological Change", supra note 28 at S89.
41 Hyde, "High-Velocity Labor Market", supra note 1 at 35.
arise through the natural monopoly provided by lead-time or learning curve advantages. However, it is assured more consistently through the enhanced monopoly provided by imperfect intellectual property rights with carefully defined boundaries. Trade secrecy law provides such rights. An intellectual property regime need not, and indeed should not, make non-rivalrous information entirely excludable. Complete excludability may hamper the diffusion of privately generated information and restrict economic growth. Appropriate limitations on the scope of trade secret protection ensure that only partial excludability is granted. This allows for both monopoly rights that encourage information production and information spillovers that diffuse it.

Intellectual property protection, reducing monopoly costs and achieving information diffusion are not necessarily mutually exclusive objectives. Without innovation there is nothing to diffuse. Intellectual property rights lead to diffusion by encouraging innovation. Limiting protection to information that would not be produced without an additional market incentive leaves other forms of knowledge readily transferable at no cost. Protecting some information acknowledges that in the long term, the increased technological innovation that results may contribute as much to social welfare and economic growth as the elimination of inefficiencies associated with monopoly power.

C. THEORETICAL IMPLICATIONS FOR THE EMPLOYMENT RELATIONSHIP

A reassessment of intellectual property protection within the employment context flows naturally from the premises of information generation and diffusion upon which theories of endogenous growth are predicated.

As noted above, one characteristic of the knowledge-based economy is an increase in the demand for highly skilled labor. An increase in short-term employment and high velocity labor markets is also prevalent. Employees are increasingly engaged for their knowledge-based skills rather than their manual work skills.

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42 See for example Kitch, supra note 2 at 711-712; Bone, supra note 3 at 264; See also text and footnote 8 at 8, above.
44 OECD, supra note 24 at 233.
Within the employment relationship the tension between information protection and information diffusion is particularly pronounced. Employees provide both an economy’s means of information production and the means of information diffusion. They are at the same time an employer’s greatest asset and an employer’s greatest threat. Individual employees are vital to a firm’s production. However, they also provide the primary means of knowledge transfer through networks of professional relationships. Increased employee mobility increases the relevance of trade secrecy and information protection to employers in a knowledge-based economy. An employee’s ability to transfer information is limited by intellectual property rights granted under copyright and patent law. However, it is also directly affected by the terms of the employment relationship, including obligations of good faith and confidentiality, the enforceability of covenants not to compete and trade secrecy law.

Gilson and Hyde have recently each made the connection between labor market constraints and information diffusion. Gilson’s focus is on the role of legal infrastructure in facilitating the diffusion of tacit knowledge in the formation of agglomeration industries such as Silicon Valley.45 His primary focus is on the unenforceability of express covenants not to compete in California. However, Hyde examines in greater depth the potential for trade secrecy law to impact on economic growth in that region.46 Both authors draw extensively on the work of Anna Lee Saxenian who emphasises that Silicon Valley’s high velocity labor market is its key to success when compared with rival technology district Route 128 near Boston, Massachusetts.47

Hyde argues that in Silicon Valley a high velocity labor market has effectively co-existed with trade secrecy law only because of informal social and economic sanctions that attach to attempts to enforce obligations of confidentiality.48 In essence, the “law in action” in

45 Gilson, supra note 1.
47 See Saxenian, A.L., Regional Advantage: Culture and Competition in Silicon Valley and Route 128, (Cambridge, Mass.: Harvard University Press, 1994); note that Hyde appears to have first coined the term “high velocity labor market” to identify the culture of employee mobility that Saxenian, Gilson and Hyde describe in Silicon Valley.
48 See generally Hyde, “Shared Information”, supra note 1; especially Part III (Rejecting alternative suggestions that the co-existence is due to explicit or implicit contracting allowing employees to retain
California diverges from the "law on the books". He claims that employers rarely sue employees for three reasons. It can be difficult to prove a claim of misappropriation and litigation may achieve little in the way of substantive result for employers. Litigation has high costs in terms of reputation, morale and recruitment. Finally, lawyers tend to advise clients that the working definition of "trade secret" in the Valley is narrower than the formal definition so that employers are discouraged from taking legal action.

Hyde expressly acknowledges that the public interest in information diffusion should not automatically trump an employer's claim to trade secret protection in every case. He acknowledges that a high velocity labor market with weak trade secret protection may result in diminished employer investment in research and innovation. However, in Hyde's view any diminished investment is "swamped" by associated growth. This perspective may underestimate the value derived from allowing employers a degree of monopoly power through limited intellectual property protection. However, Hyde usefully identifies the advantages of allowing employees to take to a future employer, knowledge of what they have seen tried, failed or proved at a former employer's enterprise. First, it saves wasteful duplication of effort in "reinventing the wheel". Second, it may facilitate more rapid convergence on efficient practices and correct diagnoses of problems leading to increased overall productivity. Third, it may reinforce the high velocity labor market. Finally, it may provide good incentives for employees to develop knowledge by reassuring them of the potential for future start-ups that they may control.

The difficulty facing the law, confirms Hyde, is to find a model that achieves a balance between competing objectives:

The model would measure the extent to which, for particular industries or kinds of information, making information publicly shared would contribute to

Information, that courts use a restricted definition of trade secret, that courts adopt a policy in favor of employee mobility or that courts reject the doctrine of inevitable disclosure).

49 Hyde, "Shared Information", ibid. at Part IV(Intro.).
50 Ibid. at Part IV.C.
51 Ibid. at Part V(Concl.).
52 Ibid. Part II; Hyde, "High-Velocity Labor Market", supra note 1 at 33.
53 Hyde, "Shared Information", supra note 1 at Part II.
Romeresque growth, convergence on helpful protocols, and incentives to employees, and weigh these factors against the possibility that making such information public would diminish firms’ incentives to invest in its production. It is obvious that no such model exists. ... Lawyers for plaintiffs and defendants could incorporate the best economic analyses by addressing, in individual trade secrets cases, these crucial issues of public benefit in diffusion of information and incentives to employees, and weigh them against the question of incentives to the firm to produce information.

The courts must undertake a precise enquiry focussed on the trade-off between the gains in encouraging information diffusion and the losses in diminished incentives to produce information.\textsuperscript{54} This thesis focuses on the extent to which current trade secrecy law efficiently strikes this balance by combining Hyde’s perspectives with the insights contributed by the economic theories discussed above. The continued relevance of trade secrecy in a knowledge-based economy is supported. However, it is argued that in some areas, more efficient methods may be available for managing the stock of technological information generated by employees within high technology firms.

\textsuperscript{54} Ibid. at Part IV.E.
2. The Economics of Trade Secrecy Liability

This chapter applies the economic perspectives explored previously to review the efficiency of current trade secrecy doctrine. It includes discussion of how trade secret law currently contributes to incentives to create information, the reduction of wasteful expenditure associated with protection and misappropriation of information, and facilitates the efficient exchange of information. It also identifies strategies reflected in current doctrine for minimising the costs of monopoly rights, including limits on the diffusion of information.

A. Incentives for Creation

The protection of trade secrets provides an incentive to invest in information production in two ways.

First, it reassures employers that employees who are paid the price of their marginal product in wages will be prevented from taking any more from their employers on their departure.\(^{55}\) Employers are encouraged to invest in the resources required for production in the knowledge that they will retain the product of that investment. The incentive to create is crucial from an endogenous growth perspective because it generates the basic unit for diffusion – innovative information.\(^{56}\)

Second, protection may be justified as an incentive to invest in training that equips employees for production. The human capital argument involves the following simplified logic.\(^{57}\) Firms can be expected to invest in firm specific training because the information imparted will be of no use to employees seeking to work outside the firm. In contrast, employees can be expected to bear the cost of general training through reduced wages because they can expect to recover their costs either through increased

\(^{55}\) See for example Trebilcock, supra note 2 at 146 (Explaining that if employees are compensated for the value of their marginal product contributed to developing trade secrets then they should have no further claim on those trade secrets).

\(^{56}\) But note the tension with the acknowledgement that intellectual property rights also inhibit diffusion by requiring prior agreement for the use of information. See generally text at 10-15, above.

\(^{57}\) See for example Kitch, supra note 2 at 684-685.
remuneration during future employment in the same firm, or through sale of their improved skills to alternative employers.

Trade secrets provide an uncomfortable fit with this justification. They include information that is useful to competitors. They are therefore of a general nature. However, an employer’s wish to retain their secrecy makes them firm specific so that an employee will be unwilling to bear the cost of training in relation to them. Employers can be assumed to be willing to invest in training in trade secrets only if their secrecy is guaranteed. There are two ways of achieving such a guarantee. Either employers and employees can contract to preserve secrecy in exchange for training, or the law can provide protection that provides a guarantee of secrecy so that employers have an incentive to provide training. Legal protection removes the need to contract, with its associated transaction costs, and ensures that employers will invest in training. Given that knowledge transfer is the building block for technology based growth, training of employees also advances the objectives of endogenous growth theory.

However, the human capital argument would require training employees in pre-existing trade secrets as a pre-requisite for trade secret protection. It does not easily justify enforceable trade secrecy laws in high technology industries where employees with specialised skills add to the firm’s stock of trade secrets but do not require training in pre-existing secrets. In addition, the protection of information such as product specifications tends to elude the training paradigm which might better justify the protection of information such as production processes.58

The common law protection of trade secrets achieves the incentive objectives of intellectual property protection in a general sense by encouraging investment in the resources required to produce information including, but not limited to, investment in training employees.

B. REDUCING THE COSTS OF PROTECTION AND MISAPPROPRIATION

i. TANGIBLE MEANS OF PROTECTION

If protection that reduces the likelihood of misappropriation costs less than the value an employer places on the information at issue, then the employer can be expected to invest in its protection. In the absence of a protective legal rule, protection by employers against misappropriation by their employees may include fencing or security, reorganisation of production so that no single employee has access to a coherent body of secret information, employing family members expected to have higher degrees of loyalty, or hiring fewer staff.

However, business reorganisation is likely to result in lost productivity. In addition, it is unlikely to be effective against the misappropriation of evolving innovative information, as opposed to pre-existing trade secrets. The highly skilled employees at the helm of research and development efforts may have better knowledge of the value of information, and better access to it, than those in control of the firm and its protection.

Kitch argues that information is "self-protecting". He suggests that information of any complexity is difficult to transmit. Within a firm it is unlikely to be organised in a way that facilitates communication because production is naturally fragmented, and information is likely to be embedded in a context that contains a great deal of extraneous information so that determining the value of any particular piece is difficult. However, these factors are unlikely to hold in high technology industry dominated by sophisticated forms of electronic communication, swift and cheap copying methods, and integrated research and development teams comprised of employees who understand both the function of their specialisation and its broader commercial application. In the absence of trade secret protection, a high technology firm will have an incentive to invest in protection of the information generated by these employees.

59 Bone, supra note 3 at 272.
60 Trebilcock, supra note 2 at 120; Friedman, D.D., et al., supra note 23 at 67.
62 Bone, supra note 3 at 273.
63 Trebilcock, supra note 2 at 120.
64 Kitch, supra note 2 at 711-712.
A firm will set its protective efforts at a level that minimizes the sum of the loss it sustains from misappropriation of its information and the cost of protecting it against loss.\textsuperscript{65} It follows that the greater the value of the secret (and the greater the potential loss from misappropriation) and the greater the effectiveness of measures taken to protect against loss (and the greater the probability of successful protection), the more a firm will spend on protection.\textsuperscript{66} Employers will need to do less to protect information when there is a threat of legal sanction for misappropriation.\textsuperscript{67} Trade secret law helps to ensure that an efficient level of resources is allocated to the protection of information by defining the limits of what will be protected.

For example, employers are required to take some reasonable steps to maintain the secrecy of information. Evidence of these steps reassures the court that the information is in fact secret and it forewarns employees against misappropriation.\textsuperscript{68} However, the requirement also signals the threshold beyond which the law considers protection to be wasteful. Expenditure on more protection than is required to satisfy the court that steps have been taken to preserve the secrecy of information is discouraged because additional steps cannot yield any greater degree of protection. This helps to reduce the social cost of over-protection.\textsuperscript{69}

At the same time, protection is not denied simply because information has been disclosed in a limited form under conditions of implied or express secrecy, such as during business

\textsuperscript{65} Friedman, D.D., et al., supra note 23 at 68.
\textsuperscript{66} Ibid.
\textsuperscript{67} Ibid.; But see Bone, supra note 3 at 276 (Providing an in-depth analysis of the precaution/thealing game and arguing that investment in protection and theft strategies is unlikely to change with protection of trade secrets. Instead, both parties may invest more in misappropriation and protection because the threat of litigation alters the pay offs available. The costs and benefits of detection are increased when trade secrets are protected because the parties can either gain or lose more through litigation success or failure, including the costs of litigation).
\textsuperscript{68} Kitch, supra note 2 at 698-699.\textsuperscript{69}
\textsuperscript{69} But see Bone, supra note 3 at 277 and his note 161 (Doubting the effectiveness of the self-help requirement at reducing social costs. Arguing that it increases precaution and litigation costs and does little to reduce detection costs).
negotiations. The efficiency of trade secret protection can also be measured against what it does not protect. Before information is protected it must exhibit some degree of net present value that indicates a low depreciation rate or the ability to retain value for some period of time so long as it remains secret. This reflects the fact that information with a high depreciation rate is unlikely to be sought through means that require any degree of planning or effort. Wasteful expenditures on misappropriation are therefore unlikely. Further, once misappropriated by an employee, an employer is unlikely to pursue information with a high depreciation rate through time-consuming litigation that is unlikely to yield a high return. Protection of this type of information by trade secret law is inefficient and is avoided.

In addition, trade secrecy does not protect against accidental discovery. This is also efficient. No investment in protection is likely to avoid accidental discovery of a secret and so any attempt to protect it is inefficient and discouraged by the law.

Expenditure on detecting misappropriation is also limited under current trade secret doctrine because the courts are able to draw flexible inferences about lead and development times to find that an employee could only have developed a product or process with the use of his or her former employer’s trade secrets.

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70 See text at 70-71, below.
71 See text at 67-68 (Describing the English requirement that disclosure of information is likely to cause harm to the employer); at 111 (Describing the United States’ requirement that information is of commercial value), below.
72 Kitch, supra note 2 at 714.
73 Ibid. at 702.
74 See for example text at 91, below; See also Bone, supra note 3 at 281 (Acknowledging that detection costs are reduced when detection is made easier through inferences about use). But see Bone, supra note 3 at 277-278 (Arguing more generally that difficulties with detecting misappropriation are unchanged by legal protection). See also Kitch, supra note 2 at 690-691 (Arguing that covenants not to compete overcome detection difficulties by restraining an employee from contact with competitors).
ii. Costs of Misappropriation

Trade secret protection also reduces wasteful expenditure on methods of misappropriation. Misappropriation is most profitable if it goes undetected and unchallenged. The strategy and covert methods required to achieve this end are not costless. Increased informal security measures are assumed to trigger a requisite increase in expenditure on strategies for misappropriation so that not only the producer, but also the appropriator of information engages in wasteful behaviour. The probability of successful investment in methods of misappropriation is reduced by a legal rule that makes misappropriation more risky or more expensive.

Legal protection will be less efficient than no protection only when the employer’s costs of protection are less than the competitor’s costs of misappropriation. Given that copying information is usually very cheap, this is almost never likely to be the case. Reverse engineering provides an example of a time-consuming and potentially costly form of misappropriation. Uncovering information already known to the product’s producer involves some duplication of effort. Consistent with the economic rationale described, the law does not protect against reverse engineering but leaves employers to protect against it if they choose to do so.

Freedom to reverse engineer also meets information diffusion objectives and carries a social benefit. The process has educational value. The prospect for discovery of improvements and new innovation is enhanced when an inventor is allowed to uncover the workings of another inventor’s technology. When other forms of misappropriation carry legal sanction, allowing reverse engineering not only condones, but also encourages, employees and competitors to copy information in this way. Allowing reverse engineering as an exception to trade secret protection promotes the social benefit of education and potential innovation despite the costs of that form of misappropriation.

Those costs include the loss of an exclusive right that would provide an incentive to

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75 Ibid. at 273.
76 Friedman, D.D., et al., supra note 23 at 69 (Justifying the exception to trade secrecy protection for accidental discovery).
77 See generally ibid. at 66-71. But see Bone, supra note 3 at 269 (Arguing that these limitations encourage wasteful investments in reverse engineering and racing to innovate).
produce information. In contrast, reverse engineering of patented inventions does not overcome protection of the patented technology. Patent protection offers a more exclusive, although time limited, right to an inventor in return for publication of the technology’s specifications. Reverse engineering is unnecessary and wasteful if the information to be uncovered is already publicly available. Examination of the patent and inventing around it is encouraged as a means of information diffusion. Trade secrecy involves no such publication trade-off. The essence of the protection is secrecy. However, by allowing reverse engineering, different information diffusion objectives are achieved.

Protection of trade secrets at common law introduces enforcement costs that may be especially high if measures are required to keep material secret during litigation.78 However, the threat of sanction can be an effective protective tool without incurring those costs. With measures such as those described above, trade secret law is capable of striking an optimal level of investment in misappropriation and protection by prohibiting only the most socially costly means of misappropriation while at the same time minimising the cost of the defensive strategies they induce. Where this optimal level is achieved, it seems likely that the benefit of the reduction in wasteful expenditures outweighs the enforcement costs that might result.

**iii. Contractual Means of Protection**

Without legal protection for trade secrets an employer may attempt to assume the risk of misappropriation for an ex ante negotiated price – an agreement tantamount to the grant of an option over a trade secret.79 This is likely to prove difficult. Inevitable information asymmetries regarding the value of existing information make agreeing on valuation difficult.80 Valuation of information not yet in existence is even more troublesome. Identifying the subject matter of exchange with sufficient clarity poses problems when

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78 See generally Bone, *ibid.* at 277 (Arguing that protection increases detection and litigation costs); See also Kitch, *supra* note 2 at 691 (Arguing that litigation requires the disclosure of information to people involved in the litigation process).

79 Trebilcock, *supra* note 2 at 121.

80 See text at 9 above; See also *ibid.* at 121.
either type of information is involved. It has also been argued that no matter how incomplete the knowledge of both parties, an employer is likely to have better information than an employee as to the likely value of future products. This exposes the employee to opportunism by the employer.

Even assuming that valuation difficulties could be overcome, Trebilcock has analysed other issues that militate against an effective agreement. The employee is unlikely to be able to pay the price of the option. The monopoly rents available to an employer from exclusive access to information will always exceed the duopoly profits of sharing with an employee who begins a start-up in competition with a former employer. Further, the loss sustained by the employer will be greater than the duopoly profit available to the employee because duopoly profits are always less than monopoly profits. For these reasons the benefit of misappropriation to the employee is likely to be less than the price required by the employer.

If the employee leaves to pursue alternative employment with a competitor, his or her duopoly share will be reduced further because the employee will have to share any profit with the competing firm. This is likely to limit the amount the employee can pay for the information. In that case the former employer may obtain a better price by approaching a competitor directly and obtaining a price equivalent to an undivided share of the duopoly profit.

For these reasons, the price charged to the employee for an option to misappropriate information is likely to exceed his or her willingness to pay. It is also likely to exceed his or her ability to pay. Employees are unlikely to have the financial means to pay without borrowing. Borrowing against their human capital is prohibitive because a lender cannot obtain specific performance against that form of security.

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81 Ibid. (Noting that no matter how incomplete the knowledge of both parties, an employer is likely to have better information than an employee as to the likely value of future products. This exposes the employee to opportunism by the employer. In addition, an employee committing resources to the bargain is more likely to be risk-averse making common valuation even more difficult to achieve).
82 Ibid.
83 Ibid. at 121-122.
84 Ibid. at 122; Rubin and Shedd, supra note 2 at 96.
When the subject matter at issue more closely resembles know-how, similar problems present themselves.\textsuperscript{85} Paying the employee not to disclose information may also be impeded by valuation difficulties. The price required to successfully restrain the employee would equate to the value of the secret to competitors and would therefore consume most of the returns on the original investment in production, acting as a disincentive for future investments.\textsuperscript{86}

The dynamics of innovative industry may limit the impediments to effective bargaining identified by Trebilcock. In a high velocity labor market, valuation of an employee’s alternative earning capabilities may be more readily accessible because of rivalry between firms for employees’ services and the availability of venture capital finance.\textsuperscript{87} These market features may improve a skilled employee’s chances of paying for an option over information. In addition, a highly skilled employee may have a greater private knowledge of the contingent value of research and development than the employer within whose firm the innovation has developed. Finally, an employee committing resources to a bargain in high technology industry may not necessarily be more risk-averse than an employer so that making a common valuation may be easier than in other contexts.\textsuperscript{88}

In this context, Hyde argues that employers should refuse to bid to keep departing employees only because barriers to entry by other competitors are low, or the information is not truly secret.\textsuperscript{89} In short, he warns that “courts in trade secret cases should be alert for firms attempting to use the courts to impede employee mobility that the firm could easily have purchased from the employee but chose not to”.\textsuperscript{90}

However, a common law rule that protects employers’ trade secrets removes the need to bargain to protect information that comes within the rule. Whether or not the dynamics of high technology industry would increase the potential for an employer to assume the

\textsuperscript{85} Trebilcock, \textit{ibid.} at 124.
\textsuperscript{86} \textit{Ibid.}; see also Kitch, \textit{supra} note 2 at 708.
\textsuperscript{87} Hyde, “Shared Information”, \textit{supra} note 1 at Part V.A.1.
\textsuperscript{88} Trebilcock, \textit{supra} note 2 at 121.
\textsuperscript{89} Hyde, “Shared Information”, \textit{supra} note 1 at Part V.A.1.
\textsuperscript{90} Hyde, “Shared Information”, \textit{supra} note 1 at Part V.A.1.
risk of misappropriation by an employee does not alter the effectiveness of trade secrecy law in overcoming these difficulties when employees are not so well placed to bargain. Despite the protection provided by trade secrecy, it remains open to employers and employees to strike an effective agreement to contract out of the presumptions or default rules that might otherwise apply. Further, it may be more efficient for them to do so ex post in the shadow of a protective rule when valuation difficulties may be less severe. The same ex post valuation is achieved by allowing an option to breach the implied obligation of confidence and pay damages for breach. An implied obligation of confidence may improve the chance of reaching agreement if transaction costs are otherwise too high to facilitate private agreement.

In summary, trade secrecy protection does not alter the effectiveness of a bargain between the parties and it overcomes the market failures that may prevent such an agreement from being concluded. This discussion highlights the fact that in high technology industry ex ante agreement may be possible more often than has previously been considered the case. It follows that allowing an option to breach an obligation of confidence and pay damages may provide a more effective remedial solution than has traditionally been considered appropriate.

Kitch argues that if secrecy were the only way to protect information we should expect to see firms preoccupied with the secrecy of their affairs. Yet, he argues that “casual empiricism suggests that this is not in fact the way firms operate”. A lack of preoccupation with secrecy, if empirical evidence supported its existence, may indicate an efficient trade secret law. In addition, firms increasingly rely on a range of employee reward systems to retain employees who pose a threat to the secrecy and profitability of innovative information. These include in-house venture capital schemes, stock options and revised remuneration structures.

\[91\] See text at 36, below.
\[92\] See text at 35-42, below for further discussion of the preference for damages as a remedy.
\[93\] Kitch, supra note 2 at 709.
\[94\] Ibid. at 709-710 (Citing examples including overt strategies by firms to disseminate information about themselves through trade journals and networking between employees and firms and clients).
\[95\] See for example Merges, R.P., “The Law and Economics of Employee Inventions” (1999) 13 Harv. J. Law & Tec. 1 at 3; at 24; especially at 38-42; See also Hyde, “Shared Information”, supra note 1 at
iv. LOWERING TRANSACTION COSTS AND FACILITATING EXCHANGE

In addition to enhancing incentives to create information and reducing protection and misappropriation costs, efficient trade secret protection also crystallizes entitlements to information and facilitates its transfer to higher valued uses.

The uncertainties that make efficient contracting concerning information unlikely at the outset of the employment relationship are heightened when research and development is involved because of the inherent uncertainty of the subject matter. Bargaining for information is most likely to occur with minimal transaction costs when the parties have clear and unambiguous knowledge of their entitlements or "threat values". This gives them a basis upon which to assess the utility and risks of co-operation or misappropriation. It facilitates rational decision-making.

An implied duty of confidence renders more certain the entitlements of the parties by defaulting to protect confidentiality in favor of the employer subject to the information coming within the boundaries of protection prescribed by law.

The default is external to the employment relationship in the sense that it is not agreed between the parties. Further, it is invoked at the end of the employment relationship to determine whether information is protected and what form the protection will take. Therefore, difficulties that may exist in specifying ex ante the nature of the information protected, the form of protection and its price, are avoided and determined by the courts ex post. Providing that the default rule is efficiently framed, both parties will benefit from the division of surplus that results from saved transaction costs. Ultimately, the ability to negotiate to exclude the implied term means that the parties can expressly replace its terms with their own if they are able to agree ex ante.

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96 See text at 8, above.
97 Cooter and Ulen, supra note 9 at 89.
98 See Rubin and Shedd, supra note 2 at 98 (Arguing that the role of the courts in cases concerning covenants not to compete is sometimes to clarify ex post what the parties intended to cover with the
This discussion of transaction costs illustrates that trade secret law may assist in information diffusion by assisting structured private agreements to effect its transfer.

Bone suggests that protecting information brings new costs that prevent efficient exchange, such as licensing costs.\textsuperscript{99} In addition, information asymmetry and valuation difficulties are not overcome with trade secret protection.\textsuperscript{100} However, these difficulties would exist in the absence of trade secret law. The benefits of protection outweigh these unchanged factors.

\section*{C. Summary}

This chapter has examined how trade secrecy law overcomes the public goods problem to encourage information production and diffusion with the grant of a monopoly right in information. It has supported the continued availability of trade secret protection. The advantages of protection are threefold. Incentives to create information are generated by allowing producers of information to appropriate its social value for themselves. Wasteful expenditures on protecting information and strategies for misappropriating information are reduced. Finally, the unique transaction costs of trading in information are reduced and these facilitate its transfer to higher valued uses.

The costs associated with the monopoly right, including the potential to chill the diffusion of information, are limited by careful definition of what information will be protected and what forms of misappropriation will be prohibited. In this way, trade secrecy law advances the objectives of endogenous growth theory by ensuring that information is only partially excludable and that some information spills over.

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\textsuperscript{99} Bone, \textit{supra} note 3 at 273; at 280.

\textsuperscript{100} \textit{Ibid.} at 280.
3. **The Economics of Trade Secrecy Remedies**

After a substantive entitlement to information protection is recognized, trade secrecy law continues to address the tension between providing incentives to create information and the social costs of monopoly through the choice of remedy.

The range of available remedies plays an important role in determining how entitlements are negotiated and exchanged in the employment context. A liability rule may allow breach of obligations of confidence combined with the payment of damages that compensate the employer for any loss sustained. This functions in a similar way to the contractual option over trade secrets discussed previously as a protective contractual measure. However, under an implied duty of confidence, valuation of the option occurs *ex post* in the form of assessment of damages instead of *ex ante* through agreement on valuation.\(^{101}\)

Alternatively, a property rule allows injunctive relief to prevent continuing breach.\(^{102}\) Because of their breadth, remedies under a property rule have been described as "ubiquitously severe"\(^{103}\) and designed to deter post-employment competition completely.\(^{104}\) However, in theory injunctive relief only allocates entitlements. The parties may bargain around the terms of the injunction to allow the employee to use the information.\(^{105}\)

The courts have taken a varied approach to the choice and combination of remedies awarded in trade secrecy cases. This is due in part to the *sui generis* nature of the cause of action that draws on a range of juridical bases for its justification. However, this thesis suggests that a more principled approach may better achieve a balance between an

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101 See text at 29, above.
102 Lester, G. and Talley, E., "Trade Secrets and Mutual Investment" (Unpub. Manuscript, Oct. 2000, on file with author) at 3; See also Calabresi, G. and Melamed, A.D., "Property Rules, Liability Rules, and Inalienability: One View of the Cathedral", (1972) 85 Harv. L. Rev. 1089 (Giving a classic exposition of differences between property and liability rules).
103 Lester and Talley, *ibid.* at 3.
104 *Ibid.* at 4 (Also including under a property rule the remedy of account of profits because of its punitive effects although an account of profits would ordinarily be regarded as a liability rule remedy).
105 See text at 33-34, below.
employer’s entitlement to protection and the social benefit derived from information diffusion.

A. AVAILABLE REMEDIES

The remedies most commonly applied by the courts in trade secrecy cases are described briefly below.

i. EXPECTATION DAMAGES

Expectation damages award compensation that is designed to grant an employer the benefit of the contract had it been performed. This measure of damages leaves the employer indifferent as to performance or breach.106

Efficiency from a contract law perspective requires maximizing the payoffs of an employment agreement for both parties.107 In essence, this means that if an employee’s liability for breach equates to the benefit forgone by the employer (that is, full expectation damages) then the employee has efficient incentives for performance and breach. This is because the employee internalizes the cost of breach to the employer through the measure of liability, assuming that all other costs of breach are also internalized. The existence of the obligation itself encourages employees towards performance so that in theory perfect expectation damages give employees an efficient incentive to perform.

However, expectation damages are notoriously difficult to assess and they are almost always imperfect.108 The value of an obligation of secrecy is likely to be particularly difficult to quantify because the measure of the employer’s loss depends on hypothetical future profit. It is even more difficult to value the contribution that secret information might have made to an employer’s interrupted research and development efforts. These factors make the assessment of damages particularly problematic in trade secrecy cases.

106 Cooter and Ulen, supra note 9 at 226.
107 See generally ibid. at 189-190 (Explaining efficiency from a contract law perspective although not specifically in the employment context).
108 Ibid. at 193.
ii. ACCOUNT OF PROFITS

Perfect compensation completely internalizes the cost of breach. Consequently, an efficiency framework provides no rationale for punishment or deterrence where costs are internalized through compensation. However, like perfect competition and bargaining with zero transaction costs, perfect compensation is unlikely. This is especially so when the value of performance is uncertain.

Cooter and Ulen argue that compensation in the form of an account of profits may be appropriate to eliminate profit derived from wrongdoing where valuing compensatory damages may be impossible. An account of profits leaves employees indifferent as to whether they respect obligations of confidence on one hand, or breach confidence and disgorge their profits on the other.

iii. INJUNCTIVE RELIEF

Injunctive relief requires performance of the duty of confidence in the employment context. It does not enforce involuntary servitude to former employers. Instead the courts restrain employees from disclosing their former employers' trade secrets.

B. PROPERTY RULES

A property rule, or injunctive relief, is often described as the best remedy for lowering transaction costs and facilitating the private exchange of information.

On one hand, property rules seem rigid. Interim injunctions are seen as an indicator of the likely substantive outcome of the case and proceedings often go no further. A permanent injunction is often perceived as freezing the movement of protected information.

On the other hand, enjoining action may mean only that entitlements are allocated in a manner that facilitates private bargaining for an efficient outcome where none was

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109 Ibid. at 234.
110 Ibid. at 234.
111 Ibid. at 234.
possible before because of the prohibitive transaction costs described above. The Coase theorem holds that when transaction costs are zero, private bargaining will ensure the efficient allocation of resources. The assignment of property rights under a legal rule will be inconsequential. However, when transaction costs are high enough to prevent bargaining, the efficient use of resources will depend on how property rights are assigned initially by law. It follows that when private bargaining for the efficient use of information is impeded, the law must adopt a rule that either assigns entitlements to trade secrets in an efficient manner, or lowers transaction costs sufficiently to ensure that the parties can negotiate around the rule. On this reasoning, injunctive relief may affirm or assign an entitlement to confidential information. Once the entitlement is affirmed or assigned, the entitlement holder may strike a bargain to sell or license it. The allocation of rights in information provided by injunctive relief may lower transaction costs that prevented a bargain from being reached prior to intervention by the courts. Agreements between the parties that allow for use of information may be subsequently concluded. In this way, the threat of enjoinment may assist in achieving a privately negotiated outcome without the need to resort to applications for relief before a court.

Courts tend to prefer injunctive relief in trade secrecy cases because of the difficulty of quantifying damages. When there are likely to be few obstacles to the parties co-operating after the remedy is awarded, injunctive relief may be the more efficient remedy. The information costs saved by the court in avoiding assessment of damages will combine with low transaction costs to ensure that information is most efficiently transferred to its highest valued use.

A preference for injunctive relief assumes that once entitlements are confirmed transaction costs are sufficiently low to facilitate bargaining with respect to use of information. However, allocating or affirming entitlements may not remove the difficulty posed by valuation or information asymmetries between the parties.

112 Ibid. at 85.
113 See ibid. at 93. In essence the normative value of the Coase theorem lies in the notion that the law ought to be structured in such a way as to remove impediments to private bargaining.
114 Ibid. at 99.
115 Ibid. at 102.
116 Ibid. at 193 citing Calabresi and Melamed, supra note 102.
Trebilcock suggests that determining a value for the efficiency restoring transaction is likely to be difficult and could result in the parties engaging in strategic bargaining to gain a greater share of the rewards. The employment relationship may also have terminated in acrimonious circumstances making negotiations difficult or unlikely. When an employee attempts to use a trade secret, the precedent value to the employer of retaining the trade secret may also override the efficiency of a one-off bargain.

When transaction costs remain high even after injunctive relief is granted and the parties' ability to bargain is reduced, injunctive relief may not increase the chances of the parties reaching an efficient bargain. This may freeze the information in an inefficient use. If bargaining difficulties are not overcome with trade secrecy protection and injunctive relief then a property rule should not be preferred.

For these reasons, compensatory damages may provide a more efficient remedy. In general, when transaction costs preclude bargaining, awarding compensatory damages instead of injunctive relief makes the employer no worse off and the employee may be better off and cannot be worse off. This is because the employee has a choice to misappropriate and pay damages if he or she would be better off to do so. Because damages compensate the employer for its loss, it is as well off with damages as without misappropriation.

C. LIABILITY RULES

An economic analysis of liability rules also supports the use of damages instead of injunctive relief in trade secret cases.

Technically speaking, the remedy of an account of profits is awarded under a liability rule. However, in this thesis, discussion of damages refers to expectation damages. The

117 Trebilcock, supra note 2 at 142.
118 Ibid. at 142.
119 Ibid. at 142.
120 Cooter and Ulen, supra note 9 at 103.
121 Ibid. at 104.
122 This assumes that valuation of the information is both possible and accurate.
respective advantages and disadvantages of damages and accounts of profits as remedies are considered in more detail in Part IV. Damages are preferred as a remedy because an account of profits is largely punitive and has little positive effect on incentives to innovate.

The doctrine of efficient breach describes the option on misappropriation provided by a damages remedy. A liability rule allows breach to occur upon payment of damages when breach may be more efficient than performance. Breach can be more efficient when the costs of performance are greater than the benefits from performance available to all parties. The costs of maintaining obligations of confidence will exceed the benefits of doing so for the employee when a contingency arises, such as alternative employment, that gives the information at issue a higher valued use elsewhere. Alternatively, an unforeseen event that increases the cost of performance may make breach more efficient than performance.

Cooter and Ulen argue that damages are always an efficient remedy and specific performance is sometimes efficient and sometimes inefficient when the costs of performance are high. A damages remedy is likely to induce employees to preserve confidence when they can do so at low cost and to breach confidence when the costs of maintaining confidence are high. With an award of damages employees have a choice of whether to perform, or breach and pay. Where the pay-off from one action or the other is greater, employees are free to choose the highest paying action.

In contrast, injunctive relief is unlikely to materially affect the outcome of an employee’s decision. An employee has a choice only between preserving confidence or breaching and being forced to preserve confidence in any event. The pay-off for each option for the employee under this scenario is the same. Once again the parties may renegotiate in the

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123 Cooter and Ulen, supra note 9 at 238.
124 Ibid. (Describing this form of contingency as a fortunate contingency).
125 Ibid. (Describing this form of contingency as an unfortunate contingency).
126 Ibid. at 241.
127 In fact the pay off for the employee of breaching and being enjoined may be higher because he or she will also have lost his or her employment in the process.
face of the injunction and restore efficiency by agreeing to let the employee exploit the information at issue.

However, as has been explained above, the Coasean bargain that restores efficiency relies upon the ideal of zero transaction costs. Transaction costs are invariably positive. Where renegotiations are costly, damages will often provide a more efficient remedy than injunctive relief because if renegotiations fail the employee will be forced to preserve confidence despite the fact that this may inefficient. In contrast, a liability rule safeguards against chilling the flow of information by allowing the employee an option to choose the most efficient course of action with ex post valuation of that option and without relying on negotiation.

These arguments assume that the costs of quantifying damages in court, including the costs of making an inaccurate assessment, are less than the transaction costs of negotiation or the social costs of failed negotiations that might result when injunctive relief is granted. In fact, the courts have historically shown a strong preference for injunctive relief in trade secrecy cases. This is partly because of a concern that a monetary remedy will inadequately compensate for loss of secrecy. In addition, it is arguable that valuing forgone performance is so complex and fraught with difficulty that the costs involved in gathering and assessing the necessary information make injunctive relief a superior remedy. Miscalculations and discretionary estimates of quantum risk rendering inefficient and inequitable awards of damages. When injunctions are granted, valuation is left in the hands of the parties wishing to negotiate around the order and this saves the cost and risk of error associated with valuation by the courts. If the courts choose to assess damages then the parties’ transaction costs are saved but the courts incur the information costs of valuation. In essence, the choice of the more efficient remedy reduces to a question of whether the information costs facing the courts, combined with the litigation costs of the parties, exceed the transaction costs facing the parties in renegotiation.

128 See Cooter and Ulen, supra note 9 at 241; The superior efficiency of damages in this context is subject to the costs associated with calculating damages; See also text at 35, above and this page below.
129 See Ibid. at 244.
130 Ibid. at 244-245.
In high technology industry, if renegotiation is likely to be thwarted entirely, the public interest in information diffusion is likely to outweigh information costs, risk of error and litigation expenses such that damages remain a more efficient remedy. The courts may provide the only mechanism for valuation of information that can facilitate its transfer to a higher valued use, even if this brings its own costs.

This discussion suggests a working rule, subject to further insight that may be provided by the discussion below, that liability rules should be preferred in all cases with three exceptions. First, when the courts are satisfied that a failure to renegotiate would not harm social welfare because the information cannot be put to a higher valued use outside the hands of the employer. Second, when the courts can be confident that an allocation of entitlements has overridden the greatest impediment to bargaining in the circumstances of the case so that agreement between the parties is likely to ensure that information ends up in its highest valued use. However, in such a case a finding of liability and an indication that a damages award will be appropriate may be enough to encourage agreement between the parties and avoid the costs of quantification in court. Third, injunctive relief may be justified when the courts anticipate that the costs of quantifying damages will greatly outweigh the transaction costs of the parties in reaching agreement or the social cost of restricted information diffusion if no agreement is reached.

i. **Further Perspectives in Support of Liability Rules**

Trebilcock has advocated a preference for liability rules over property rules for breach of an express covenant not to compete where there is ambiguity as to whether the employer has a protected interest.\(^{131}\) Requiring an employer to prove that the use of information by an employee caused damage to a greater extent than could be expected from market competition may prevent overzealous enforcement action.\(^{132}\) In addition, a liability rule provides the courts with an intermediate solution that avoids the choice between complete

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\(^{131}\) Trebilcock, *supra* note 2 at 149.  
exclusion under injunctive relief and unencumbered competition where protection is refused.\textsuperscript{133}

Ayres and Talley add further strength to the preference for liability rules by arguing in favor of damages even when transaction costs are positive, but not prohibitive.\textsuperscript{134} They argue that when private information is the key source of market failure, liability rules and divided entitlements may induce the disclosure of more information and facilitate more efficient bargaining before breach than undivided entitlements under a property rule.\textsuperscript{135}

The likely quantum of damages under a liability rule decreases opportunistic behaviour by serving as both a ceiling to overstatements of value and a floor to understatements of value placed on information by employers when bargaining as to whether to pay employees not to use information or selling employees the right to use information.\textsuperscript{136} In essence, Ayres and Talley dispute the "folklore" that property rules induce negotiation and contractual exchange, while liability rules encourage non-consensual taking and substitute private bargaining with litigation and judicially determined prices.\textsuperscript{137}

However, they acknowledge that other costs of contracting can prevent the parties from making any Coasean offer at all.\textsuperscript{138} In the case of trade secrecy it is likely that the confidentiality of the information would provide an impediment to bargaining regardless of the remedy adopted. The parties are unlikely to want to reveal to each other the type of business information required to establish their respective values when they intend to compete with one another after the transaction is concluded. The private value that they place on secrecy is always likely to limit the likelihood of efficient bargaining.

\textsuperscript{133} Ibid. at 150.
\textsuperscript{134} See generally Ayres, I. and Talley, E., "Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade" [1995] Yale L.J. 1027; See also Cooter and Ulen, supra note 9 at 105 (Discussing Ayres and Talley's conclusions).
\textsuperscript{135} Ayres and Talley, ibid. at 1101; at 1036 (Acknowledging that if other transaction costs provide the reason for market failure then a different approach may be required); See also at 1033 (Arguing that divided entitlements can facilitate trade by inducing claim holders to reveal more information than they would under an undivided entitlement regime); at 1065-1067 (Arguing further that liability rules that do not tailor the level of damages to the employer's valuation of loss can be more effective in channelling negotiation towards consensual trade. Tailoring liability rules can create an additional information asymmetry that amplifies strategic behaviour because, for example, an employer knows the value of his or her potential loss but the employee does not. The employee cannot assess the price of the options of performance versus a non-consensual taking with payment of damages).
\textsuperscript{136} Ibid. at 1046.
\textsuperscript{137} Ibid. at 1037.
\textsuperscript{138} Ibid. at 1047.
Other commentators have suggested that this secrecy constraint may also prevent employers from seeking damages in litigation. The disclosure of additional secret business information that may be necessary to quantify damages could deter employers from seeking a remedy at all.

Lester and Talley have added a further perspective in favor of liability rules where trade secrets are concerned. They suggest that protection of trade secrets should explicitly account for mutual investments and the relative skills of employers and employees in enhancing the value of a disputed asset by awarding divided entitlements, for which liability rules serve as a proxy. In essence, they argue that allowing employees to use information to compete with their former employers may be more efficient when four conditions are satisfied. First, the employee enjoys a relative advantage in enhancing the value of the disputed asset. Second, competition between the parties will not be overly destructive of joint rents. Third, the employer will remain partially successful at improving the value of the disputed asset. Finally, the employee's wealth constraint is not prohibitive.

This approach has significant importance for high technology industry where employees may exceed their employers' capacity for exploiting trade secrets. Employees may have the financial means to exercise an option over the information at stake. A remedy structured in the way advocated by Lester and Talley accords with what the parties might be expected to agree between themselves when these conditions hold.

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140 Lester and Talley, *supra* note 102 at 3; at 6; at 17; See also at 41-42 (Advocating a dynamic approach to divided entitlements that initially grants strong protection to employers and progressively comes to favor the employee during the lifetime of the disputed asset).

141 See generally *ibid.* especially at 29 (Listing these factors as indicia of when an employee may be the most efficient *ex ante* undivided property entitlement holder. Later carrying these indicia into an assessment of allocation of fractional entitlements and liability rules as a substitute for express fractional entitlements).

142 See text at 27, above.

Traditionally, courts have focused on whether information is protected rather than the form of protection granted. This has been justified on the basis that an employee who has been paid the value of his or her marginal product in wages should expect no more from his or her employer.\textsuperscript{144} Current trade secret doctrine reflects this focus by distinguishing between trade secrets that employees are enjoined from using and general knowledge that they are free to exploit. However, Lester and Talley argue that in contexts where mutual investments are important, “weak” entitlements can catalyse aggregate investment with an incentive for employees to maximise their productive potential.\textsuperscript{145} In addition, the courts display some considerable difficulty in distinguishing between protected and unprotected interests. Trebilcock suggests that contractual covenants not to compete render it easier for the courts to deal with information of ambiguous confidentiality.\textsuperscript{146} Some courts have attempted to overcome the difficulty with a common law doctrine of inevitable disclosure that enjoins a former employee from competing in a manner akin to a contractual covenant not to compete.\textsuperscript{147} Both these options have the social cost of entirely excluding employees from the workforce. In contrast, trade secret protection enjoins employees from the use of specific items of information.

Preference for liability rules adds a new and helpful dimension to the scope of trade secret law. Damages provide an alternative means of granting protection in some ambiguous cases while acknowledging that ambiguity with a remedy that allows the use of information for a price.\textsuperscript{148} Liability rules make the difficult task of assigning the entitlement in information less crucial if a remedy is available that allows either the flexibility to account for mutual investment, or to account for ambiguous circumstances. Through a preference for damages over injunctive relief, an employee can exercise an

\textsuperscript{144} Trebilcock, \textit{supra} note 2 at 146.
\textsuperscript{145} Lester and Talley, \textit{supra} note 102 at 6.
\textsuperscript{146} Trebilcock, \textit{supra} note 2 at 83.
\textsuperscript{147} See text at 156-160, below for a discussion of the United States’ doctrine of inevitable disclosure.
\textsuperscript{148} See Trebilcock, \textit{supra} note 2 at 149 (Arguing for the substitution of liability rule for property rule protection when there is ambiguity as to whether the employer has a protected interest under a covenant not to compete).
option to exploit what might be regarded under a less flexible doctrine as information to which the employer has an exclusive right.

A preference for damages also meets the objectives of theories of information diffusion and economic growth by ensuring that avenues exist for the transfer of information to its highest valued use.
4. An Optimal Trade Secrecy Doctrine

Some commentators have described the common law protection of trade secrets as "a neglected orphan in economic analysis". The efficiency of closely related covenants not to compete has been advocated with few exceptions. Trade secret law has been criticized for a lack of normative justification on the one hand, and praised in some isolated respects on the other. More recently, in an attempt to give greater weight to theories of endogenous growth in a critique of trade secrecy, the doctrine has been criticized as potentially overbroad.

The objective of the analysis of trade secrecy within an economic framework that is undertaken in this thesis is to bring these aspects of critique together in a search for a more coherent evaluation of the efficiency of current doctrine and suggestions for reform that may improve its efficiency.

The classic intellectual property trade-off and endogenous growth theory have provided a context within which to assess the efficiency of current doctrine. Trade secrecy law meets the challenges of that trade-off. It provides incentives to produce information. However, at the same time it defines the parameters of what information will be protected in a way that reduces, as far as is possible, the social costs of an exclusive right. The protection of trade secrets is not necessarily antithetical to the social interest in information diffusion. By encouraging the production and exchange of information, protection of trade secrets may promote innovation and economic growth. In addition, the choice of remedy in trade secrecy cases may play a pivotal role in balancing these competing interests.

On balance, an economic analysis favors the retention of common law protection of trade secrets with some modifications. Three contributions to the debate on reform in this area

150 See generally Trebilcock, supra note 2; Rubin and Shed, supra note 2; Kitch, supra note 2.
151 See generally Bone, supra note 3.
152 See generally Friedman, D.D., et al., supra note 23; Trebilcock, supra note 2.
combine with the economic analysis undertaken above to provide a context for a proposal for reform in this thesis. Each of these three commentaries is discussed in turn below. A proposal for reform is provided in the concluding section of this chapter.

A. HYDE'S PROPOSAL FOR TRADE SECRET REFORM

Hyde's discussion of trade secrecy has been described in detail above. Hyde suggests that courts should adopt what he describes as the "working definition" of Californian courts.\(^\text{154}\) He advocates the protection of identifiable, tangible and positive information that is genuinely kept secret, and that would not have been created but for the fact that it could be kept secret.

Hyde's formulation correctly preserves the touchstone of trade secrecy - that the information is secret. He also directly addresses the need for incentives by making secrecy the deciding factor as to whether information will be protected. While seductively simple in its approach, it is unlikely that Hyde's criteria for protection would be workable in practice without some modification. A subjective measure of incentives is problematic because it will always be in the interests of employers to claim that they would not have created the information but for its secrecy. The greatest incentive will always be to produce secret information that earns monopoly profit. However, incentives for production still exist in competitive markets. Hyde's standard begs the question of how much profit will be enough to encourage the production of information in any particular case. This is not to say that his criteria are unhelpful. They are intended to capture the essence of Romer's theory of endogenous growth by protecting that information that would not come into being without the ability to partially exclude others from its use. However, a more sophisticated enquiry is required to give greater depth to Hyde's criteria.

\(^{154}\) Hyde, "Shared Information", *ibid.* at Part V.3.a.
B. Trebilcock’s Proposal for Enforcing Covenants Not to Compete

Trebilcock has suggested a standard for measuring the enforceability of covenants not to compete that may assist in defining a similar framework for trade secret law.155 He argues that an efficient doctrine in restraint of trade would grant a protected interest whenever an employee has had significant access to, or contact with, an employer’s trade secrets, specialized know-how or customer connections.

The courts would then undertake a review of the competitive effects of denying protection. Trebilcock would ask whether the post-termination activities of the employee have reduced the value of the former employer’s investments in innovation or customer connections, which reduction in value would not have occurred but for the employee’s prior access to those innovations or customer connections. The reduction in value must significantly exceed any reduction likely to be associated with the activities of other rivals. An employee’s ability to reduce the market value of an employer’s information to an extent appreciably greater than market rivals is presumptively attributed to the exploitation of the employer’s trade secrets. If these conditions were satisfied then Trebilcock would grant protection to an employer subject to one qualification. He emphasises that the external market environment must provide sufficient competition to ensure that restraining an employee would not reinforce an employer’s monopoly or constitute a disguised employer/employee cartel.

Trebilcock usefully focuses on the effect of protection on the market value of information. This factor is likely to have a direct impact on an employer’s incentives to innovate. Comparing the threat of competition presented by the employee against the threat of competition by market rivals helps to ensure that the value of the information is derived from its uniqueness and its secrecy, and not from some broader quality available to rivals such as general skill and knowledge. It also ensures that an employee gains no greater competitive advantage from access to a former employer’s trade secrets than would be available to him or her without that access. However, looking at the depreciated value of the employer’s information alone does not account for the potential

155 Trebilcock, supra note 2 at 147.
that highly skilled employees may successfully compete without relying on the use of trade secrets. The superior capabilities of skilled employees may afford them an independent competitive advantage. This framework does not adequately account for the social benefit derived from allowing use of information by employees with a comparative advantage in its exploitation in sectors such as high technology industry.

Trebilcock's final assessment of market conditions ought to be applied with caution. He assumes that if sufficient competition already exists in the market, restraint of an employee will not significantly affect competition or overall welfare and may therefore be justified. However, this argument cuts both ways depending on whether priority is given to employers' incentives or encouraging information diffusion. From a diffusion perspective, when barriers to entry are low and competition strong, employees should be allowed freedom to compete for the very reason that their competition is unlikely to harm their employer's business. Trebilcock's suggestion may also provide an uncomfortable fit with the protection of secret information. When secret innovative information is at stake employers will almost always have a degree of monopoly power. Use of valuable secret information by former employees will almost always pose a greater threat than that of other market rivals. Trebilcock's measures of protection acknowledge that employers are to be protected against access to this form of information. However, under his enquiry into external market conditions it will always be in the public interest to break that monopoly by allowing employees to compete using the information. While Trebilcock usefully focuses on the market value of information, his analysis may be oriented too far towards balancing employer incentives against competitive effects to the detriment of the potential for information diffusion.

Insofar as remedies are concerned, Trebilcock would weaken the presumption in favor of a property rule when it is ambiguous as to whether information ought to be protected, and if injunctive relief puts a greater cost on the employee than the benefit conferred on the employer. In such cases, requiring the employer to prove damage as a result of the employee's actions is likely to deter vexatious employers seeking to opportunistically

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156 Ibid. at 149.
157 Ibid. at 150.
restrain employees. Trebilcock helpfully points out that a damages award respects the right to exit while attaching a price to that right. These arguments are as helpful to trade secrecy protection as they are to the question of enforceability of covenants not to compete.

C. LESTER AND TALLEY’S ANALYSIS OF REMEDIAL APPROACHES

Lester and Talley focus more on the dynamics of duopoly competition than on broader market competition. They do not suggest a framework for granting protection. They focus on determining what form of protection trade secrecy ought to give by way of remedy.

As described earlier, Lester and Talley suggest invoking a liability rule that would allow employees an option to use information and pay damages when four prior conditions are satisfied. First, the employee must have a comparative advantage at exploiting the information post employment. Second, allowing the employee to compete must not be overly destructive of joint rents. Third, the employer must be able to succeed in exploiting the information in competition with the employee to some degree. This assures the employer of a continuing incentive to invest in production of information if it can appropriate at least some profit from its use, or all of the profit at least some of the time. Fourth, the employee’s liquidity constraint must not be prohibitive so that he or she can pay damages.

The approach taken by Lester and Talley ensures that any increase in competition does not destroy the viability of the employer’s business. This safeguards incentives to produce information against being undermined by the remedy used to give effect to an entitlement to protection.

However, the real value of their approach lies in its ability to account for the dynamics of innovation and high technology industry that distinguish it from traditional industry. As noted above, skilled employees in high technology industry may contribute to building an

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158 Ibid. at 149-150.
159 See text at 40, above.
employer's stock of trade secrets during employment and may be better placed to exploit them post-employment. Considering comparative advantage recognises mutual investment. It also taps directly into the key of endogenous growth theory by providing a means for employees to exploit information post-employment where there is a tangible social benefit in them doing so.

Adopting a liability rule allows information to be transferred to a higher valued use while retaining an incentive for employers to invest in its creation with the assurance of being paid for the option to use the information. This analysis also seems likely to substitute what parties might agree ex ante if all the prerequisite conditions were satisfied. An employee with a comparative advantage is most likely to be able to raise the finance through his or her own means or through venture capital finance to overcome the liquidity constraint that might otherwise be assumed to exist. The comparative advantage also gives the information a higher value in the employee's hands than in the hands of the employer so that agreement on a price is more likely. This likelihood is supported by the fact that such options are observable in the market. Effecting this result overcomes the ex ante valuation difficulties that might otherwise prevent such an arrangement.

D. PROPOSAL FOR AN OPTIMAL TRADE SECRECY DOCTRINE

The foregoing brings definition to the parameters of an optimal trade secret doctrine. It will bear two important aspects. The first determines how an entitlement to protection is defined. The second determines how the remedy granted can assist in furthering the objectives met with substantive protection. Trebilcock and Hyde provide useful perspectives for defining a framework for protection. Lester and Talley's approach to remedies may provide a check on the potential for trade secret protection to chill information diffusion.

Reform of the entitlement more clearly separates protected information from information that is not protected against use by departing employees. The range of indicia currently applied by the courts adequately guides this task. However, greater weight ought to be placed on those factors that directly influence employers' incentives to invest in information creation while at the same time limiting expenditure on over-protection and
the transaction costs associated with the exchange of information. Care must be taken to prevent constraints being placed on employees seeking to use superior skill and knowledge that gives them a competitive advantage independent of the use of their former employers' trade secrets.

Protected information must in fact be secret. It must also be readily identifiable both during the employment relationship and if litigation becomes necessary. This requirement creates certainty as to what information is protected. It may facilitate the efficient transfer of information independent of legal action, deter misappropriation, and reduce protection and litigation costs. Trebilcock makes the point that employees must have access to information for which protection is claimed. It follows that they must also have the means of appropriating it.

The balance between incentives to create information and the social benefit in information diffusion lies in Hyde's question of whether the information would have been created but for the ability to keep it secret. This broad enquiry is given definition by the attention to the market value of the information and market conditions that is emphasized by Trebilcock. The information must be of some independent value to the employer. This value may be measured by asking whether use of the information by the employee poses a greater risk of reducing the value of the information than the risk posed by market rivals. This assessment will question whether a significant part of the value of the information is derived from the employer's ability to continue to apply it to increase the productive capacity of other inputs of production. This ability indicates that the information is valuable irrespective of its secrecy. The fact that some reduction in value may result should not be determinative. In particular, if competition is already strong, barriers to entry are already low, and reducing the employer's market power derived from the use of secret information would make little difference to market conditions then the employee should not be restrained from its use. The threat posed by the employee must be substantial before protection is granted. In addition, the ability to effectively compete must not be presumed to arise from the misuse of trade secrets. It must be acknowledged that some employees will possess superior abilities that allow them to effectively compete. Use of those abilities should not be restrained. Even when protection is
granted, balancing market conditions should be reassessed at the remedial level as advocated below. Placing greater emphasis on the value of information as an incentive for its production generates a more workable and efficient trade secret doctrine.

Having determined the parameters of an optimal entitlement to protection, this thesis advocates a shift in remedial emphasis from undivided property rules to liability rules. This shift safeguards against overly broad trade secret protection and gives greater relevance to the changed dynamics of innovative industry than the current preference for injunctive relief.

When it is ambiguous whether information ought to be protected, but protection is granted, damages should be preferred. Damages should also be preferred when the courts can satisfy themselves that the employee has a comparative advantage in exploiting information, is able to pay damages to the employer for its use, that competition by the employee would not be overly destructive of joint rents and that the employer will retain some ability to exploit the information in the face of competition. When faced with uncertainty as to these issues, courts should favor damages.

Injunctive relief should be allowed only when these indicia are not satisfied. In such a case the court is likely to be satisfied that there is no social cost to the information remaining in the hands of the employer. Injunctive relief may also be appropriate when the court is satisfied that the costs of quantifying damages are greater than the transaction costs of negotiation between the parties, or that determining liability has removed many of the impediments to bargaining previously facing the parties so that renegotiation is likely.

In cases where damages are appropriate, the courts should determine the existence of a substantive entitlement to protection while deferring quantification to a delayed quantum hearing. This allows the parties the opportunity to negotiate a price for the option without burdening the courts with the information cost of such a task when agreement between the parties is possible. In many cases, when the courts must determine quantum,
the majority of costs will have already been incurred in determining whether a protected interest exists. 160

The concerns of endogenous growth theory are met within this framework. The incentive to create information that provides a catalyst for diffusion is pivotal. This is maintained with protection through a doctrine that at the same time minimises the social costs of monopoly as far as possible. A switch in emphasis in remedy significantly advances the potential for information diffusion.

However, there may yet be criticism that such a doctrine is overbroad. This criticism is met with one final point that arises from Hyde’s analysis of the “law in action” in Silicon Valley as compared against the “law on the books”. 161 Hyde has shown that even with the potential for an overbroad and draconian trade secrecy doctrine, firms can facilitate information diffusion and avoid enforcement. His account suggests that when firms perceive that the costs of protection or enforcement in the face of uncertain trade secret law are prohibitively high, they may develop informal rules or social norms of non-enforcement. Market competition may develop to cope with external costs, without the need to strike private bargains or submit to the law. 162 As an alternative to trade secrecy law, firms may rely on the loss of reputation that accompanies cheating on informal rules as an enforcement mechanism in a game where giving and taking employees and information resembles a game with repeated play. A firm that loses an employee to a rival today may benefit from employing the same rival’s employee tomorrow. In such an environment firms may concentrate on getting products to market and competing in the marketplace rather than relying on the legal tools of information protection available to them. This behaviour does not undermine the efficiency of trade secrecy law. It simply reinforces the fact that the market may correct potential overbreadth of the law if the social and economic characteristics of that market diverge from the economic assumptions underlying the doctrine advocated in this thesis.

160 Trebilcock, supra note 2 at 149; This is particularly the case if the differential cost accounting method of assessing quantum of damages is preferred; See text at 134, below.
161 See text at 16, above.
162 See Cooter and Ulen, supra note 9 at 87 (Describing informal non-legal rules for regulating conduct).
5. **TRADE SECRECY COMPARED WITH OTHER MEANS OF PROTECTING INFORMATION**

Although independently justified within the economic framework described above, trade secrecy law must also be efficient when viewed as an aspect of the greater fabric of intellectual property protection available to employers. Patent law offers protection for inventions that may also be protected under trade secrecy at the option of the employer. In addition, covenants not to compete provide a contractual means of securing the confidentiality of information by enjoining employees from working in competition with their former employers. The following discussion demonstrates that the availability of these alternative and complementary forms of protection does not diminish the efficiency of current trade secret doctrine.

**A. PATENT LAW**

Trade secrecy and patent protection are potentially available for the same information. A patent is granted to inventions that are novel, non-obvious and useful, such that they have an industrial application and are of commercial value. Patent law addresses the intellectual property trade-off by granting a monopoly to the inventor in exchange for full disclosure of the invention's specifications. The social cost of the monopoly is limited by restrictions on patent breadth and duration. After expiry of the patent term the technology is free for exploitation. Disclosure of the invention's specifications aids diffusion by encouraging other inventors to invent around, learn from, and improve upon the patented innovation.

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Patent protection and trade secret protection cannot be sought for the same invention. Clearly the publication requirement under the patent regime belies the secrecy required of trade secrets. In many respects patent law appears irreconcilable with the protection granted by trade secrecy. On its face, trade secrecy protects information in perpetuity so long as it remains secret. Patent terms are limited in duration. Where trade secrecy permits complete secrecy, patent law requires publication.

A comprehensive review of the impact of the patent system on innovation and diffusion is beyond the scope of this thesis. The efficiency of patent law is accepted in broad terms. Some commentators have claimed that allowing protection for patentable inventions under trade secret law pre-empts the intellectual property trade-off made by patent law and undermines the incentives it provides.\(^\text{164}\)

The first obvious argument in support of the co-existence of trade secrecy and patent law is that not all information qualifying as a trade secret qualifies for patent protection. Critics have conceded that for this reason trade secret law may be efficient in protecting intermediate research results and non-technical information that would not otherwise be patentable.\(^\text{165}\) The litigation costs of distinguishing between non-patentable and patentable inventions for the purposes of offering trade secret protection only to the former make this option unworkable. In addition, there appears to be no independent justification for drawing such a distinction.

Friedman, Landes and Posner provide a persuasive explanation for the co-existence of patent and trade secret protection for both patentable and non-patentable inventions.\(^\text{166}\) They describe three invention scenarios. Each scenario, and the arguments presented in favor of the co-existence of the two regimes are discussed in turn below.

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\(^{164}\) See for example Bone, *supra* note 3 at 266 and 270.

\(^{165}\) See for example Bone *ibid.* at 271 (Arguing that there is likely to be less social cost in protection of interim research results, especially if final results are made publicly available. But also questioning whether incentives are required for the production of non-technical information and whether any additional non-technical information created as a result of the incentive provided by trade secrecy law is of such social value as to exceed the social cost of protection).

In the first scenario, an inventor has an invention that he or she believes will take at least as long as the patent term for anyone else to invent but the invention is of moderate economic value. While a patent may provide greater protection for the invention, there are significant costs involved in preparing an application. The return on the moderate value of the invention may not realise these costs. In contrast, the authors argue that the moderate value of the invention should decrease interest in misappropriation. Expenditure on protection may also be moderate and more commensurate with expected returns under trade secret protection in these circumstances. The inventor may choose secrecy instead of patent and that decision may be more efficient.

In the second scenario, a similar patentable invention is expected to take much longer for someone else to invent. By keeping the invention secret the inventor has an opportunity to show that the social value of the invention is greater than patent law would suppose by granting a limited term of protection over it. The inventor proves this if he or she chooses protection that does not prevent parallel invention and no other person successfully reinvents the invention.

In the third scenario, the inventor has a non-patentable invention expected to yield a high return if it can be kept secret. If the invention is kept secret and cannot be invented by another person then the inventor succeeds in proving that the invention was worthy of protection. Trade secret law provides that protection.

In any of these cases if the inventor's estimation of value is correct then the rationale for allowing patent protection supports the period of protection the inventor has granted him or herself by keeping the innovation secret. At the same time, the inventor runs the risk of parallel invention and another person patenting the invention to his or her exclusion. Duplication of effort, claimed to be a social cost of trade secrecy, yields a reward because a parallel inventor may obtain patent protection for an invention previously invented but

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167 Ibid. at 63.
168 Ibid.
169 Ibid. at 64.
kept secret and unpatented.\textsuperscript{170} This encourages an inventor with a secret to patent it if the chances of invention by someone else are high and it is not of greater value than the value recognised by the limited term of patent protection.

Friedman, Landes and Posner summarize their reasoning as follows:\textsuperscript{171}

To summarize, trade secret law supplements the patent system. Inventors choose trade secret protection when they believe that patent protection is too costly relative to the value of their invention, or that it will give them a reward substantially less than the benefit of their invention (as reflected, in part, in the length of time before anyone else will invent it), either because the invention is not patentable or because the length (or other conditions) of patent protection is insufficient. By successfully maintaining their trade secret they provide evidence that their belief was correct. In effect the common law has plugged several economic holes in the patent statute. It has not done so costlessly; patenting results in the disclosure of socially valuable information, and trade secret protection does not. But it may be doubted how great this social cost is.

Bone criticizes the authors for exaggerating the benefits of trade secret law and underestimating its costs.\textsuperscript{172} He argues that it is unclear that trade secrecy enhances incentives to the extent necessary to justify its additional costs and that in fact trade secret law runs the risk of undermining the socially beneficial incentives provided by the patent system.\textsuperscript{173} The balance between incentives and social costs in trade secret law has been described above. In contrast to Bone’s claims, this thesis concludes that on balance trade secret protection is efficient. Given that not all innovation protected by trade secrecy is patentable, and the persuasiveness of reasoning regarding patent scope given by Friedman, Landes and Posner, patent law does not offer any reason to alter that conclusion. Rather, trade secrecy and patent law can be seen as complementary intellectual property protection regimes.

\textsuperscript{170} Ibid. at 65.  
\textsuperscript{171} Ibid. at 64.  
\textsuperscript{172} Bone, supra note 3 at 266.  
\textsuperscript{173} Ibid. at 270.
B. COVENANTS NOT TO COMPETE

Trade secrets may also be protected through enforceable covenants not to compete. The courts confront the interface between these two forms of protection more frequently than the question of the inter-relationship between patent and trade secret law.

Covenants not to compete may protect trade secrets and other confidential information that would not be protected as a trade secret at common law. Courts may enjoin an employee from exploiting specific trade secrets. However, when an employer proves that a covenant not to compete is reasonably necessary, it enjoins an employee from working for a competitor at all within a reasonable geographic area for a reasonable period of time. When distinguishing between protected interests under the two mechanisms, the courts have been careful to emphasise that employers should not seek protection at common law for information that does not qualify as a trade secret. They must instead negotiate with their employees for reasonable covenants not to compete.

Trebilcock argues that costs of protection, costs of the contractual assignment of risk and the difficulties in specifying the activities to be restricted under contract (assuming one could overcome valuation and liquidity problems) make a contractual assignment of risk to the employee through the use of a covenant not to compete the only efficient form of protection of trade secrets. However, covenants not to compete have their own costs. Specifying the subject matter at stake ex ante is problematic. Covenants create the chance for opportunism by an employer attempting to pay an employee below the value of his or her marginal product. Employees will have difficulty estimating the duration and utility of their employment ex ante, the opportunity cost of the covenant if alternative employment presents itself is unknown, and the probability of obtaining

174 There has been some dispute over whether an employer can protect information that does not amount to a trade secret by means of a restrictive covenant. However, it now appears settled that mere confidential information can be protected by express covenant. See text generally at 79-85, below.
175 See text at 67-68, below; See also text at 81.
176 Trebilcock, supra note 2 at 123; at 124-125; See also Kitch, supra note 2 at 690 (Arguing that difficulties in detecting misappropriation of trade secrets makes restrictive covenants efficient).
177 See generally Trebilcock, ibid. at 139-142 (Discussing contracting, monitoring and enforcement costs of covenants not to compete); See also Rubin and Shedd, supra note 2 at 98 (Discussing costs including risk of employer opportunism).
release from the covenant is also uncertain. These factors make entering covenants not to compete problematic for both employers and employees.

More importantly, excluding an employee from working for a competitor at all causes a social loss because he or she is prevented from using general skills and training that would not otherwise be protected. Consequently, trade secrecy may provide a cheaper means of minimising the costs identified by Trebilcock than a covenant not to compete. As the previous discussion has indicated, an efficient law of trade secrets may remove the logistical difficulties associated with the physical protection of information, together with the difficulties of definition and *ex ante* valuation inherent in contractual protection.

Trebilcock usefully identifies two situations where the use of a covenant not to compete may be more effective than trade secrecy law acting alone. The first is in ambiguous cases where it is unclear whether specific information that an employer wishes to protect will be protected at common law. The second is where monitoring the protection of trade secrets post-employment provides unique difficulties. The law of trade secrets particularly encourages the use of covenants in the latter case because information will not be protected at common law if it is not easily separable from the employee’s general stock of knowledge.

Allowing covenants to protect some information that is not protected at common law is also consistent with providing control over monopoly costs. Covenants restrict protection by time and geography. Trade secrecy law does not. Allowing different measures of protection through two different means allows the law to strike different balances between incentive and diffusion objectives when values differ between types of information. The different requirements reflect the fact that information protected under a covenant may present a more ambiguous case. Accordingly, the monopoly interest is restricted in time and space to more significantly limit monopoly costs and allow greater diffusion of information.

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178 Rubin and Shedd, *ibid.* at 98.
179 Trebilcock, *supra* note 2 at 83-84 and 124.
In summary, the law of trade secrets is efficient as an alternative to an enforceable covenant not to compete because it protects a narrower range of information. However, the efficiency of covenants not to compete is not diminished by the advantages of trade secret protection. Enforceable covenants put employees on notice when information that is not easily separable is considered protected by an employer. They provide a useful complement to the law of trade secrets when an employer seeks to protect information not protected at common law and when it is unclear whether protection would be provided at common law. The interface between these two complementary forms of protection is examined in more detail in the analysis of current trade secret doctrine that follows.
III: TRADE SECRECY LAW IN PRACTICE

Part III compares the common law of trade secrecy as it is applied in England, Canada and the United States. Current law is evaluated against the optimal trade secret doctrine identified in Part II to determine whether it promotes an efficient allocation of resources to innovation and economic growth.

1. ENGLISH TRADE SECRECY LAW

A. CATEGORIES OF CONFIDENTIAL INFORMATION

When considering issues of trade secrecy, the English courts allocate information to one of three categories identified in the leading case Faccenda Chicken Ltd v Fowler.\(^{180}\) These categories include non-confidential information, confidential information, and trade secrets as a subset of confidential information warranting more extensive protection.\(^{181}\)

In the Chancery Division Goulding J. described these categories in more detail as follows:\(^{182}\)

First, there is information which, because of its trivial character or its easy accessibility from public sources of information, cannot be regarded by reasonable persons or by the law as confidential at all. The servant is at liberty to impart it during his service or afterwards to anyone he pleases, even his master’s competitor. ...

Secondly, there is information which the servant must treat as confidential (either because he is expressly told it is confidential, or because from its character it obviously is so) but which once learned necessarily remains in the servant’s head and becomes part of his own skill and knowledge applied in the course of his master’s business. So long as the employment continues, he cannot otherwise

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\(^{180}\) Faccenda Chicken Ltd v Fowler, [1984] ICR 589 (ChD) per Goulding J. [hereinafter Faccenda Chicken].

\(^{181}\) This categorization was developed in the Chancery Division by Goulding J. and was subsequently endorsed by the English Court of Appeal in Faccenda Chicken Ltd v Fowler, [1986] 1 All ER 617 (CA) at 623-624 per Neill L.J. although with some contention over whether information in the second category may be protected by express covenant; cf Faccenda Chicken (ChD), ibid. at 599 per Goulding J. with Faccenda Chicken (CA) at 626 per Neill L.J. (Disputing that an employer can protect the use of mere confidential information by means of a restrictive covenant). It now appears settled that mere confidential information can be protected by express covenant. See text generally at 79-85, below.

\(^{182}\) Faccenda Chicken (ChD), supra note 180 at 598-600 per Goulding J.
use or disclose such information without infidelity and therefore breach of contract. But when he is no longer in the same service, the law allows him to use his full skill and knowledge for his own benefit in competition with his former master; and ... there seems to be no established distinction between the use of such information where its possessor trades as a principal, and where he enters the employment of a new master, even though the latter case involves disclosure and not mere personal use of the information. If an employer wants to protect information of this kind, he can do so by an express stipulation restraining the servant from competing with him (within reasonable limits of time and space) after the termination of his employment. ...

Thirdly, however, there are to my mind, specific trade secrets so confidential that, even though they may necessarily have been learned by heart and even though the servant may have left the service, they cannot lawfully be used for anyone's benefit but the master's.

These categories of information have provided the basis for trade secrecy litigation in England since Faccenda Chicken. They have also been extensively applied to define the scope of trade secret protection in Canada. These categories are reviewed in more detail below.

i. Category One: Non-Confidential Information

It somewhat overstates the case to say that employees may disclose non-confidential information to whomever they please during employment or following its termination. Implied obligations of good faith, fidelity and confidence require employees to act in the best interests of their employers. These obligations restrict the ability of employees to share information relating to their employers' businesses during the term of employment. Obligations of good faith have little to do with secrecy. They ensure that employees act honestly and with loyalty, advancing only the interests of the employer that pays them. They safeguard employers' investments in staff and encourage the use of productive information within firms by providing security against disclosure to industry rivals.

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184 Faccenda Chicken (CA), supra note 9 at 625.
185 See Ocular Sciences Ltd v Aspect Vision Care Ltd. [1997] RPC 289 (Pat. Ct) at 370 [hereinafter Ocular Sciences] (Discussing the difference between the obligation of good faith during employment and obligations of secrecy subsisting post-employment).
An employer cannot attempt to restrain the use of non-confidential information by a competitor, even if that competitor was once its employee. Consequently, post-employment disclosure of non-confidential information is not restrained. Post-employment protection is denied because employers do not provide consideration for employee loyalty after termination of employment. In addition, legal protection of information that is readily available in the public domain would be wasteful.

**ii. Category Two: Confidential Information**

At the heart of trade secrecy is the protection of information that is not public knowledge. However, contemporary jurisprudence draws upon a broader set of criteria for distinguishing what is confidential from what is not. In general terms, information must satisfy the following criteria:

1) It must have the necessary quality of confidence. The information must not be available in the public domain.

2) It must have been imparted in circumstances either expressly or impliedly importing an obligation of confidence.

3) There must be an unauthorized use or disclosure of the information without the implied or express consent of the owner.

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186 *Herbert Morris v Saxelby*, supra note 5 at 702, per Lord Atkinson; at 709 per Lord Parker of Waddington.
187 *Saltman Engineering Co Ltd v Campbell Engineering Co Ltd* (1948), [1963] 3 All ER 413 (CA) at 415 per Lord Greene M.R. [hereinafter *Saltman Engineering*].
4) Arguably, the information must have been used to the detriment of the owner.\textsuperscript{189}

5) The \textit{prima facie} breach of confidence must not be able to be excused or justified by any available defence.\textsuperscript{190}

The category of confidential information is divided into two sub-categories. These are referred to in this thesis as mere confidential information and trade secrets. Both categories of information are protected against disclosure during the term of employment by reason of the implied obligations that protect against the misuse of non-confidential information. However, an employee’s post-employment obligations are more restricted in their scope than those applying during the term of employment.\textsuperscript{191}

After termination, the common law will protect only “information which is of a sufficiently high degree of confidentiality as to amount to a trade secret”.\textsuperscript{192} Mere confidential information will not be protected at common law after termination of employment but may be protected under an express confidentiality agreement or a contractual covenant not to compete.\textsuperscript{193} Included in the category of mere confidential

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\textsuperscript{189} There is some controversy over whether proof of likely harm or detriment is required to establish that the information is confidential, or whether it goes to the appropriate remedy; See \textit{Coco}, \textit{ibid.} at 47 (Setting out criteria 1-3 referred to above and including as an element of unauthorised use or disclosure that the use must be to the detriment of the party communicating it); \textit{Lansing Linde}, \textit{ibid.} at 425 (Proof of real or significant harm required); \textit{Printers and Finishers}, \textit{ibid.} at 735 (Requiring use or disclosure to the detriment of the former employer); See also Brearley and Bloch, \textit{ibid.} at p63 (Endorsing \textit{Coco} as good law); and Vaver, \textit{ibid.} at 268 (arguing that proof of detriment may be required); But see Coleman \textit{ibid.} at 4 fn 1 (Acknowledging that proof of detriment may be required to establish confidentiality but querying whether it is likely to be an element which goes to remedy and not to establishing breach of confidence); For further discussion of the requirement for proof of harm or detriment see text at 67 below.

\textsuperscript{190} Available defences include publication and just cause. If the publication defence is available to an employee it is likely that the information will not have the necessary quality of confidence to qualify for protection. A full review of the defence of just cause is beyond the scope of this thesis. It is assumed that where misappropriation of trade secrets is proven, employees are unlikely to be able to rely on this defence. See Brearley and Bloch, \textit{supra} note 188 at 83 for a more detailed discussion of these defences.

\textsuperscript{191} \textit{Facenda Chicken} (CA), \textit{supra} note 181 at 625; \textit{Printers and Finishers}, \textit{supra} note 188 at 738.

\textsuperscript{192} \textit{Facenda Chicken} (CA), \textit{ibid.} at 625.

\textsuperscript{193} \textit{Facenda Chicken} (ChD), \textit{supra} note 180 at 599; But see \textit{Facenda Chicken} (CA), \textit{ibid.} at 626 (Disputing that an employer can protect the use of mere confidential information by means of a restrictive covenant); The disagreement between the courts in \textit{Facenda} has resulted in some jurisprudential debate. It now appears settled that mere confidential information can be protected by express covenant. See text generally at 79-85, below.
information, is information which once learned remains in an employee’s head and becomes part of his or her general skill and knowledge.\footnote{194}{\textit{Faccenda Chicken} (ChD), ibid. at 699; See also text at 71-73, below.}

The distinction between mere confidential information and trade secrets is the most significant distinction drawn between categories of information. A departing employee who is not bound by an express covenant may freely use information that does not constitute a trade secret.

\textit{iii. Category Three: Trade Secrets}

In \textit{Faccenda Chicken}, the Court of Appeal referred to a list of non-exclusive indicia relevant to determining whether information constitutes a trade secret.\footnote{195}{\textit{Faccenda Chicken} (CA), ibid.} These indicia consolidate standards applied in earlier cases and they have been consistently applied since \textit{Faccenda Chicken}.\footnote{196}{Ig\textasciitilde{5}} They include the following:

1) The nature of the employment.\footnote{197}{\textit{Faccenda Chicken} (ChD), ibid. at 699; See also text at 71-73, below.}

2) The nature of the information.\footnote{198}{\textit{Faccenda Chicken} (CA), supra note 188; For cases concerning common law protection of trade secrets prior to \textit{Faccenda Chicken} see for example \textit{Balston Ltd v Headline Filters Ltd}, [1987] FSR 330 (ChD) at 346 [hereinafter \textit{Balston}]; \textit{Lancashire Fires Ltd v S. A. Lyons \\& Co Ltd}, [1996] FSR 629 (ChD); 660 (CA) at 668 [hereinafter \textit{Lancashire Fires}].} It is relevant whether a person of ordinary honesty and intelligence would recognize the information as the property of the former employer and not the employee’s property to do with as he or she chooses.\footnote{199}{\textit{Printers and Finishers}, supra note 188 at 735; See also \textit{FSS Travel and Leisure Systems Ltd v Johnson}, [1999] FSR 505 (CA) at 513 [hereinafter \textit{FSS Travel}]; \textit{S.B.J. Stephenson Ltd v Mandy}, [2000] FSR 286 (QBD) at 298 [hereinafter \textit{S.B.J. Stephenson}].}
3) Whether the employer has impressed the confidentiality of the information on the employee. The court may enquire whether the owner sought to limit the dissemination of the information or at least did not encourage or permit its widespread publication.

4) Whether the relevant information can be easily isolated from other information that the employee is free to use or disclose. Put another way, the court may ask whether the information can fairly be regarded as a separate part of the employee’s stock of knowledge.

Other frequently cited indicia of trade secrecy include:

1) Whether disclosure of the information to a competitor could cause real or significant harm to the owner.

2) Whether the information is used in trade or business. Compliance with other criteria is also judged in light of industry practice.

B. IDENTIFYING TRADE SECRETS

i. THE NATURE OF EMPLOYMENT

Higher expectations of confidentiality are imposed on employees who habitually handle confidential information. For example, a senior executive with responsibility for overseeing operations has been more readily considered bound by obligations of confidence than a lower level employee responsible for only a part of a process of

\[\text{Footnotes:}\]

200 Faccenda Chicken (CA), supra note 181, at 626.
201 Lansing Linde, supra note 188 at 425.
202 Faccenda Chicken (CA), supra note 181 at 626.
203 Printers and Finishers, supra note 188 at 735.
204 See footnote 189, above: See also text at 67, below.
205 Lansing Linde, supra note 188 at 425.
manufacture. The closer an employee is to a firm’s management, the more likely he or she has been considered to be able to access trade secrets.

Giving weight to the seniority of the employee may protect against misappropriation of some pre-existing trade secrets. However, high technology industry often requires skilled employees to work at a distance from firm management. These employees may be responsible for developing a firm’s most valuable information. For example, a laboratory scientist may have little direct contact with management and yet greater knowledge of the value of the information and of methods of appropriating it. For this reason, emphasizing the seniority of the employee may ignore the potential for misappropriation of some technology. The courts could more effectively give their attention to the nature of the information at issue in trade secrecy cases and whether employees are in a position to misappropriate that information, regardless of seniority or their relationship to firm management.

ii. AWARENESS OF CONFIDENTIALITY

It is the responsibility of an employer to take steps to protect confidential information and to communicate to employees what information it considers to be confidential. Communication may be either verbal or written. Whether the communication is express or implied, the information considered to be confidential must be clearly defined. For example, an employer cannot make sweeping claims of confidentiality to protect the confidentiality of only a small part of the information. If not specifically defined, an

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207 See for example Lancashire Fires (ChD), supra note 196 at 654; See also Lancashire Fires (CA), supra note 196 at 670; at 674 (Finding that the defendant must have had knowledge of confidentiality on the basis that other lower level employees knew of the confidentiality).

208 Lancashire Fires (CA), ibid. at 668.

209 Ibid. Information must also be clearly defined for the purposes of litigation. See Ocular Sciences, supra note 185 at 360; Isora Trading Inc v Jones, [1990] FSR 251 (ChD) at 260 [hereinafter Isora Trading] (Successfully striking out a claim on the basis that the information claimed to be confidential was not adequately defined).

210 A.T. Poeton (Gloucester Plating) Ltd v Horton, [2001] FSR 169 (CA) at 186 [hereinafter Poeton] (A covenant or patent would be more appropriate to protect trade secrets tucked away in a wide category of mere confidential information so that the defendant’s obligations are clear); See also FSS Travel and Leisure Systems Ltd v Johnson, supra note 199 at 513 (In the context of enforceability of a contractual covenant it is insufficient for the employer to assert a claim that it is entitled to an accumulated mass of knowledge which it regards as confidential); But see Lancashire Fires (CA), supra note 196 at 674 (Where an entire process is confidential and an aspect is taken an employee has implied knowledge that the aspect is confidential).
employer must rely on a reasonable covenant not to compete after termination of employment to protect against disclosure of information that it considers to be confidential. 211

Evidence of an employer's expectations of confidentiality may assist the courts to determine that information is confidential. 212 In addition, employees are forewarned against misappropriation. The requirement for specificity also helps to limit the amount of information that will be protected by the common law. This ensures that only a limited amount of information will be withheld from the public domain. Litigation costs are reduced in the event of breach if information is clearly identified. In addition, private agreement between the parties to facilitate use of information is more likely where other transaction costs can be overcome, such as difficulties in valuing trade secrets.

The degree to which the courts have expected confidentiality to be emphasized to employees has varied depending on the size and operating culture of the firm. 213 For example, a large and bureaucratic institution employing a number of lower level employees may be required to implement formal and overt measures to protect its information against disclosure. A smaller family business employing few employees, or employees working in close business relationships may attract less of an onus. These expectations limit wasteful costs of overprotection. In addition, an employee's knowledge of expectations of confidentiality may be implied from evidence that other similarly situated employees were aware that the information was confidential. 214 This reduces the litigation costs that employers and employees would otherwise incur to prove an employee's subjective knowledge of obligations of confidence.

211 Lancashire Fires (ChD), supra note 196 at 648; Poeton (CA), supra note 210 at 186.
212 Faccenda Chicken (CA), supra note 181 at 627; See also Poly Lina Ltd v Finch, [1995] FSR 751 (QBD) at 762. [hereinafter Poly Lina] (Express contractual clauses protecting confidentiality significant in finding information was a trade secret).
213 Lancashire Fires (CA), supra note 196 at 668; at 675 (Overturning the lower court decision at 675 on the basis that the judge took too strict a view of the degree of precision to be required of an employer in defining and pointing out what he seeks to protect as a trade secret).
214 Lancashire Fires (CA), supra note 196 at 674 cf Lancashire Fires (ChD), supra note 196 at 656-657 (The Court of Appeal overturned the Chancery Division decision to find that the defendant must have had knowledge of confidentiality on the basis that other lower level employees knew of the confidentiality).
iii. Likelihood of Real or Significant Harm

Whether disclosure of information to a competitor would cause real or significant harm to an employer has received limited attention as an indicator of the confidentiality of information. Some commentators have suggested that it is a factor that goes to remedies as opposed to determining whether information is confidential. Economic objectives support more widespread consideration of likely harm when assessing whether information is to be protected. The greater the harm likely to be caused by misappropriation, the lower the incentive for information production in the absence of legal protection.

In Thomas Marshall (Exports) Ltd v Guinle Megarry V.C. considered the enforceability of an express covenant. He considered whether the former employer subjectively believed that the information was confidential, and that its release could harm his business or assist his competitors even if some competitors already held the information. Although tempered by an objective requirement that the former employer’s perception be reasonable when measured against trade use, this inquiry introduces a subjective element not previously relied on.

It has been suggested that a subjective inquiry is best restricted to cases determining the enforceability of covenants not to compete. This may be because the negotiation of a covenant not to compete provides evidence of the employer’s belief that harm might result from disclosure. Proof that an employer impressed the confidentiality of the information on the employee may also imply that the employer perceived a likelihood of harm resulting from its use. However, without such evidence, proof of a genuine subjective belief in potential harm is problematic. An employer has an incentive to claim

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215 See footnote 189, above.
216 In addition, the greater the value of the information to the employer, the greater the risk of wasteful overexpenditure on protection, and a requisite increase in wasteful expenditure on strategies for misappropriation by employees. See generally text at 21-29, above.
217 Thomas Marshall, supra note 196.
218 Thomas Marshall, ibid. at 209-210; For further discussion of the requirement that information not be publicly available see text at 70, below.
219 See Lancashire Fires (ChD), supra note 196 at 645-646; at 655-656 per Carnwath J.
that harm may result from disclosure because retaining a monopoly over information will always be in its best interests.

When genuine commercial harm is likely to result from use of information by former employees, incentives to innovate may be damaged if protection is not granted. For this reason courts should prefer an objective assessment of likely harm.220

In devising an appropriate objective standard the courts should have recourse to the economic framework provided above. Disclosure of information will increase the ability of former employees to compete with their former employers. However, the courts appropriately identify that competition in itself is not sufficient to qualify the use of information by former employees.221 The courts need to assess whether use of the information by the former employee poses a greater risk of reducing the market value of the information than the risk posed by market rivals. The fact that some reduction in value may result should not be enough to warrant protection. The assessment should include consideration of whether a significant part of the value placed on the information by the employer is derived from its ability to continue to apply the information to increase the productive capacity of other inputs of production despite disclosure.

The courts must be particularly vigilant to ensure that any likely harm occurs as a result of the actions of the employee in disclosing or using trade secrets and not as a result of the loss of the employee from the employer's stock of skilled workers.222 In addition, the potential for a skilled former employee to successfully compete with a former employer using general skill and knowledge must be accounted for. There should be no presumption that successful competition results only from the misuse of trade secrets.

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220 See Poly Lina, supra note 212 at 757; Printers and Finishers, supra note 188 at 735; Lansing Linde, supra note 188 at 426; FSS Travel, supra note 199 at 512.

221 See Herbert Morris v Saxelby, supra note 5 at 702, per Lord Atkinson; at 709 per Lord Parker of Waddington: See also text at 63, above.

222 Faccenda Chicken (ChD), supra note 188 at 597; at 602 (The losses to Faccenda Chicken Ltd were impossible to disentangle from losses which may have resulted from the defection of its staff and not through use of trade secrets in competition with it); See also S.B.J. Stephenson, supra note 199 at 309 (The defendant’s conduct in taking client lists and soliciting clients was causally connected to their defection and the loss of profits suffered by S.B.J. Stephenson Ltd).
iv. INDUSTRY USE

The extent to which information is used in the wider industry is an indicator of confidentiality that is not commonly relied on. However, it impacts on whether the harm caused by an employee exceeds the harm that might be caused by other industry rivals. In *Johnson & Bloy (Holdings) Ltd v Wolstenholme Rink plc* the Court of Appeal found that the plaintiff’s ink drying methodology was a trade secret.\(^{223}\) It was relevant that there was no evidence that any other manufacturer used a similar formulation.\(^{224}\)

In *Ocular Sciences Ltd v Aspect Vision Care Ltd* a defendant took a computer program from his former employer but there was no evidence that he had used it in developing competing products.\(^{225}\) He had the ability to write another program and he was found to have done so.\(^{226}\) It was relevant that other firms would require programs similar to the one that Ocular Sciences Ltd alleged was confidential. Other firms were capable of similar work and so the ability to reproduce the program was considered more likely to be an aspect of the employee’s general skill and knowledge than a protected trade secret.\(^{227}\)

Surveys of industry specific characteristics may be of increasing relevance to courts determining whether information amounts to a trade secret in high technology industry. Evidence of the strength of barriers to entry, existing competition, the technology and general techniques relied upon in the industry, and the speed with which new technologies develop, will help the court to assess the threat that disclosure of information is likely to pose to a former employer. These factors may indicate the likelihood of reverse engineering, whether information is already in the public domain, and whether it forms part of the general skill and knowledge of employees. The protection of information that is readily available is wasteful and is denied by the courts.

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\(^{223}\) *Johnson and Bloy (Holdings) Ltd v Wolstenholme Rink plc.* [1989] FSR 135 (CA) [hereinafter *Johnson & Bloy*].


\(^{225}\) *Ocular Sciences, supra* note 185.

\(^{226}\) *Ibid.* at 377. The employee had used the program to assist other aspects of production and was found to be in breach of confidence in respect of those uses.

\(^{227}\) *Ibid.* But where information is misappropriated but not relied upon this may be relevant to assessing damages; See *Universal Thermosensors Ltd v Hibben.* [1992] 1 W.L.R. 840 (ChD) at 850-852 [hereinafter *Universal Thermosensors*]; *Roger Bullivant Ltd v Ellis,* [1987] FSR 172 (CA) at 181 [hereinafter *Roger Bullivant*]; See also text at 122-123, below.
Assessing industry use carries its own litigation costs. However, in most cases the added perspective that the courts gain on whether protection is justified will outweigh these costs. This is because the extent to which denying protection harms an employer’s ability to compete with market rivals is important to the question of the right balance between providing incentives to create information and facilitating its diffusion.

v. THE NATURE OF THE INFORMATION

The most influential of the Faccenda Chicken indicia of confidentiality that has been applied in subsequent cases is consideration of the nature of the information at issue. The first aspect is whether the information is secret, or whether it is available in the public domain. This requirement provides the cornerstone of trade secret protection and has been emphasized in the framework for an efficient trade secrecy doctrine in Part II. The more problematic aspect is the differentiation between an employee’s general skill and knowledge and trade secrets.

a. Public Information

Information is not protected if it is already publicly available. The courts will not protect information that is included in a published patent, or information obtained by the employer under a non-exclusive licensing agreement when the principal may license others to use the same technology. Information will not generally be protected when it is already known to rivals or has been published. However, competitors’ knowledge of general concepts will not prevent the protection of other, more precise, details of production. For example, in Lancashire Fires Ltd v S.A. Lyons & Co Ltd, allegedly confidential manufacturing processes were also documented

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228 Poeton, supra note 210 at 181; See also Ocular Sciences, supra note 185 at 373 (The licensing agreement between the plaintiff and the defendant recognised the potential for the defendant to independently utilise the allegedly confidential information).

229 An exception is when the information qualifies as an independently valuable compilation of publicly available information; See text at 74, below.

230 Lancashire Fires (ChD), supra note 196 at 654 (The fact that visitors to the factory could deduce that the plaintiff had devised a novel process was not sufficient to mitigate against the confidentiality of the details of that process which would not have been apparent to them).
and replicated to some extent by other firms. Nevertheless, Carnwath J. found that refinements introduced by the plaintiffs, even if replicated by some companies, did not put them in the public domain in the sense used to deny protection in prior cases.

Allowing some limited disclosure of information without denying trade secret protection deters wasteful over-protection by employers. Firms are free to network and share valuable production insights without losing protection for specific production processes that give them a competitive edge over rival firms. This flexibility advances both incentive and diffusion objectives.

b. General Skill and Knowledge

The distinction drawn between an employee’s general skill and knowledge and protected trade secrets is perhaps the most controversial of the distinctions drawn between categories of information in this area of law.

The distinction between these two types of information loosely correlates with Romer’s emphasis on the importance of non-rivalrous partially excludable information generated in the private sector as the key to economic growth. Consistent with Romer’s theory the common law protects only trade secrets or non-rivalrous information that would not be produced without the degree of market power assured by keeping information secret. Refusing protection of general skill and knowledge, and non-rivalrous information that is publicly available recognises that that information would be produced irrespective of its non-excludability. Accurately distinguishing between the two types of information is crucial to striking the balance between providing incentives to create information in the private sector and allowing some information to spill over to other firms.

The earliest distinctions between general skill and knowledge and trade secrets were drawn by courts refusing to enforce covenants not to compete that protected against the disclosure of information not amounting to a trade secret. Since F accenda Chicken the use of general skill and knowledge and mere confidential information may be restrained

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231 Lancashire Fires (ChD), ibid. at 653-654.
232 Ibid at 654; See also Lancashire Fires (CA), supra note 196 at 670.
by express covenant. However, the distinction developed in earlier cases remains helpful and has been applied to the protection of trade secrets at common law.

The starting presumption in case law is that every person has a prima facie right to use and exploit for the purpose of earning a living all the skill, experience and knowledge which that person has acquired in the course of previous employment. A former employee who has acquired skill and knowledge through his employment or training that later equips him as a competitor in trade will not be restrained on that basis alone. Protection is given to the employer for such personal knowledge of, and influence over, customers as to allow an employee to take advantage of the employer's connections. An intimate knowledge of the employer's trade secrets that allows the employee to use confidential information to the employer's disadvantage is also protected.

As noted above, in Faccenda Chicken Goulding J. expressly included general skill and knowledge in his second category of confidential information not amounting to a trade secret. Some commentators have made much of his reference to an employee's freedom to use his or her "full skill and knowledge" and not simply "general skill and knowledge". If his category were to include full skill and knowledge, it would leave too much commercial information potentially without protection and open to exploitation.

Subsequent cases have applied Faccenda Chicken on the basis of the same notions of general skill and knowledge described in the authorities quoted above. In particular, what

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233 Disagreement between the Chancery Division and Court of Appeal in Faccenda Chicken on this issue has resulted in some jurisprudential debate. It now appears settled that mere confidential information can be protected by express covenant; See text generally at 79-85, below.

234 Faccenda Chicken (CA), supra note 181 at 619 per Neill L.J.; See also Lancashire Fires (ChD), supra note 196 at 656 (Qualified by the fact that specific steps must not have been taken to commit the information to memory).

235 Herbert Morris, supra note 5 at 709 per Lord Parker of Waddington; Note that Herbert Morris was a case in which a covenant not to compete was rendered unenforceable because it purported to restrain the employee from use of general skill and knowledge. The Court assumed that only trade secrets could be protected against disclosure by a covenant not to compete. This is no longer good law following Faccenda Chicken but the indicia relevant to identifying a trade secret in that context remain applicable to the common law protection of trade secrets; See text generally at 73-79, below.

236 Herbert Morris, ibid. at 709 per Lord Parker of Waddington.

237 Ibid.

238 Coleman, supra note 188 at 12.
can and cannot be memorized by an employee will not define what amounts to general skill and knowledge in any particular case.\textsuperscript{239}

The distinction between general skill and knowledge and trade secrets is largely a matter of fact determined with reference to the particular circumstances of the case. Consideration of the indicia of trade secrecy already mentioned help to differentiate the categories.

In high technology industry the distinction between general skill and knowledge and trade secrets is particularly difficult to draw. Employees increasingly apply their specialized skills to develop their employers' trade secrets. Traditionally, the use of general skill and knowledge would afford an employee no greater advantage over a former employer than other industry rivals could enjoy. However, some skilled employees possess greater skill and knowledge than employees in rival firms. Use of that knowledge will afford them an advantage over both their existing employers and other rivals. This comparative advantage should not prevent skilled employees from competing. Constraining the use of such abilities is socially costly. However, this advantage is sometimes inadequately accounted for when the courts assess whether the threat posed by a former employee to his or her former employer exceeds that posed by other industry rivals. It is often inefficiently confused with protected information. The final of the \textit{Faccenda Chicken} indicia, whether confidential and non-confidential information can be separated, is crucial to ensuring that skilled employees are not prevented from applying their general skill and knowledge to future innovation.

\textit{vi. Separating Confidential from Non-Confidential Information}

Whether confidential and non-confidential information can be separated is relevant to determining whether protection is justified in two ways. The courts consider whether individual items of information may be separated from each other for the purpose of

\textsuperscript{239} \textit{S.B.J. Stephenson, supra} note 199 at 298; \textit{Johnson & Bloy, supra} note 223 at 142 per Parker L.J. (The fact that information can be memorized will not automatically remove its quality of confidence.); \textit{Herbert Morris, supra} note 5 at 703 (Information will not necessarily be protected just because it is so detailed that it cannot be carried away in an employee's head); See also \textit{Ocular Sciences, supra} note 185 at 385 (Information not denied protection just because it is of a technical or complex nature).
rendering different aspects of a body of information confidential. The courts also review whether the general skill and knowledge of the employee may be separated from knowledge of the employer’s workplace and processes that might otherwise be protected.

a. Separating Bundled Items of Information

Whether items of knowledge in a “package” of information are readily separable may indicate whether the information in question is a trade secret.\(^{240}\) In *Faccenda Chicken* the Court of Appeal denied protection to a package of sales information because it included non-confidential information.\(^{241}\) A single piece of confidential information could not render others confidential “by association” in a package of applied information. This principle reinforces the requirement described above that confidential information should be specifically identified when advising employees of what information is considered confidential and when claiming protection through the courts.

Similarly, in *Ocular Sciences* the plaintiff claimed that a set of operating procedures collected together in a single manual represented a body of valuable information maintained for the purposes of internal process control and regulatory approval of contact lenses.\(^{242}\) It claimed that the complete set of procedures should be treated as a single confidential item irrespective of whether individual items were confidential. The court doubted whether this was possible if none of the individual items were alleged to be secret, substantial, or owned by the plaintiff. A “whole package’ claim could not be used to bestow confidentiality on the individual items of content when, by themselves, they were not protectable”.\(^{243}\)

In contrast, a protected confidential document can be created if work on publicly available materials produces a result only able to be obtained by going through a similar

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\(^{240}\) *Faccenda Chicken* (CA), supra note 181 at 627.

\(^{241}\) *Ibid.* at 628; Although commented on, this issue did not arise for determination because the Court concluded that neither a package of sales information, nor the pricing information which constituted a part of the package were sufficiently secret or sensitive to be protected.

\(^{242}\) *Ocular Sciences*, supra note 185 at 368.

independently valuable process.\textsuperscript{244} This is consistent with the approach taken in copyright law. Compilations of information otherwise available in the public domain are often copyright.\textsuperscript{245}

Laddie J. denied protection of a lens specification booklet in Ocular Sciences because the information it contained was available in the public domain. He considered that:\textsuperscript{246}

> It is commonplace that valuable and novel ideas may be produced by the judicious selection and combination of a number of items which, separately, are in the public domain. No one would suggest that such ideas are incapable of being the subject of an obligation of confidence. But, to adopt Megarry J.'s words, there must be some application of the human brain. A mere non-selective list of publicly available information should not be treated as confidential even if putting it together involves some time and effort. No relevant skill is employed. Were this not the case, it would be possible for individual competitors to copy or make use of the individual items of information but they could not get together to make use of all or most of them.

These principles are efficiently framed to safeguard the requirements that protected information is secret and is of independent value to an employer. It is appropriate to protect efforts to compile public information if that effort adds independent value to the information. Protection is wasteful if compilations are easily replicated, or if protection might limit the use of information otherwise readily available in the public domain.

b. Separating Skill and Knowledge from Knowledge of Work Practices

In Printers and Finishers Ltd v Holloway Cross J. found that an employee’s recall of particular features of the plaintiff’s production plant was not protected because “such knowledge is not readily separable from his general knowledge of the flock printing process and his acquired skill in manipulating a flock printing plant ...”.\textsuperscript{247} A more recent selection of cases involving technology based industry highlights the difficulty in

\textsuperscript{244} Faccenda Chicken (ChD), supra note 180 at 598-599 per Goulding J.; See also Coco, supra note 188 at 47; Ocular Sciences, ibid. at 374-375 (Booklet of lens specifications was not considered to be confidential because the information contained in it could be accessed in the public domain and had been compiled in the booklet without any special effort).

\textsuperscript{245} See for example Copyright Act, RSC 1985, c. C-42, ss 2 and 2.1 (Defining a compilation as a work resulting from the selection or arrangement of literary, dramatic, musical or artistic works or a work resulting from the selection or arrangement of data).

\textsuperscript{246} Ocular Sciences, supra note 185 at 375.

\textsuperscript{247} Printers and Finishers, supra note 188 at 736.
drawing the distinction between an employee’s knowledge of an unprotected process and a process qualifying as a trade secret.

In *Balston v Headline Filters Ltd* the defendant’s knowledge of his former employer’s manufacturing processes could be applied to manufacturing in his new employment.²⁴⁸ Scott J. concluded:²⁴⁹

> It is not, in my view, practicable to regard the second defendant’s knowledge of the plaintiffs’ mixes as something that can, like cream from milk, be separated from the sum total of his knowledge of the manufacturing process.

Scott J. had no trouble agreeing that the defendant was prevented from using blends of fibres in the construction of glass microfibre filter tubes that were exactly the same as those of the plaintiff. However, he was entitled to apply his knowledge and skill in mixing fibres to produce tubes to meet particular client specifications even if these ended up being “substantially the same” blends as those used by the plaintiff.²⁵⁰ The same was said of his knowledge, assumedly derived from experience, of the concentrations of binding chemicals into which the finished tubes were dipped.²⁵¹

The formulas used by the plaintiffs were not the same as the formulas used by the defendant.²⁵² The defendant had not removed documents from the plaintiff’s premises and there was no evidence that he had intentionally memorized the plaintiff’s formula. It was apparent that he had derived the new formula himself.

The findings in *Balston* are consistent with other decisions that emphasize that it is necessary to prove that the specific information used by the defendant is more than the inevitable result of adopting a general method of production. In *A. T. Poeton (Gloucester Plating) Ltd v Horton* the Court of Appeal found that the common features of production

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²⁴⁸ *Balston, supra* note 196. Although the employee was subject to an express covenant that prevented disclosure of confidential information, the covenant was agreed to be overbroad and was restricted to protect no more than the employer was entitled to protect at common law. The case proceeded on the basis of a common law claim for protection of trade secrets only.


used by the defendant after leaving the plaintiff were not protected.\textsuperscript{253} They were the consequences of adopting a nickel-plating concept, which was not itself protected.\textsuperscript{254} He could not help but notice the concept in use by the plaintiff and it was obvious that features of use flowed from that concept.\textsuperscript{255} Easily seen and assimilated information could not be separated from his general skill and knowledge.\textsuperscript{256} In \textit{Ocular Sciences} a swell factor used to determine the end size of contact lenses after hydration was part of the general skill and knowledge of the employee.\textsuperscript{257} The former employee's knowledge of this factor of production was considered similar to the knowledge of an experienced baker who becomes accustomed to how much yeast to use when making a particular dough. Similarly, the knowledge that an oven ought to be used for a certain part of the lens curing process was analogous to knowledge of the time that it might take to hard boil an egg.\textsuperscript{258} 

In other cases, when a defendant has taken and used tangible information relating to production processes the courts have found that the information was a trade secret. In \textit{Johnson \& Bloy} Parker L.J. did not accept that the defendant could freely use a formula for an ink drier which varied only slightly from the formula subject to interim protection.\textsuperscript{259} Parker L.J. considered that to allow the ex-employee "...having got in his head the particular formula and the ingredients, nevertheless to depart from it by some small iota would make a nonsense of the law relating to trade secrets."\textsuperscript{260} 

There was less discussion in \textit{Johnson \& Bloy} of whether the information constituted a part of the general skill and knowledge of the defendant. The allegedly secret formula

\textsuperscript{253} \textit{Poeton}, supra note 210.
\textsuperscript{254} \textit{Ibid.} at 185 (CA).
\textsuperscript{255} \textit{Ibid.} at 185; at 186 (CA). The employee in \textit{Poeton} was not subject to any express covenant governing his post-employment activities.
\textsuperscript{256} \textit{Ibid.} at 186 (CA).
\textsuperscript{257} \textit{Ocular Sciences}, supra note 185 at 378. The employees in \textit{Ocular} were not subject to any express covenant governing their post-employment activities.
\textsuperscript{258} \textit{Ibid.} at 387.
\textsuperscript{259} \textit{Johnson \& Bloy}, supra at note 223; The employee in \textit{Johnson \& Bloy} was not subject to any express covenant governing his post-employment activities.
\textsuperscript{260} \textit{Ibid.} at 143 per Parker L.J.
was derived from documents taken from the plaintiff and his culpability clearly influenced the balance of convenience and the outcome of the case.\textsuperscript{261}

Drawing the distinction between knowledge of processes that amounts to general skill and knowledge and protected trade secrets is of heightened importance in high technology industry. The specialized information produced by skilled employees may be the most valuable information to employers. However, it is the information, and not the employee’s ability to create the information that may be protected. In \textit{Ocular Sciences} the court warned that technical processes, although framed in technical language, will not necessarily qualify as trade secrets.\textsuperscript{262} The court warned that “it is necessary to guard against imposing more stringent restraints on more technical employees, particularly those whose very value as employees is their deep knowledge and practical expertise in the field”.\textsuperscript{263}

The distinction drawn between general skill and knowledge and trade secrets highlights the inter-relationship between other factors applied to determine whether information is protected as a trade secret. The potential for harm or detriment, the use of similar information in the relevant industry, and whether the information is publicly available, all go to the central doctrinal questions of whether information derives its value from secrecy, whether it would be produced without protection by trade secret law and whether the threat posed by the employee is more appropriately characterized as a result of his or her superior productive abilities. Except where there is proof that an employee has taken and applied tangible information belonging to a former employer, knowledge of general production processes is refused protection because it constitutes rivalrous information, or no more than general skill and knowledge. Alternatively, the information may be non-

\textsuperscript{261} \textit{Ibid.} at 141; The defendant had not only taken documents but had subsequently impeded the execution of an Anton Piller order intended to recover them. The Court regarded the defendant as having brought his ill fortune upon himself; See also \textit{Apotex}, \textit{supra} note 183 at 333; at 350 (Although the employee possessed the skill to engineer a similar formula to the alleged trade secret, the Court implied from the speed with which he replicated the formula that he had developed while under contract to the plaintiffs that he had taken it and applied it for his own use and benefit. The Court refused to isolate basic information that could form part of a scientist’s trade from other information because the individual concepts formed part of a whole recipe).

\textsuperscript{262} \textit{Ocular Sciences}, \textit{supra} note 185 at 385.

\textsuperscript{263} \textit{Ibid.} at 385.
rivalrous technological information able to be used by any employee. Firms are likely to produce it irrespective of their ability to exclude others from its use because it enhances the productivity of capital and labor within their own firms during the term of employment. It will continue to do so despite the departure of an employee. The use of broadly defined production concepts by a former employee may present no more threat to a former employer’s business than competition by industry rivals. The information need not be in use in the industry so long as it is easily derived by implication from other industry practices. Protection for information that falls within any of these categories would be inefficient and is appropriately denied by current trade secrecy law.

When the courts are uncertain of whether information qualifies as a trade secret, or it is mixed with information that would not independently qualify, it is appropriate to deny protection. It may be confusing for an employee to be prevented from using information that is not clearly defined or easily separated from information that employees are free to use. Monitoring restrictions on its use may be difficult for employers. The social costs of over-inclusive legal protection are high in terms of delaying innovation and economic growth. The appropriate method of protecting information that falls into an ambiguous category is through negotiation of an express contractual covenant not to compete.

C. PROTECTION OF MERE CONFIDENTIAL INFORMATION BY EXPRESS COVENANT

Mere confidential information is protected against disclosure by the implied term of good faith and fidelity during employment.\(^{264}\) It is not protected at common law after termination of employment. *Faccenda Chicken* marked the beginning of a jurisprudential debate over whether an express covenant can protect mere confidential information against post-employment disclosure.

Faccenda Chicken Ltd had not entered into express covenants with Mr Fowler. Nevertheless, both Goulding J. and the Court of Appeal gave opinions on the classes of information that they considered could be protected by express covenant. The protection

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\(^{264}\) See text at 62, above.
of trade secrets at common law was unquestioned. That protection may also be enhanced through the use of a covenant not to compete.

Goulding J. considered that although not protected at common law, information falling within his second category of confidential information could be protected by express covenant.\textsuperscript{265} The Court of Appeal disagreed.\textsuperscript{266} It considered that to allow such protection would run counter to the principle that a restrictive covenant will not be enforced unless the protection is reasonably necessary to protect a trade secret or to prevent the abuse of personal influence over customers.\textsuperscript{267} The Court of Appeal’s reasoning has been challenged in subsequent cases and is unlikely to prevail.

Neill L.J., writing for the \textit{Faccenda Chicken} Court of Appeal interpreted a passage quoted from Cross J. in \textit{Printers and Finishers} as supporting the assertion that an express covenant could protect only trade secrets.\textsuperscript{268} The passage was as follows:\textsuperscript{269}

\begin{quote}
If [the managing director] is right in thinking that there are features in his process which can fairly be regarded as trade secrets and which his employees will inevitably carry away with them in their heads, then the proper way for the plaintiffs to protect themselves would be by exacting covenants from their employees restricting their field of activity after they have left their employment, not by asking the court to extend the general equitable doctrine to prevent breaking confidence beyond all reasonable bounds.
\end{quote}

The \textit{Faccenda Chicken} Court of Appeal took Cross J. to suggest that \textit{only} trade secrets may be protected by express covenant on the basis of this excerpt. However, if this were the case, then Cross J. would have to have meant that trade secrets must be protected by express covenant, or not at all. Common law protection would be rendered redundant.

On a close reading of \textit{Printers and Finishers} this does not appear to have been Cross J.’s intention. The plaintiff sought to prevent Mr Holloway from disclosing information about its flock printing plant that he had acquired during his employment. Cross J. was

\begin{footnotes}
\item[265] \textit{Faccenda Chicken} (ChD), supra note 180 at 599.
\item[266] \textit{Faccenda Chicken} (CA) supra note 181 at 626.
\item[267] \textit{Ibid.}
\item[268] \textit{Ibid.} at 626-627.
\item[269] \textit{Printers and Finishers, supra} note 188 at 732-733.
\end{footnotes}
concerned to identify information that formed a part of Mr Holloway's general skill and knowledge, which he was free to use post-employment. He distinguished this from information that, although capable of being committed to memory, was readily identifiable by "a man of ordinary honesty and intelligence" as the property of Printers and Finishers Ltd and able to be protected against disclosure by injunction.270

Cross J. considered the flocking process to be part of Mr Holloway's own knowledge. When he made the comment quoted above, he must have meant that had the manager considered the processes to warrant protection, he ought to have negotiated a covenant to protect them. This would have been the case because the common law would not extend to protect information that underpinned the defendant's general skill and knowledge. He was not referring to trade secrets in the sense used by Goulding J. subsequently to define the third category of Faccenda Chicken information. In an addendum considering the relief to be granted, Cross J. noted:271

It may well be that some of the features of the plaintiff's process which [the managing director] claimed to be "trade secrets" are either not secrets at all or, if secret, are yet not of a character which an employer could prevent an employee from divulging, at all events in the absence of some express covenant; ...

This is precisely the scope of express covenants later referred to by Goulding J. in Faccenda Chicken. Information that does not amount to a trade secret falls into the second category of information. It may be protected only by a covenant not to compete.272 On close analysis there seems little difference between what Goulding J. and Cross J. respectively apply as the law.

The Faccenda Chicken Court of Appeal's view has also come under significant subsequent challenge. Some commentators have argued that Goulding J.'s categorization, combined with the Court of Appeal's finding that mere confidential

270 Ibid. at 735.
271 Ibid. at 738 (addendum).
272 Faccenda Chicken (ChD), supra note 180 at 599; See also at 600-601 (Referring to an employee's freedom to compete "unless, of course, he has been restrained by express contract from doing so.").
information is unable to be protected by express covenant, would render too little commercial information capable of protection.\textsuperscript{273}

In \textit{Balston} there was an express contractual obligation not to disclose confidential information.\textsuperscript{274} The provision was read down by consent to offer no more protection than could be derived for trade secrets at common law.\textsuperscript{275} Scott J. did not consider that the Court of Appeal could have intended to exclude all confidential information in Goulding J.'s second category from protection by express covenant.\textsuperscript{276}

He also reinforced the limited circumstances in which the common law will protect information and found that beyond those limits an express covenant should be relied upon to restrict employees after their departure:\textsuperscript{277}

\begin{quote}
This case is, in my view, yet another example of an attempt by an employer to use the doctrine of confidential information to place fetters on the ability of ex-employees to compete. ...

Employers who want to impose fetters of this sort on their employees ought in my view to be expected to do so by express covenant. The reasonableness of the covenant can then be subjected to the rigorous attention to which all employee covenants in restraint of trade are subject. In the absence of an express covenant, the ability of an ex-employee to compete can be restricted by means of an implied term against use or disclosure of trade secrets. But the case must, in my view, be a clear one. An employee does not have the chance to reject an implied term. It is formulated and imposed on him subsequently to his initial entry into employment. To fetter his freedom to compete by means of an implied term can only be justified, in my view, by a very clear case.
\end{quote}

In \textit{Lancashire Fires Ltd} the Court of Appeal seized the opportunity to undermine its prior finding in \textit{Faccenda Chicken}.\textsuperscript{278} It recognized that other courts had questioned its denial

\begin{footnotes}
\item[273] Coleman, supra note 188 at 14.
\item[274] \textit{Balston}, supra note 196.
\item[275] \textit{Ibid.} at 349-350.
\item[276] \textit{Ibid.} at 347; See also \textit{Ixora Trading}, supra note 209 at 258 (Citing Balston, \textit{ibid.} and interpreting Scott J. as expressing a view that an express covenant can be used to protect confidential information that is not protected under an implied term); See also \textit{Lansing Linde}, supra note 188 at 426 per Staughton L.J. (Confusing the issue by tentatively extending the category of information deserving of protection beyond what might be considered a trade secret in "ordinary parlance"); See also \textit{B.J. Stephenson}, \textit{supra} note 199 at 298 (Interpreting Staughton L.J. as saying that the category of information protected by express covenant is wider than trade secrets alone but narrower than confidential information generally so called).
\item[277] \textit{Balston}, supra note 196 at 352 (Emphasis added).
\end{footnotes}
of protection of mere confidential information by express covenant. The Court of Appeal noted that so long as a covenant not to compete is not in unreasonable restraint of trade, it is legally enforceable, assuming irrespective of the nature of the information at stake. Sir Thomas Bingham M.R. also noted that the interpretations of law adopted by Goulding J. in *Faccenda Chicken* and Cross J. in *Printers and Finishers* seemed consistent with one another.

More recently in *Poeton* the Court of Appeal again supported the enforceability of an express covenant protecting mere confidential information.

If my assumption that the information came within class 2 is right then Aptec might have protected themselves by covenant or patent from which the duties of Mr Horton would have been plain. If the employer for reasons of his own does not do so then the court should not, in my view, be astute to find confidential information within class 3 tucked away in a much wider, but unjustified (sic.), claim to confidential information. Such claims are easily made but expensive and time-consuming to refute.

Given that no express covenant was at issue in *Faccenda Chicken*, even Neill L.J.'s ruling on this point is strictly *obiter dicta*. The Court of Appeal has subsequently expressly rejected its earlier qualification on Goulding J.'s classificatory system, preferring to assume that confidential information not amounting to a trade secret may be protected by express covenant. None of those cases have actually considered express covenants. The matter now awaits a definitive ruling in a case where the issue is a live one. However, it seems highly unlikely that any court will adopt the strict interpretation applied by the Court of Appeal in *Faccenda Chicken* given the more recent statements of the Court of Appeal. It seems assured that mere confidential information may be protected against disclosure by express covenant.

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278 *Lancashire Fires* (CA), *supra* note 196 at 666-667.
281 *Poeton, supra* note 210 at 186.
282 Except *Lansing Linde*, *supra* note 188 in which Staughton L.J. tentatively extended the category of information deserving of protection beyond what might be considered a trade secret in "ordinary parlance" but was unclear as to his precise meaning.
i. Efficiency of the Distinction Between Protection at Common Law and Protection Under an Express Covenant

Allowing different methods of protecting different types of information is appropriate from an efficiency perspective. Common law protection extends to a narrowly defined category of information. Only non-rivalrous information that is at risk of not being produced without the incentive of a limited monopoly right is protected. Common law protection preserves that incentive without incurring the transaction costs associated with negotiating express covenants.283 When trade secrets are readily identifiable, common law protection also limits the amount of information that is excluded from the public domain. This restriction advances the interests of information diffusion.

As described in Part II, express covenants provide an efficient alternative for the protection of information in ambiguous cases when it is uncertain whether information will meet the threshold for common law protection.284 The transaction costs of negotiating express covenants are outweighed by the savings in litigation costs incurred in assessing whether ambiguous cases meet the common law standard for protection. The cost of negotiation and the consideration required for an enforceable covenant act as a disincentive for employers seeking opportunistically to restrict the use of non-confidential information.

Protection of mere confidential information under an express covenant is further justified by the limited excludability that a reasonable covenant provides.285 Whereas trade secret protection has the potential to last as long as the information is secret, information will be protected by a covenant only so long as is reasonable, and only in such a geographical area as it is reasonable to restrict the employee from operating. In this way, in ambiguous

283 See text at 29-30 and 56-57, above.
284 See text at 57, above; See also Poly Lina, supra note 212 at 764 (Determining the reasonableness of a covenant not to compete. The defendant offered undertakings but the court preferred injunctive relief on the basis that the complexity of the information and the range of information was better protected under a covenant than by the defendant's undertakings); See also Lancashire Fires (ChD), supra note 196 at 648 per Carnwath J. (If an employer is unable to define with some degree of precision those parts of its business which it seeks to protect, then the appropriate form of protection will be a contractual restraint on post employment competitive activity, "subject to the temporal and geographical constraints allowed by considerations of reasonableness").
285 See Balston, supra note 196 at 348 per Scott J. (Judicial acknowledgement of the limitations of protection by express covenant as compared against common law protection of trade secrets).
cases, a covenant provides a flexible form of protection that the parties and the courts can tailor to meet the needs of the particular case subject to a standard of reasonableness.

Even protected information has the potential to spill over because it is not necessarily secret and employees are entitled to use information after the expiry of reasonable time periods or outside restricted geographical areas. These restrictions grant employers protection that maintains monopoly power for only so long as is required to safeguard incentives to innovate.

The enforceability of express covenants not to compete, covenants against the disclosure of confidential information and protection of trade secrets at common law complement and do not compromise the effectiveness of one another. Together these protections provide a flexible protective regime. They safeguard incentives for the production of the type of information that Romer identifies as essential to economic growth by offering limited protection in reasonable circumstances. At the same time, both forms of protection allow for different forms of information spillover between firms.

D. SUMMARY

Drawing analogies between trade secrecy cases is difficult because many are decided on their facts. The integrity of the former employee, particularly whether he or she has taken tangible information from a former employer, often influences the outcome of a case. Identifying a set of uniform principles is further complicated by the fact that many cases are decided as applications for interim injunction pending substantive trial. Many do not proceed beyond an interim stage. Their value as precedent is qualified by the requirement that their merit has been proved only as an arguable case.

Despite these difficulties, a uniform body of English trade secret law has been identified in this chapter. That law is efficient in most respects. The criteria that are applied to determine whether information is protected ensure that information is secret, is clearly defined and readily identifiable, and that employees are aware of expectations of confidentiality. However, too much significance is currently attached to the nature of the position of the employee. Greater weight should be given to factors such as the nature of
the information, industry use and whether trade secrets can be separated from information that is not protected. These questions indicate whether information derives its value from secrecy and whether its protection is required to maintain incentives to innovate. By attaching greater significance to these factors the courts may more easily distinguish between information that amounts to the general skill and knowledge of an employee and information that requires common law protection.

Significantly, this chapter has also illustrated that when the courts are uncertain whether information qualifies for protection they efficiently tend to deny protection. This minimises the social cost of restricting information diffusion when protection may be unwarranted. Express covenants provide a more efficient alternative means of protecting information in ambiguous cases.
2. Canadian Trade Secrecy Law

Canadian courts have adopted the general principles of law relating to post-employment competition and the protection of trade secrets developed in England and described in the previous chapter.

An employee may use knowledge, skill or intellect and similar information to compete with a former employer. However, an employee is bound by an implied obligation not to use knowledge of secret information acquired during employment beyond the term of employment. The courts ask such questions as whether the employer uses a secret process, whether the employee knew the process to be secret, acquired information relating to the secret, and made improper use of that information. Use of the information in the wider industry and whether the information was in the public domain are also relevant. Cases distinguish between general skill and knowledge that the employee is free to use and trade secrets that the employee cannot exploit.

Despite these parallels, Canadian law is heavily influenced by the expansion of the law of fiduciary duty into the employment context. It is open to the courts to concurrently consider claims of breach of fiduciary duty and implied obligations of confidence. The same facts may give rise to breach of both duties depending on the nature of the relationship between employer and employee in the particular case. In addition, the confidentiality of the information at issue is irrelevant to consideration of a breach of fiduciary duty.

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286 Canada Bonded Attorney and Legal Directory Ltd v Leonard-Parmeter Ltd (1918), 42 DLR 342 (Ont. SC) at 356.
288 International Tools Ltd v Kollar (1968), 67 DLR (2d) 386 (Ont. CA) at 388 citing Amber Size & Chemical Co Ltd v Menzel, [1913] 2 Ch 239 at 244-245 (ChD).
289 Crain v Ashton, supra note 288 at 610-611 (Information was not deemed secret because it had been licensed to other companies and there was no evidence of the obligations imposed on those companies to retain the confidentiality of the information).
290 International Tools Ltd v Kollar, supra note 288 at 391; Crain v Ashton, ibid. at 606-607.
291 MDI Industrial Sales Ltd v McLean (2000), 267 AR 394 (Alta. QB) at 397.
292 Canadian Aero Service Ltd v O'Malley (1973), 40 DLR (3d) 371 (SCC) at 388 [hereinafter Canaero].
The co-existence of the doctrines was summarized in *Tree Savers International Ltd v Savoy* as follows:\(^{293}\)

An employee has a basic common-law obligation to render faithful and loyal service to his employer during his employment. As a general rule, an employee may leave his employment and lawfully compete against his former employer, taking with him knowledge gained in his former employment, but he may not take or use against his employer any of his employer’s trade secrets, confidential information or customer lists, whether during or after his employment. If he was top or senior management or a key employee, he owes a fiduciary duty to his employer, which not only encompasses the ordinary duties of an employee but is an enlarged, more exacting duty which endures after termination.

This chapter reviews the parallels between the law of trade secrets in England and Canada within the employment context. Because the common law is so similar, a full review of the application of those principles in Canadian case law is avoided in favor of identifying particular points of interest. This chapter also summarizes some Canadian jurisprudence relating to breach of confidence outside the employment relationship and the growing body of employment law dealing with breach of fiduciary duty. This leads to a conclusion that the Canadian courts’ focus on fiduciary duties in employment is misplaced and overbroad. It gives inefficient protection to trade secrets. The Canadian courts would do well to focus more on the common law of trade secrets that has historically drawn on English precedent. The jurisprudence relating to equitable breach of confidence outside the employment relationship may be of some assistance in shaping a doctrine that better meets the needs of Canadian industry.

**A. The Canadian Common Law of Trade Secrets**

The Quebec Superior Court clearly adopted English principles of trade secret law in *Montour Ltée v Jolicoeur*.\(^ {294}\) The Court rejected the existence of a fiduciary duty and considered the case on the basis of trade secrecy law alone. The Court cited *Herbert Morris Ltd v Saxelby*,\(^ {295}\) and *Faccenda Chicken* at length to find that the plaintiff's

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\(^ {293}\) *Tree Savers International Ltd v Savoy* (1991), 37 CPR (3d) 455 (Alta. QB) at 458 [hereinafter *Tree Savers*].

\(^ {294}\) *Jolicoeur*, supra at note 183 at 39; *Jolicoeur* has been subsequently applied in cases throughout Canada. See for example *Cadbury Schweppes Inc v FBI Foods Ltd* (1999), 83 CPR (3d) 289 (SCC) [hereinafter *Cadbury*]; *Apotex*, supra note 183; *Ebco*, supra note 183.

\(^ {295}\) *Herbert Morris*, supra at note 5.
smoked meat seasoning recipes constituted trade secrets that had been misappropriated by its former employee. It considered the following factors to determine whether the nature of the information qualified it as a trade secret:

1) The extent to which the information was known outside the business;
2) The extent to which it was known by employees and others involved in the business;
3) The extent of measures taken to guard the secrecy of the information;
4) The value of the information to the holder of the secret, and to its competitors;
5) The amount of effort or money expended in developing the information;
6) The ease or difficulty with which the information could be properly acquired or duplicated by others; and
7) Whether the parties treated the information as secret.

While applying English legal principles, the Court in Jolicoeur demonstrated an approach more closely aligned with the optimal trade secrecy doctrine advocated in Part II. Consideration of secrecy serves the same purposes as under English law. It renders certain employees' obligations and indicates that the information may be a trade secret warranting protection. The ease with which the information may be duplicated gives effect to considerations of the strength of competition that might result if the information is not protected. Protection will not be granted if the information is likely to be easily replicated. These factors also allow protection to be denied if the information is capable of self-protection through lead-time and learning curve advantages that enable an employer to extract sufficient profit to motivate further discovery despite non-excludability. Core elements of the Jolicoeur recipes were available in the wider industry. They could be reverse engineered, and they were often altered to meet

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296 Jolicoeur, supra at note 183 at 35-39.
298 Jolicoeur, supra at note 183 at 46.
customer demands. These factors caused the Court to deny permanent injunctive relief, preferring instead to grant damages in favor of the plaintiffs.

Most significantly, the emphasis in *Jolicoeur* on the value of the information translates into direct consideration of market conditions and the return on investment available to the employer. The *Jolicoeur* factors closely resemble the review of industry use, the nature of the information and questions of whether protected and unprotected information may be separated that were discussed in relation to English law in the previous chapter.

The approach of the *Jolicoeur* Court has a further important implication for high technology industry. The Court expressly recognized that information may become steadily less sensitive as competitors catch up on any first-mover advantages that the employer may have had. Information may shift from the category of trade secret to the category of mere confidential information, or even non-confidential information. Reviewing this factor allows the courts to assess the life of the value of the information that depends on secrecy and tailor the duration of protection appropriately.

Other Canadian cases have emphasized the requirement for certainty in defining the information to be protected. In *Ebco Industries Ltd v Kaltech Manufacturing Ltd* the British Columbia Supreme Court refused injunctive relief on the basis that the plaintiffs had not specifically described any process or system against which the claim for confidentiality could be assessed. Their claim had been for the protection of a "unique" process with reference, at best, to "certain techniques such as modifying machines and retooling". In *Future Shop Ltd v Northwest Atlantic (B.C.) Broker Inc* the same Court refused to prevent a former employee from "inevitably disclosing" the plaintiff's trade secrets in her new employment. The Court considered that applying

\begin{itemize}
\item 299 *Ibid.* at 47.
\item 300 *Ibid.* at 48-50.
\item 301 *Ibid.* at 39.
\item 302 See generally the discussion of remedies tailored to compensate for the headstart an employee derives from the use of protected information in Part IV, below.
\item 303 *Ebco*, supra note 183 at para 48.
\item 305 *Future Shop Ltd v Northwest-Atlantic (B.C.) Broker Inc.*, [2000] BCJ No 2659 (BCSC) online: QL (BCJ) [hereinafter *Future Shop*].
\end{itemize}
the United States’ doctrine of inevitable disclosure would require a significant change in the standards for protection of trade secrets applied in Canada.\(^{306}\) The most notable change would have been abandonment of the requirement for specificity in the claim. These findings represent an important choice of the efficiency of certainty and clarity over the inefficiency that would accompany protection of generic categories of information at common law.

*Apotex Fermentation Inc v Novopharm Ltd* provides a good example of trade secret law at work in high technology industry in Canada.\(^{307}\) Pharmaceutical formulae were protected in that case, in part because of the unconscionability of the defendant’s conduct. However, the Court gave weight to the highly competitive nature of the pharmaceutical industry where research and development is particularly expensive.\(^{308}\) Greater incentives to undertake research may be required and greater protection may be appropriate to provide those incentives. The Court avoided the costs and logistical difficulties of proving that the defendant took the plaintiff’s formula by implying that he had done so from the complexity of the information and the time it took to replicate it.\(^{309}\) Had the defendant not taken the formula, it was implied that it would have been permissible for him to apply his scientific skills to develop a similar one. This approach is consistent with the distinction between general skill and knowledge and protected production processes that is drawn in English cases such as *Balston*.\(^{310}\)

Because of the prominence of claims of breach of fiduciary duty in Canada, employment related cases tend not to consider claims of breach of confidence at all, or findings are made without extensive reasoning or reliance on legal precedent. Some recent employment cases have pared back the scope of fiduciary duty claims in the employment context. They rely increasingly on authorities considering breach of confidence in a commercial context to help clarify the nature of post-employment obligations.

\(^{307}\) *Apotex, supra* note 183.
\(^{308}\) *Ibid.* at 350.
\(^{309}\) *Ibid.* at 327; at 333; at 350.
\(^{310}\) See generally text at 73-79, above; See also *Balston, supra* note 196.
B. THE CANADIAN LAW OF EQUITABLE BREACH OF CONFIDENCE

Perhaps the most significant case considering equitable breach of confidence in Canada is *LAC Minerals Ltd v International Corona Resources Ltd.* More renowned for its attention to fiduciary duties in an arms length commercial context, it has also contributed greatly to case law concerning the nature of protected confidential information and trade secrets. International Corona Resources Ltd had undertaken exploratory work that suggested that its land, and surrounding land, offered profitable mining potential. LAC Minerals Ltd approached Corona with a view to undertaking a mining joint venture. Towards this end Corona disclosed information concerning its findings. LAC Minerals then successfully bid for the purchase of surrounding land to Corona’s exclusion.

The Supreme Court of Canada divided over the result in the case. It unanimously found that LAC Minerals had breached a duty of confidence owed to Corona. It then divided over the remedy to be granted. The majority imposed a constructive trust over the land while a minority of two found damages to be an appropriate remedy.

The *LAC Minerals* Court applied English authority for establishing breach of confidence. Both La Forest and Sopinka JJ. found that the information was confidential, had been imparted in circumstances of confidence, and that LAC Minerals had acquired the property through unauthorised use of the information to Corona’s detriment. The detriment arose because if the information had not been received and misused by LAC Minerals, Corona would have acquired the property. The detriment was characterized as loss of an opportunity rather than the loss of a pre-existing profit yielding asset already in the defendant’s possession. In the employment context, it is more common for the latter to be the case. However, it is significant that the Court considered an element of detriment to be relevant to the claim.

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311 *LAC Minerals Ltd v International Corona Resources Ltd* (1989), 61 DLR (4th) 14 (SCC) [hereinafter *LAC Minerals*].
312 *Ibid.* at 36 per La Forest J.; at 73 per Sopinka J.; But see *Pharand*, supra note 297 at 312 per Mason J. (Incorrectly alleging that La Forest and Sopinka JJ. did not require proof of detriment in *LAC Minerals*).
313 *LAC Minerals*, *ibid.* at 22 per La Forest J.
In *Pharand Ski Corp v The Queen in Right of Alberta* the Court considered whether a proposal for a ski resort location and development, including potential to operate the 1988 Winter Olympics, amounted to confidential information. In determining whether the information had the necessary quality of confidence, the Court applied English authority and indicia originally developed in the Australian courts and applied indirectly in *Jolicoeur*. Any person could identify the mountain as a valuable site. However, the basic location, concept and plans for use of the ski facilities were the product of the plaintiff’s ingenuity and they qualified as confidential information.

Notably, the *Pharand* Court did not require proof of detriment to find a breach of confidence. The Court noted:

In most instances detriment is present, otherwise court action would not have resulted. But it is important only “insofar as the lack of, or extent of, detriment will have an effect upon the quantum and nature of remedy available”.

However, proof of likelihood of harm in the employment context has been advocated in this thesis as an important factor in assessing whether protection of information has incentive value. Its desirability in Canada is reinforced by the approach of the Supreme Court of Canada in *LAC Minerals*.

C. THE CANADIAN LAW OF Breach of Fiduciary Duty IN EMPLOYMENT

Concepts of trusteeship began to influence the assignment of liability for misuse of confidential information in Canada in the middle of last century. This trend foreshadowed a significant divergence between Canadian and English law as the courts came to assign increasing importance to equitable principles in regulating post-
employment competition. Claims of breach of fiduciary duty by employees now occupy a prominent position in Canadian employment law.

i. DEVELOPMENT OF THE DUTY - CANADIAN AERO SERVICE LTD v O’MALLEY

Canadian Aero Service Ltd v O’Malley has been described as “the beginning of a revolution in Canadian law, during which [Canada’s] courts have applied equitable principles to a whole new set of relationships”.

Canaero was a topographical mapping and geophysical exploration company. Mr O’Malley was at various times a senior executive, chief executive officer and director of Canaero. The second defendant, Mr Zarzycki, had occupied similar positions of authority. Both were extensively involved in planning the topographical mapping and aerial photography of parts of Guyana. The company hoped to secure this project by tender. The third defendant was a company established by the first two defendants following their resignation from Canaero. Through that company they successfully tendered for the Guyana work. Canaero was unsuccessful. It claimed that the third defendant had obtained the project in breach of fiduciary duties that the first and second defendants owed to Canaero.

In both England and Canada fiduciary duties had prevented company directors from profiting from their positions or from placing themselves in a position of conflict of interest. However, the Court did not consider it necessary to determine whether Messrs O’Malley and Zarzycki were directors of Canaero at the time they acted against its interests. The case turned solely on the attribution of a fiduciary duty by virtue of their positions as senior executive officers employed by the company:

They were “top management” and not mere employees whose duty to their employer, unless enlarged by contract, consisted only of respect for trade secrets.

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320 Regal (Hastings) Ltd v Gulliver, [1942] 1 All ER 378 (HOL); Peso Silver Mines Ltd (N.P.L.) v Cropper (1966), 58 DLR (2d) 1 (SCC).
321 Canaero, supra note 292 at 381; There was some dispute over whether Messrs O’Malley and Zarzycki were properly appointed directors of the company at the relevant time.
322 Ibid. at 381; at 382.
and for confidentiality of customer lists. Theirs was a larger, more exacting duty which, unless modified by statute or by contract ... was similar to that owed to a corporate employer by its directors.

Messrs O’Malley and Zarzycki were bound by a fiduciary duty which “in its generality betokens loyalty, good faith and avoidance of a conflict of duty and self-interest”. Further:

Descending from the level of generality, the fiduciary relationship goes at least this far: a director or a senior officer like O’Malley and Zyrzycki is precluded from obtaining for himself, either secretly or without the approval of the company (which would have to be properly manifested upon full disclosure of the facts), any property or business advantage either belonging to the company or for which it has been negotiating; and especially is this so where the director or officer is a participant in the negotiations on behalf of the company.

The fiduciary duty logically extended beyond their resignation to prevent them from taking advantage of the call for tenders for the Guyana project. The finding of breach of fiduciary duty was “not to be taken as laying down any rule of liability to be read as if it were a statute”. However, whether the duty had been breached could be tested against factors including:

1) The position or office held;
2) The nature of the corporate opportunity;
3) Its ripeness;
4) Its specificity;
5) The defendant’s relation to it;
6) The degree of knowledge possessed by the defendant;
7) The circumstances in which the information was obtained; and
8) The circumstances of termination of the relationship.

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323 Ibid. at 381; at 382.
324 Ibid. at 382.
325 Ibid. at 382.
326 Ibid. at 382.
327 Ibid. at 382.
327 Ibid. at 391.
In essence, *Canaero* extended directors’ fiduciary duties to senior executives in similar positions of authority. Although expressly dismissed as relevant, their positions as former or current directors of the company bespoke their level of seniority and the confidential nature of the information to which they would have had access. The Court sought to acknowledge the extent of the control that senior employees may have over corporate operations, and the conflict of interest that arises as a result. It sought to supplement the limited scrutiny to which that control is subject at annual general or special meetings in an attempt to ensure “exemplary behaviour” among management for the good of the public. The apparent rationale for imposing the duty is consistent with the concern for protecting the integrity of business that underpins directors’ fiduciary duties.

However, unlike the quintessential classes of fiduciary relationship that involve a clearly disproportionate balance of power and authority between fiduciary and beneficiary, this case extended the duty to “an entirely new set of relationships”.

**ii. THE EXPANSION OF THE DUTY - ALBERTS v MOUNTJOY**

Despite the admonition in *Canaero* against applying Laskin J.’s reasoning as if it were a statute, subsequent cases have applied the case as if it identified a new class of fiduciary. Some courts have assumed that sufficiently senior employees owe their employers a fiduciary duty. Enquiry into the factors enumerated by Laskin J. for assessing whether a fiduciary duty has been breached has largely been avoided. *Alberts v Mountjoy* was one such case.

Mr Mountjoy had been the general manager and chief executive of the plaintiff’s insurance brokerage firm. Estey C.J. did not consider it an extension of the *Canaero* principles to find that he was under a fiduciary duty that prevented him from soliciting

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330 See for example *Barton Insurance Brokers Ltd v Irwin* (1999), 170 DLR (4th) 69 (BCCA) at 81 per Hall J.A. (Stating that the ratio of *Alberts* is that persons occupying positions of directors or senior management may be found subject to a continuing fiduciary duty to a former employer and such a duty may encompass a prohibition on soliciting former customers).
331 *Alberts v Mountjoy* (1977), 79 DLR (3d) 108 (Ont. HCJ) [hereinafter *Alberts*].
clients of the firm after termination of his employment.\textsuperscript{332} Although the doctrine would not ordinarily extend to a salesperson in the position of the second defendant, he was also restrained by reason of his association with Mr Mountjoy.\textsuperscript{333}

The Court endorsed the general obligations of confidence applying to employees.\textsuperscript{334} However, the ultimate finding against Mr Mountjoy was that he was in breach of a fiduciary duty owed to protect his employer’s business.\textsuperscript{335} The “substantial natural advantage that opened up to him the opportunity of taking over for his own profit a substantial trade asset of the plaintiff” was likened to the corporate opportunity protected in \textit{Canaero}.\textsuperscript{336}

In considering whether Mr Mountjoy had acted in breach of his fiduciary duty, the nature of his relationship with the company, the “ripeness” or “specificity” of the opportunity presented by client connections, the actual degree of knowledge that he possessed and the circumstances of termination of the relationship were largely ignored by the Court. His liability was based on findings that client connections in the insurance industry were particularly vulnerable to attack, and the fact that he occupied a “senior” position.

The extension of the fiduciary doctrine in this case was driven at least in part by Estey C.J.’s concern that authority that imposed liability for misuse of confidential information on employees distinguished between whether solicitation was based on a physical list of customers, or the memory of the employee.\textsuperscript{337} However, Estey C.J. avoided the challenge of clarifying this perceived inequity in the law. In contrast, the English courts did so.\textsuperscript{338} Instead, Estey C.J. “chose to sweep aside the rules of the common law in this

\textsuperscript{332} \textit{Ibid.} at 118.
\textsuperscript{333} \textit{Ibid.} at 119.
\textsuperscript{334} \textit{Ibid.} at 112; at 115.
\textsuperscript{335} \textit{Ibid.} at 116-117.
\textsuperscript{336} \textit{Ibid.} at 117.
\textsuperscript{337} \textit{Ibid.} at 113.
\textsuperscript{338} See for example \textit{Printers and Finishers}, supra note 188 at 735; \textit{Faccenda Chicken} (CA), supra note 181 at 625; See also Trebilcock, \textit{supra} note 2 at 80 (Arguing that the memorisation of customer contact details is a matter of anticipatory breach during the course of employment. It is tied to the breach of the relationship of good faith. It is not a matter of whether the employee is able or unable to memorise the details at issue. The appropriate cause of action is possibly one for breach of good faith and not for post-employment breach of confidence.)
area entirely and substitute an extremely vague notion of ‘fiduciary’ obligation as a new basis for the law”.

iii. FURTHER EXPANSION OF THE DUTY THROUGH CASE LAW

On its narrowest interpretation, Canaero established only that senior level employees with a high degree of autonomy and authority, such as directors or senior company officers in analogous positions, are not entitled to resign and pursue a current business opportunity for their own benefit. This is particularly the case when employees have played a pivotal role in developing that business opportunity for the benefit of their former employers.

Alberts broadened that principle by adding that vulnerable and substantial business assets, and not simply maturing business opportunities, are protected by the duty. In some cases customer connections will be an asset worthy of protection. The Court also implied that seniority of position could give rise to a fiduciary duty. Further, employees not normally subject to a fiduciary duty who attach themselves to a former executive will also be bound by the duty.

Alberts obscured the policy rationales underlying the Canaero decision and fiduciary duties generally. Fiduciary doctrine has traditionally protected against abuses of power in unique relationships of vulnerability. Its extension to apply to company directors safeguards the integrity of corporate structure and the separate legal persona of the firm. Alberts extended the doctrine to protect employers against the risk that former employees would use commercial information and trade connections. This risk might alternatively be regarded as a normal risk of business and staff attrition. It is a risk that is limited in qualified circumstances by trade secret law.

Cases subsequent to Alberts have been considered under either a “broad” or a “narrow” line of authority.

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340 Wardle, supra note 319 at 248 draws the distinction between “broad” and “narrow” lines of authority.
a. The Broad Line of Canaero Authority

The applicability of the fiduciary duty has been extended even further than contemplated in *Alberths* through the “broad line” of authority that has enthusiastically adopted its sweeping principles.341 Fiduciary duties have been imposed in a wide range of employment relationships, without a great deal of regard for the specific nature of the relationship giving rise to the duty, or for the factors outlined in *Canaero* for establishing whether the duty has been breached.342 Senior employees (whoever they may be as a matter of fact) join the likes of express trustees, lawyers, doctors and directors as members of a class of fiduciary. Through their relationships with their employers, “because of their inherent purpose or their presumed factual or legal incidents, the courts will impose a fiduciary obligation on one party to act or refrain from acting in a certain way”.343 The vulnerability of the employer’s business to actions of the employee is emphasized but not scrutinized in any depth. Vulnerability is a presumed incident of the relationship. The reach of the duty is such that some courts have suggested that there are now few obstacles to characterizing an employee as a fiduciary of his or her employer.344

The approach was summarized in *E. J. Personnel Services Inc v Quality Personnel Inc* as follows:345

Where an employer by the nature of its business is particularly vulnerable to loss by the soliciting of that employer’s clients, an employee stands in a fiduciary relationship to that employer and owes a duty to that employer to not solicit those clients after leaving the business.

Again in *Tree Savers*, there was a presumption that in addition to obligations of confidence, a senior employee owes a fiduciary duty to his or her employer that is a larger and more exacting duty than might be owed by a mere employee.346 A similar

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342 Wardle, *ibid.* at 248.
343 LAC Minerals, *supra* note 311 at 28 per La Forest J. (Describing the first of three categories of fiduciary duty).
344 MDI Industrial Sales Ltd v McLean, *supra* note 291 at 397.
346 *Tree Savers*, *supra* note 293 at 458.
approach was taken in *Anderson, Smyth & Kelly Customs Brokers Ltd v World Wide Customs Brokers Ltd.*\(^{347}\) In cases such as these, fiduciary duties have been imposed on an increasingly broad range of employees on the basis of either an unquestioned assumption of seniority or the vulnerability of the employer’s business.\(^{348}\)

**b. The Narrow Line of Canaero Authority**

In contrast, Wardle identifies a second, “narrow line” of authority that “has tended to apply *Canaero* in a more tentative, restrictive fashion, often referring to *Alberts* only in passing or ignoring it altogether.”\(^{349}\) These cases have taken a more fluid approach to assessing the fiduciary duty as arising in limited circumstances and as a matter of fact to be determined in the specific circumstances of the relationship under scrutiny.\(^{350}\) The cases emphasize the capacity of the employee to actually misuse the information to which he or she has access to affect the interests of the employer, irrespective of tenure or the closeness of an employee’s relationship with senior management.\(^{351}\)

It has been emphasised that:\(^{352}\)

> A title may or may not match the reality per se. It is superficial and as such of little interest or assistance to the court. The job content is what the trial judge must define in light of all the evidence and of all reasonable inferences derived from it.

And in addition:\(^{353}\)

> Not all managerial positions should lead to the imposition of the very high duty of a trustee lest the law commit a high proportion of employees in this province to slavery.

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\(^{347}\) *Anderson, Smyth & Kelly Customs Brokers Ltd v World Wide Customs Brokers Ltd* (1996), 39 Alta LR (3d) 411 (CA) [hereinafter *Anderson, Smyth & Kelly*].

\(^{348}\) For some further examples, see the comprehensive discussion in Wardle, supra note 319 at 250.

\(^{349}\) *Ibid.* at 248.

\(^{350}\) See also *LAC Minerals*, supra note 311 at 29 per La Forest J. (Describing a second category of fiduciary relationship which corresponds with this approach).

\(^{351}\) *Jolicoeur*, supra note 183 at 34-35; See also *Sure-Grip Fasteners Ltd v Allgrade Bolt and Chain Inc* (1993), 45 CCEL 276 (Ont. CJ) at 284 [hereinafter *Sure-Grip*].

\(^{352}\) *R.W. Hamilton Ltd v Aeroquip Corp* (1988), 65 OR (2d) 345 (HCJ) at 351 [hereinafter *Aeroquip*].

\(^{353}\) *Ibid.* at 353.
The narrow line of authority emphasizes that vulnerability ought to be considered only to the extent that it arises from the employee’s ability to exercise a discretion or power to affect the interests of his or her former employer in a peculiar or exceptional way. The employer must have opened itself to a particular vulnerability by granting the employee power and discretion, the injurious exercise of which it is then powerless to control. Courts have characterized the requisite degree of discretion or control as “the power and the ability to direct and guide the affairs of the company”, with any vulnerability on the part of the firm resulting from the “ultimate power and authority” of the employee. It is “the actual level of functions and responsibility held by the employee” that must be examined.

The ability to affect the employer’s business by either doing the job badly, or adversely affecting the employer’s image cannot be regarded as a particular power or discretion sufficient to attract a fiduciary duty. It is an expected and accepted aspect of business. Exploitation of an aspect of the employer’s business that could as easily be seized upon by any person with knowledge of the industry should not warrant restraint. Other external factors such as the highly competitive nature of the industry and an apparent lack of customer loyalty to any particular firm have been taken into account to limit the calculation of damages found to flow from a defendant’s breach of duty.

For example, in *Firemaster Oilfield Services Ltd v Safety Boss (Canada) (1993) Ltd* the defendant employee’s unique opportunity to develop personal relationships with clients

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354 Reference is frequently had to the more general standards for assessing breach of fiduciary duty set out by Wilson J. in *Frame v Smith* (1987), 42 DLR (4th) 81 (SCC) (in dissent). Note that these standards were developed after *Canarco*, supra note 292 and *Alberts*, supra note 331 were decided. The Supreme Court of Canada in *LAC Minerals*, supra note 311 unanimously applied them; See also *Anderson, Smyth & Kelly*, supra note 347 at 50-51; *Sure-Grip*, supra note 351 at 283-284; *Future Shop*, supra note 305 at para 49-51; *Firemaster Oilfield Services Ltd v Safety Boss (Canada) (1993) Ltd*, [2000] AJ No. 1480 (Alta. QB) online: QL (AJ) at paras 14-15 [hereinafter *Firemaster*].

355 *Firemaster*, ibid. at para 30; See also para 42 (Finding that the defendant did not possess the requisite discretion or control).

356 *Aeroquip*, supra note 352 at 351; See also *Sure-Grip*, supra note 351 at 283.

357 *Sure Grip*, ibid. at 287.

358 Ibid. at 284; *Ebco*, supra note 183 at para 25; *Future Shop*, supra note 305 at para 48.

359 *Firemaster*, supra note 354 at para 30; at para 33.

360 *Physique Health Club Ltd v Carlsen* (1996), 141 DLR (4th) 64 (Alta. CA) at 69 [hereinafter *Physique Health Club*].

361 *Sure-Grip*, supra note 351 at 291-292.
because of his location and personal skills did not amount to a power or discretion in the sense required to give rise to a fiduciary duty. He had no authority to make corporate decisions or to affect the central interests of the company. In a trade secrecy context the employee’s attributes would likely have amounted to unprotected general skill and knowledge.


Currently, cases that take a restrictive approach to finding the existence of a fiduciary duty tend to distinguish the broad category of cases on their facts, rather than a careful delineation of the standard of review required as a prerequisite to the imposition of a fiduciary duty. This does nothing to resolve the conflict between the analytical approaches. In addition, although most cases have considered fiduciary duties as a means of restricting the use of trade or customer connections, the doctrine could easily extend to prevent the use of information relating to production processes or products that would qualify as trade secrets. This area of law is marked by a wholly unsatisfactory degree of uncertainty. Reform is sorely needed to refine the scope of the doctrine.

a. Abolishing the Duty in the Employment Context

Ideally reform would render fiduciary doctrine inapplicable in the employment context.

Fiduciary duties evolved to protect parties in specific relationships from exploitation of the authority conferred by one party on the other as a result of the type of relationship. They preserve the integrity of those relationships and the social institutions that they represent, whether church, medical, express trust or corporate structure. The employment relationship is not of such analogous importance that it requires protection by a fiduciary duty over and above the express and implied terms of contract that govern it. As a result of the focus on the implied nature of the relationship, a broad approach has foregone any analysis of the actual duties of the employee, the precise nature of the information or opportunity at stake, or the potential harm to the employer. Employees are enjoined from

362 Firemaster, supra note 354 at para 30; at 33
363 See generally for example ibid.
undertaking a broad range of poorly specified activities. Its effects are analogous to those of a contractual covenant not to compete.

Trade secrecy, by comparison, requires a more stringent assessment of factors that may impact on an employer’s incentives for production. It pays regard to a range of relevant commercial factors external to the employment relationship and the category of restricted activities is narrower.

Some arguments against the imposition of fiduciary duties in the employment context focus on the restraint on employee mobility that may result. However, the nature of the employment relationship also makes imposition of a fiduciary duty inappropriate. The employment relationship is regularly described as characterized by unequal bargaining power favoring employers. In contrast, an employee’s fiduciary duty is intended to remedy a perceived imbalance of power in favor of employees. It represents an unjustified departure from the traditional perception of the employment relationship.

This is not to say that employees may never wield some authority. It is argued in this thesis that in high technology industries dominated by employees with specialized knowledge, balances of power may be less disproportionate. However, it is far from certain that possession of these skills repose in an employee such a degree of power over an employer’s business as to justify the imposition of a fiduciary duty. Trade secret protection adequately and efficiently deals with the category of employees able to use information to adversely affect their employers’ interests. Its efficiency is compromised by the co-existence of a fiduciary duty that focuses on the implied nature of the relationship between the parties without recourse to more sophisticated criteria for protection.

In LAC Minerals Sopinka J. also asked what additional purpose could be served by imposing a fiduciary obligation when a duty of confidence already protected confidential information. There were other means open to Corona to protect its information, including

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364 See for example Wardle, supra note 319 at 235; Downard, supra note 339 at 371-372; See also Barton, supra note 330 at 88.
an express confidentiality agreement, or a remedy for breach of confidence and this
militated against the “application here of equity’s blunt tool” in the form of a fiduciary
duty.\textsuperscript{365}

In addition, he found that “the presence of the conduct that incurs the censure of a court
of equity in the context of a fiduciary duty cannot itself create the duty”.\textsuperscript{366} He elaborated
as follows:\textsuperscript{367}

... applying the same principle, the fact that confidential information is obtained
and misused cannot itself create a fiduciary obligation. No doubt one of the
possible incidents of a fiduciary relationship is the exchange of confidential
information and restrictions on its use. Where, however, the essence of the
complaint is misuse of confidential information, the appropriate cause of action
in favour of the party aggrieved is breach of confidence and not breach of
fiduciary duty.

b. Retaining a Modified Duty

It seems likely that the Canadian courts have already developed the fiduciary doctrine too
far to readily reject its application to the employment relationship. However, some courts
appear to favor a narrow interpretation of \textit{Canaero} and \textit{Alberts}. This is a desirable
outcome given the greater parallels between the narrow approach and the optimal trade
secret doctrine advocated in Part II.

Dependence on the vulnerability of the employer to harm by the employee is neither a
desirable standard for imposing a fiduciary duty nor a standard supported by \textit{Canaero}.\textsuperscript{368}
It opens a limitless range of information to be considered “a vulnerable and substantial
business asset” including trade connections and unspecified ideas involving research and
development and its results. Such ideas would be unlikely to qualify as trade secrets at
common law. Consideration of vulnerability in a vacuum has also contributed to the

\textsuperscript{365} \textit{LAC Minerals, supra} note 311 at 69 per Sopinka J.
\textsuperscript{366} \textit{Ibid.} at 63 per Sopinka J.
\textsuperscript{367} \textit{Ibid.} at 64 per Sopinka J.
\textsuperscript{368} Wardle, \textit{supra} note 319 at 247; Downard, \textit{supra} note 339 at 370.
imposition of a fiduciary duty on employees who could not be considered part of the larger corporate decision-making process.\textsuperscript{369}

If the fiduciary duty is applied in the employment context at all, the nature of the relationship must be such that the fiduciary has a pre-existing power or discretion that may be exercised to affect the interests of the beneficiary and the beneficiary must be powerless to control the exercise of that discretion. This is such that when confidential information is communicated to an employee, he or she may apply a pre-existing power or discretion to use the information in a manner that affects the interests of the employer. If communication of the information creates a power to affect the interests of the party communicating it then the communication does not create a fiduciary relationship, but only a duty of confidence.\textsuperscript{370}

The narrow line of authority ought to be preferred, rejecting unfettered reliance on vulnerability as a pre-requisite to imposing a fiduciary duty on employees. A detailed analysis of the nature of the information at issue and the likelihood of actual harm resulting from its use by a former employee is desirable. It is also consistent with the focus on promoting incentives to create information that underlies the optimal trade secrecy doctrine described in Part II of this thesis. As Chapnik J. suggested in \textit{Sure-Grip Fasteners Ltd v Allgrade Bolt and Chain Inc} the duty should be imposed only in circumstances where the employee can exercise “ultimate power and authority” over the employer’s operations.\textsuperscript{371} Scope for the exercise of independent judgment by the employee should be the focus of the enquiry.\textsuperscript{372} The capacity to exercise that discretion must include a degree of autonomy and responsibility not reposed in regular employees.

\textsuperscript{369} Wardle, \textit{ibid.} at 250 (Citing a list of cases in which the vulnerability of the employer’s customer base to attack appears to have led to a finding of a fiduciary relationship).

\textsuperscript{370} See also \textit{Cadbury, supra} note 294 at 304-305 (Supporting this line of reasoning and also citing Professor F. Gurry, \textit{Breach of Confidence} (1984) at 161-162 as follows “In a breach of confidence action, the court’s concern is for the protection of a confidence which has been created by the disclosure of confidential information by the confider to the confidant. The court’s attention is thus focussed on the protection of the confidential information because it has been the medium for the creation of a relationship of confidence; its attention is not focussed on the information as a medium by which a pre-existing [fiduciary] duty is breached” [emphasis in original]).

\textsuperscript{371} \textit{Sure-Grip, supra} note 351 at 287.

\textsuperscript{372} Wardle, \textit{supra} note 319 at 256-257.
This measure should exclude salespeople and managers from the duty in all but the rarest of cases.\textsuperscript{373}

An employee must have power, authority and control to affect the structure and function of the firm, not only its productive capacity or ability to exploit a commercial advantage. As in \textit{Canaero}, at stake must be a defined, unique, maturing corporate opportunity diverted in breach of a duty not to profit at the expense of the firm or in exploitation of a unique position of power. It is not enough that an employee is in a position to use information to which he or she has no entitlement. Such commercial risk is adequately protected through the carefully balanced measures of trade secret protection.

\textsuperscript{373} \textit{Ibid. at 267.}
3. UNITED STATES’ TRADE SECRECY LAW

Civil trade secrecy protection falls exclusively within State jurisdiction in the United States. For this reason evolution of the common law varied from State to State during the nineteenth and early twentieth centuries. It broadly followed principles of English common law. However, in an attempt to provide a set of unifying principles, in 1939 the American Law Institute included a section addressing trade secrecy in its first Restatement of Torts. Trade secrecy was omitted from the Restatement (Second) of Torts published in 1978. This was because the evolving sui generis nature of the cause of action made it inappropriate for inclusion in reference material relating only to tort. Trade secrecy did not receive Restatement attention again until 1995 when it was included in the Restatement of the Law (Third) of Unfair Competition.

The Uniform Trade Secrets Act was adopted in 1979 in a further attempt to unify the law relating to confidential information that was being applied throughout the United States. The Act codified the common law for the most part, including the significant body of law that developed in reliance on the Restatement of Torts. The Restatement of Unfair Competition makes clear that the definition of trade secret that it uses is intended to be consistent with the definition used in the Uniform Trade Secrets Act. State adoption of the Act, and its influence over independently promulgated State laws, is now widespread. Differences in statutory form are largely the result of subtle State based

378 Restatement of Unfair Competition, supra note 376 at §39 comment.
379 Cohen and Gutterman, supra note 377 at 73 (Reporting that by the end of 1996 laws based on the Uniform Trade Secrets Act had been enacted in 45 jurisdictions. Those States that have not adopted the Act include New Jersey, New York, Pennsylvania, Tennessee, Texas and Wyoming); See also Pooley, J., Trade Secrets (Intellectual Property Series, New York: Law Journal Press, 2000) at §2.03[7][a] fn 51 for a list of the States that have adopted the Act.
variations of the Act and differences in interpretation by the courts. Both *Restatements* influence the interpretation of the Uniform Trade Secrets Act throughout the United States.

In addition to the jurisprudential framework provided by the *Restatements* and the Uniform Trade Secrets Act, United States employers retain common law rights arising out of implied obligations of confidence and good faith in the employment relationship. To this extent United States law further embodies the principles that guide English and Canadian common law.

An overview of the Uniform Trade Secrets Act and the *Restatements* is provided in this chapter for the purpose of adding a comparative perspective to the review of English and Canadian common law provided in the previous two sections chapters. Detailed State-by-State review of United States law is beyond the scope of this comparative objective.

A. THE UNIFORM TRADE SECRETS ACT

   i. DEFINITION OF A TRADE SECRET

Under the Uniform Trade Secrets Act actual or threatened misappropriation of trade secrets may provide a basis for relief.

A “trade secret” is defined as:

... information, including a formula, pattern, compilation, program, device, method, technique, or process, that:

(i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and

(ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

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380 Cohen and Gutterman, *supra* note 377 at 69.
381 See *ibid.* at 202-204 (Discussing implied duties of confidence); at 211-212 (Discussing implied duties of loyalty, good faith and fidelity).
382 See Uniform Trade Secrets Act, 14 U.L.A. (1975, amended 1985), §2(a) (Relief may be injunctive); See also §3(a) (Relief may be by way of damages).
The Restatement of Torts commentary listed a broader range of relevant factors that more closely resemble indicia applied in English and Canadian common law. These included:

1. The extent to which the information is known outside [the plaintiff's] business;
2. The extent to which it is known by employees and others involved in his business;
3. The extent of measures taken by him to guard the secrecy of the information;
4. The value of the information to him and to his competitors;
5. The amount of effort or money expended by him in developing the information;
6. The ease or difficulty with which the information could be properly acquired or duplicated by others.

The same distinction is drawn in United States law between general skill and knowledge that is not protected, and information that is protected as a trade secret. However, the definition of trade secret in the Act expressly includes "methods, techniques and processes". Classification of information as a trade secret under the Uniform Trade Secrets Act and the Restatements relies heavily on it being identifiable and concrete. Therefore, it is unlikely that express inclusion of these forms of information as trade secrets alters the value of precedent in cases such as Balston that require an identifiable process for protection independent of generalized or abstract production methods. However, information need not be tangible to receive protection, such as being embodied in a document, computer programme, or product. In addition, just as compilations are

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384 See text at 63-64, above; The indicia from Faccenda Chicken included 1) The nature of the employment; 2) The nature of the information; 3) Whether the employer impressed the confidentiality of the information on the employee; 4) Whether the relevant information can be easily isolated from other information which the employee is free to use or disclose. In addition, cases have considered 5) Whether disclosure of the information could cause real or significant harm to the employer; and 6) Whether the information is used in trade or business.
385 Restatement of Torts, supra note 375, §757 comment b.
386 See Pooley, supra note 379 at §4.01[3] (Discussing general skill and knowledge as distinct from protected information and relevant case law).
387 See text generally at 78-81; Balston, supra note 196.
388 See Cohen and Gutterman, supra note 377 at 77-82 (Describing eligible subject matter).
protected under English common law.389 States generally recognize the confidentiality of combinations of characteristics and components that would not necessarily be confidential in isolation.390

United States law under both the Restatements and the Uniform Trade Secrets Act relies heavily upon evidence of the independent economic value of the information claimed to be a trade secret.391 The requirement has its origins in a United States common law requirement that the information have sufficient value in the operation of the owner's business as to afford him or her an actual or potential economic or competitive advantage over others who do not have access to the information.392 The Act requires not only that the information derives actual or potential independent economic value from secrecy, but also that others can obtain economic value from its disclosure or use. Information that has no value to the owner, or no value to those who misappropriate it, is not protected.

These requirements have important implications for the creation of incentives to produce information. The United States' requirement more squarely emphasizes market conditions and the likely effect of protection on employers' incentives to innovate. The United States' requirement for proof of market value more effectively captures efficiency objectives than current application of English and Canadian common law.

Determining the value of information may prove difficult for the courts. However, these difficulties are reduced by taking account of evidence of investment in research and development, security measures taken to protect the information and evidence that others have been willing to pay for the information under actual or requested licenses.393 Allowing the courts to draw inferences of value from these indicia help to reduce the litigation costs that might otherwise be associated with valuation.

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389 See text at 75, above.
390 Cohen and Gutterman, supra note 377 at 78; See also Pooley, supra note 379 at §4.03[2] (Discussing compilations, combinations and relevant cases).
391 See Cohen, ibid. at 94-96 (Discussing economic value and use requirements); See also Pooley, ibid. at §4.05.
392 Cohen, ibid. at 95.
393 Pooley, supra note 379 at §4.05[2].
Other similarities include an emphasis on the importance of secrecy. Information cannot be generally known in the industry or by people able to gain economic advantage from it, although there is some scope for disclosure to parties such as industry partners under conditions of express or implied secrecy. Measures taken to protect the secrecy of confidential information are taken as an indicator of confidentiality. In determining whether appropriate measures have been taken, courts may resort to a cost benefit analysis that takes account of the value of the information, the likelihood of disclosure, and the costs of maintaining the confidentiality of the information. As in English law, what may be appropriate in one context may not be appropriate in another.

In addition, the lengths to which a defendant has to go to misappropriate the information is also relevant to an assessment of whether information is a trade secret. If a competitor can duplicate the material without particular difficulty, it is unlikely to meet the required threshold of secrecy. The time, effort and expense required to duplicate the material will aid in the assessment of whether information is readily ascertainable from public sources.

Attention to these details gives effect to the fact that it is inefficient for the law to protect information that has a high depreciation rate, can be easily reverse engineered or independently discovered in the industry. Earlier in this chapter it was argued that greater relevance could be attributed to the commercial value of information in English common law if the courts paid more attention to industry conditions to determine whether the loss arising from disclosure of information exceeds the loss that may result from the actions of industry rivals. The Act expressly requires that attention be given to these factors and in doing so it appropriately advances efficiency objectives.

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394 Cohen and Gutterman, supra note 377 at 85.
395 Pooley, supra note 379 at §4.04[2][a].
396 See Cohen and Gutterman, supra note 377 at 82-94 (Discussing secrecy requirements); Pooley, ibid. at §4.04.
397 Pooley, ibid. at §4.04[2][b].
398 Cohen and Gutterman, supra note 377 at 84.
399 Ibid. at 90.
400 Ibid. at 92.
ii. FORMS OF PROHIBITED MISAPPROPRIATION

Because the Uniform Trade Secrets Act does not focus exclusively on employment relationships, forms of prohibited misappropriation are defined broadly.\textsuperscript{401} Misuse of confidential information in the employment setting is most likely to arise under the definition in subsection (ii)(B)(II):

... disclosure or use of a trade secret of another without express or implied consent by a person who ... at the time of disclosure or use, knew or had reason to know that his knowledge of the trade secret was ... acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use ...

Other definitions cover methods of misappropriation less relevant to the employment context, and the acquisition of confidential information by third parties who know, or ought to have known of the original breach of confidence. The Uniform Trade Secrets Act expressly displaces tortious, restitutionary and other civil relief for misappropriation of trade secrets.\textsuperscript{402} An exception is allowed for the recovery of contractual remedies whether based on claims of misappropriation of trade secrets or not.\textsuperscript{403}

B. RESTATEMENT OF THE LAW (THIRD) OF UNFAIR COMPETITION

The principles prescribed for the protection of trade secrets by the \textit{Restatement of Torts} have been described as the most widely accepted and applied.\textsuperscript{404} However, the more recent \textit{Restatement of Unfair Competition} now provides the most authoritative basis for the consideration of trade secrecy. Its terms influence the courts’ interpretation of the Uniform Trade Secrets Act throughout the United States. Like the Act, the \textit{Restatement of Unfair Competition} emphasizes commercial value in its definition of a trade secret.\textsuperscript{405}

As follows:

A trade secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others.

\textsuperscript{401} Uniform Trade Secrets Act, supra note 382, §1(2).
\textsuperscript{402} Ibid. §7(a).
\textsuperscript{403} Ibid. §7(b).
\textsuperscript{404} Cohen and Gutterman, supra note 377 at 71.
\textsuperscript{405} Restatement of Unfair Competition, supra note 376, §39.
Liability for misappropriation will also attach in circumstances very similar to those set out in the Uniform Trade Secrets Act. However, the *Restatement of Unfair Competition* expressly describes breach in terms of breach of a duty of confidence, which more closely reflects the English common law. Liability attaches where: 406

(a) the actor acquires by means that are improper ... information that the actor knows or has reason to know is the other's trade secret; or

(b) the actor uses or discloses the other's trade secret without the other's consent and, at the time of the use or disclosure,

(1) the actor knows or has reason to know that the information is a trade secret that the actor acquired under circumstances creating a duty of confidence owed by the actor to the other under the rule stated in §41; or

(2) the actor knows or has reason to know that the information is a trade secret that the actor acquired by means that are improper ... 407 or

(3) the actor knows or has reason to know that the information is a trade secret that the actor acquired from or through a person who acquired it by means that are improper ... or whose disclosure of the trade secret constituted a breach of a duty of confidence owed to the other under the rule stated in §41; or

(4) the actor knows or has reason to know that the information is a trade secret that the actor acquired through an accident or mistake, unless the acquisition was the result of the other's failure to take reasonable precautions to maintain the secrecy of the information.

A duty of confidence may arise under §41 in one of two ways. First, if the recipient made an express promise of confidentiality prior to disclosure of the secret by the confider. 408 Second, if the relationship between the parties, or other facts surrounding the disclosure, suggest that the recipient of the information knew or had reason to know that confidence was intended and it was reasonable for the confider to infer that the recipient consented to such a confidence. 409

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407 Improper means of acquisition are defined in §43 as including theft, fraud, unauthorised interception of communications, inducement of or knowing participation in a breach of confidence, and other means that are either wrongful in themselves, or wrongful in the circumstances of the case. Independent discovery and analysis of publicly available products are expressly not included as improper means of acquisition.

408 *Restatement of Unfair Competition, supra* note 376, §41(a).

The breach of confidence and misappropriation rules expressly apply to employees.\textsuperscript{410} Equivalent provisions of the Uniform Trade Secrets Act apply only by implication.

C. SUMMARY

This chapter has emphasized the similarities between the law of trade secrets in England and Canada and the basis for trade secret protection promoted in the United States through the \textit{Restatements} and the Uniform Trade Secrets Act. The most notable strength of United States law as compared against English and Canadian common law is its greater emphasis that information must be commercially valuable to be protected. This directly impacts on the assessment of how incentives will be affected if protection of information is denied. The emphasis on the market value of information more effectively captures efficiency objectives than current English and Canadian common law. The criteria applied in those jurisdictions have the scope to provide this emphasis through the reforms recommended in this thesis.

\textsuperscript{410} \textit{Ibid.} §42.
The range of remedies applied in trade secrecy cases is reviewed from an efficiency perspective in Part IV. The first chapter describes the law of damages, including methods of assessing quantum. The second chapter reviews accounts of profits as a remedy. It concludes that the punitive nature of an account of profits and the lack of incentive that it provides for innovation makes it an inappropriate remedy for breach of confidence. The third chapter reviews the use of interim and permanent injunctive relief. The final chapter provides a comparative perspective with an overview of the remedial approach applied in the United States. This analysis supports the preference for damages as a remedy expressed in Part II. It also provides some insight into how best to limit the inefficiencies of other remedies when they must be applied.

1. DAMAGES

Traditionally, damages were available only to remedy breach of contract and as a limited substitute for injunctive relief. However, the Supreme Court of Canada has confirmed that this is no longer the case. It has affirmed its jurisdiction to award damages for breach of confidence whether founded in contract or equity:411

In my view, therefore, having regard to the evolution of equitable principles apparent in the case law, we should clearly affirm that, in this country, the authority to award financial compensation for breach of confidence is inherently in the exercise of a general equitable jurisdiction and does not depend on the niceties of Lord Cairns’ Act or its statutory successors. This conclusion is fed, as well, by the sui generis nature of the action. The objective in a breach of confidence case is to put the confîder in as good a position as it would have been in but for the breach. To that end, the Court has ample jurisdiction to fashion the appropriate relief out of the full gamut of available remedies, including appropriate financial compensation.

This thesis has advocated a shift in remedial focus from undivided property rules to liability rules. In many cases damages will adequately compensate for an employer’s loss while at the same time avoiding compliance and enforcement difficulties associated with injunctive relief. The partial excludability created by a requirement for payment of

411 Cadbury, supra note 294 at 316.
damages maintains incentives to produce information while at the same time allowing
information to be applied to other productive uses. It was argued in Part II that damages
ought to be the preferred remedy when the courts are satisfied that the employee has a
comparative advantage in exploiting information, is able to pay damages, and when
competition between the employer and employee is not so fierce as to exclude the
employer entirely from the market. Injunctive relief ought to be allowed only where
these indicia are not satisfied. Alternatively, injunctive relief may be preferable when the
courts are satisfied that the cost of quantifying damages is greater than the transaction
costs faced by the parties in bargaining for use of the information, or when the
impediments to bargaining are sufficiently removed through determining liability that
bargaining for a remedy is possible.

Contrary statements of principle tend to focus on the immorality of misappropriation of
trade secrets, arguing that to allow damages as a remedy is to sanction the defendant's
unlawful conduct. However, this approach overlooks the commercial reality of
information use. On balance, so long as a damages award retains sufficient incentive for
an employer to produce information, it provides a more persuasive remedy because of the
additional social value derived from information diffusion.

This preference for damages as a remedy is not novel. In Seager v Copydex Lord
Denning M.R. noted that the defendant should not be entitled to use protected
information to get a start over the plaintiff or others and that damages provided an
appropriate means of neutralising the head start:

At any rate, he should not get a start without paying for it. It may not be a case
for injunction or even for an account, but only for damages, depending on the
worth of the confidential information to him in saving him time and trouble.

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412 See Terrapin, supra note 314 at 135 per Lord Evershed M.R. citing Shelfer v City of London Electric
Lighting Co., [1895] 1 Ch 322 (ChD); See also Johnson & Bloy, supra note 223 at 142 per Fox L.J.
(Noting in an interim setting that damages are not necessarily a satisfactory remedy and if the
information is in fact a trade secret, the plaintiffs are entitled to have their trade connection protected
and it is the protection of a trade connection, not damages, which the plaintiffs are primarily concerned
to obtain).

413 Seager, supra note 314 at 932-933.
In *LAC Minerals* La Forest J. also acknowledged that damages may provide an appropriate remedy:\(^{414}\)

Imposing a disability on a party in possession of confidential information from participating in a market in which there is room for more than one participant may be unreasonable, such as where the information relates to a manufacturing process or a design detail. In such cases, it may be that the obligation on the confidee is not to use the confidential information without paying compensation for it or sharing the benefit derived from it.

Other cases have indicated that damages are preferable when there is uncertainty as to the scope of the information an employee is prevented from using,\(^{415}\) or when the award of loss of goodwill accounts for the fact that the breach will have ongoing consequences.\(^{416}\)

Having supported a preference for damages as a remedy, it remains to determine the most efficient method of assessing quantum. Two primary methods of assessment currently applied by the courts are reviewed in this section within an efficiency framework. This review leads to recommendations as to the most efficient method of quantifying damages.

**A. METHODS OF ASSESSING QUANTUM OF DAMAGES**

**i. Market Value of the Information**

In *Seager v Copydex* Lord Denning M.R. drew a property analogy and likened the taking of confidential information to conversion.\(^{417}\) He approached the assessment of damages on the basis that the plaintiff should be paid for the start given to the defendant by using the protected information. The level of damages was to be determined with reference to the nature of the confidential information:\(^{418}\)

The difficulty is to assess the value of the information taken by the defendants. We have had a most helpful discussion about it. The value of the confidential information depends on the nature of it. If there was nothing very special about it, that is, if it involved no particular inventive step, but was the sort of

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\(^{414}\) *LAC Minerals*, *supra* note 311 at 25.

\(^{415}\) See for example *Coco*, *supra* note 188 at 49-50 per Megarry J. (Noting that the duty of confidence is most likely a duty to pay if employees are to be unusually hampered by the terms of an injunction that make it difficult to distinguish between information that can and cannot be used).

\(^{416}\) *Tree Savers*, *supra* note 293 at 467.

\(^{417}\) *Seager v Copydex Ltd (No. 2)*, [1969] 1 WLR 809 (CA) at 813 [hereinafter *Seager No. 2*].

\(^{418}\) *Ibid.* at 813.
information which could be obtained by employing a competent consultant, then
the value of it was the fee which a consultant would charge for it: because in that
case the defendants, by taking the information, would only have saved
themselves the time and trouble of employing a consultant. But, on the other
hand, if the information was something special, as, for instance, if it involved an
inventive step or something so unusual that it could not be obtained by just going
to a consultant, then the value of it is much higher. It is not merely a consultant's
fee but the price which a willing buyer – desirous of obtaining it – would pay for
it. It is the value as between a willing seller and a willing buyer.

... 

[If] the confidential information was very special indeed, then it may well be
right for the value to be assessed on the footing that in the usual way it would be
remunerated by a royalty. The court, of course, cannot give a royalty by way of
damages. But it could arrive at a lump sum. Once a lump sum is assessed and
paid, then the confidential information would belong to the defendants in the
same way as if they had bought and paid for it by an agreement of sale. The
property, so far as there was property in it, would vest in them. ... In other words
it would be regarded as an outright purchase of the confidential information. The
value should, therefore, be assessed on that basis: and damages awarded
accordingly.

In Seager v Copydex the plaintiff had been seeking to sell his design for a carpet grip to
the defendant company for manufacture. It had been his intention from the outset to
exchange the information he held for some financial reward. He sought a remedy on this
basis together with the loss of profits he sustained on the sale of earlier technology that
was rendered obsolete by the manufacture of the new product.419 Damages were assessed
at the market value of the information.420

Seager v Copydex (No. 2) confirmed that payment of damages had the effect of vesting
property in the information in the defendant company.421 Mr Seager gave up his rights to
any future benefit derived from its use. Had he used the information himself after the

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419 Seager, supra note 314 at 811.
420 Seager No. 2, supra note 417 at 813 per Lord Denning M.R.; at 814 per Salmon L.J. (Adding that
market value is assessed at the value between a willing buyer and a willing seller); See also Ken
Graham Consumer Products Ltd v Sunbeam Corp (Canada) Ltd (1989), 27 CPR (3d) 437 (Ont. HC)
at 440 [hereinafter Ken Graham] (The plaintiff was seeking a licensing or sale arrangement with the
defendant at the time of breach. The Court refused an account of profits and awarded damages set at
the highest amount that a reasonable person in the defendant’s position would have paid the plaintiff as
the market value of the information).
421 Seager No. 2, Ibid. at 813 per Lord Denning M.R.
defendant company paid the damages awarded, he would have been in breach of the
defendant’s rights.

A similar approach was taken in Pharand. Mason J. assessed damages at “fair value”
(as opposed to market value) of the lost opportunity to sell the information to the
defendant, recognising that in some limited instances this standard may allow damages
that exceed the market value of the same information. He gave no express guidance as
to what might indicate “fair value”. That assessment was a matter for the exercise of
judicial discretion.

Despite Lord Denning M.R.’s analogy with conversion of property in Seager (No. 2) an
award of damages assessed as market or fair value of the information may be more
appropriately likened, in restitutionary terms, to a remedy of quantum meruit. This
involves a payment by the defendant to the plaintiff of a reasonable price for the benefit
of work undertaken by the defendant and enjoyed by the plaintiff in circumstances that
make recompense to the defendant reasonable. However, this method of assessing
damages need not be taken to suggest that the information always changes hands. It may
have been necessary for the Court to draw the property analogy in Seager v Copydex
because at that time it was uncertain whether damages could be awarded on the basis of
breach of equitable duty alone. It may now be unnecessary to regard the plaintiff as
relinquishing future control over information on payment of damages. Instead the
defendant could compensate for past use of the information only.

Transferring ownership on payment of damages ignores the fact that information is non-
rivalrous. Its use by the defendant did not preclude Mr Seager from using the idea for the
carpet grip or selling it to another firm, in the absence of a patent. Finding that the
information changed hands on payment of damages creates a right of complete
excludability in the information. An award of damages that does not have the effect of
transferring ownership creates only imperfect excludability. This approach better

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422 Pharand, supra note 297 at 332-333.
423 Ibid. at 329.
balances incentives to create information with the need for access to information to promote innovation. As Lester and Talley argue, it is inefficient for the courts to always choose between undivided property rights when allocating remedies.

Damages awarded without a transfer of ownership are also more appropriate where the plaintiff never intended to publicize, license, or otherwise disseminate the confidential information taken by the defendant. In *Cadbury Schweppes Inc v FBI Foods Ltd* the Supreme Court of Canada accepted that granting the plaintiff a sum equivalent to the market value of the information was an inappropriate measure of remedy because the plaintiffs had no intention of selling rights to their product or licensing the recipe used for it.\(^{425}\) It preferred an assessment of the profits lost by the plaintiff up to the time at which the defendant could reasonably have been expected to duplicate the product well enough to compete with the plaintiff’s product.

The consultancy fee approach was rejected in *Apotex* on different grounds.\(^ {426}\) Expert evidence suggested that valuing such a fee was an overly complex task.\(^ {427}\) An accurate assessment would have required a number of assumptions to be made about hypothetical scenarios including who would license the technology, for what market, for what kind of exclusivity entitlements, for what lengths of time, and for what form of remuneration. It would be necessary to determine what market share the licensee may capture, with whom it might compete and how effective their product was at competing. However, courts commonly emphasize that difficulty in assessing damages should not preclude their award.\(^ {428}\) In addition, licensing occurs in a commercial setting despite these *ex ante* unknowns on the basis of value estimates. The irony of the *Apotex* Court’s reasoning is that if the task of quantification is overly complex for the courts then it is also likely to inhibit private bargaining to overcome the chill on information use created by injunctive relief. From an efficiency perspective, if negotiation around injunctive relief is likely to be thwarted, the public interest in information diffusion outweighs the information and

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\(^{425}\) *Cadbury*, *supra* at note 294 at 320; at 326.

\(^{426}\) *Apotex*, *supra* note 183.

\(^{427}\) *Ibid.* at 164-165.

litigation costs of determining quantum in the courts such that damages remain a more efficient remedy.\footnote{See text at 38, above.}

\textit{ii. LOSS OF PROFITS}

A sum of damages equivalent to the plaintiff’s actual loss of profits may be awarded for a period from the breach of confidence to the date of trial. A further award may be appropriate based on the capitalized value of future lost profits, goodwill and reputation.\footnote{Tree Savers, \textit{supra} note 293 at 464; See also \textit{S.B.J. Stephenson, supra} note 199 at 309 (Awarding a sum for lost profits that would have been derived from clients who were not expected to return).}

In a claim for loss of profits, the plaintiff must prove that the defendant’s business was acquired as a result of the misuse of confidential information and that but for the defendant acquiring the business, the plaintiff would have secured it in whole or in part.\footnote{\textit{Universal Thermosensors, supra} note 227 at 851.} In \textit{Cadbury} the Court emphasized that the relevant opportunity lost to the plaintiff is not an opportunity to conduct its business free of competition, but the opportunity to be free of that degree of competition that utilises its own confidential information.\footnote{\textit{Cadbury, supra} at note 294 at 317-318 (The plaintiff cancelled a licensing agreement between the parties that had been developed during years of legitimate use of the licence. The Court found that the plaintiff’s self inflicted deprivation of the defendant’s business \textit{infra}structure and experience was relevant to assessing the loss of profits that had resulted from the misuse of confidential information).}

Less specific claims for lost profits may succeed on the basis of a general diminution of trade but this is likely to be more difficult to prove.\footnote{\textit{Ibid. at 327 citing Robb v Green [1895] 2 QB 1 at 19-20 per Hawkins J.}} General reduction in trade may result from factors such as competition from rivals other than former employees and internal disorganisation following the loss of an employee, or the loss of a number of employees at once.\footnote{\textit{Universal Thermosensors, supra} note 227 at 852; See also \textit{Alberts, supra} note 331 at 120; \textit{Jolicoeur, supra} note 183 at 49; \textit{Tree Savers, supra} note 293 at 465.}

When damages are assessed on the basis of a lost opportunity, the court may also deduct from the award of damages an estimate of the costs that the plaintiff would have
expended to obtain the opportunity for itself. However, defendant’s costs do not always provide a suitable guide as to the costs that would have been incurred by the plaintiff. For example, the plaintiff may have been able to take advantage of greater economies of scale or scope than the defendant. The employee will bear any costs that would have been unnecessary if the employer had applied the information in the same manner as the employee after misappropriation. Damages may also be reduced to take account of cost reductions made possible by the diminution of the plaintiff’s trade. For example, reduced overheads, such as rental and staffing costs may reduce the amount of loss sustained by the plaintiff.

Damages may also be limited to the period of time necessary to make up for the advantage received by the defendant through use of the protected information. This is consistent with the principle that an employer should be protected against only the degree of threat that an employee poses to its business using confidential information that exceeds the threat posed by other industry rivals. For example, in Cadbury it was possible to approximate the plaintiff’s product’s qualities so that a new product could adequately compete without ever actually replicating the original. In assessing the time it might take to develop a competitive product, it is not necessary to determine exactly how long the same product may take to develop but only the period of time that it might take to develop a sufficiently close substitute product to satisfy the ordinary customer.

An employee’s claim that he or she had no need to have recourse to confidential information after termination of employment may not prevent a finding of breach if confidential information was nevertheless taken from the former employer. However,

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435 LAC Minerals, supra note 311 at 81 per Sopinka J. (Although in the minority on the issue of appropriate remedy).
436 Ibid. at 84 per Sopinka J.; See also at 81 per Sopinka J. (Proposing that damages be awarded on the basis of a sum equivalent to the plaintiff’s likely share of the mine’s current valuation, less the costs of development of the mine).
437 S.B.J. Stephenson, supra note 199 at 308-309.
438 Cadbury, supra at note 294 at 318.
439 Ibid. at 321.
440 Ibid. at 319.
441 See Universal Thermonsensors, supra note 227 at 850-851 (Also finding that any doubt about whether the information was used will be resolved in favor of the plaintiff assuming that if the information was
this issue may be relevant to quantifying the loss that the former employer could have suffered without the defendant’s misuse of information.\textsuperscript{442} In essence, the courts advocate a flexible discretionary approach that assesses as many influential factors as possible when assessing quantum of damages.\textsuperscript{443}

Allowing a measure of damages based on lost profits avoids claims that injunctive relief is required to prevent future losses. The relationship between the parties is severed without the need for future monitoring by the plaintiff to ensure that the defendant complies with the terms of an injunction. The principles applied to assess damages also ensure that the plaintiff is compensated for net losses only. A damages remedy safeguards employers’ incentives for creation of information by ensuring that they receive the benefit they would have received without misappropriation, while at the same time allowing the employee to use the information. This is particularly appropriate if use by the employee has a higher value than use by the employer.

\textit{iii. Cost Approach/Defendant’s Savings}

In \textit{Apotex} the Manitoba Court of Appeal agreed that it would be usual to assess and award as damages the loss of profits that \textit{Apotex} had sustained as a result of the breach of confidence.\textsuperscript{444} However, it upheld the lower court’s award that had been based on a loss of investment or cost approach. Novopharm reimbursed Apotex for the entire cost of development of the technology it had misappropriated, now in the public domain as a result of the patent application that had been made by Novopharm.

The Court acknowledged that authority for this approach in Canada is sparse.\textsuperscript{445} However, the fiercely competitive nature of the pharmaceutical industry, the likely loss of

\textsuperscript{442} \textit{Universal Thermosensors}, \textit{ibid.} at 852-852; See also \textit{Ocular Sciences}, \textit{supra} note 185 at 377 (Finding that although information was taken by the defendant, he had the ability to reproduce something similar without reference to his former employer’s information).
\textsuperscript{443} See \textit{Apotex}, \textit{supra} note 183 at 512; \textit{Cadbury}, \textit{supra} at note 294 at 330.
\textsuperscript{444} \textit{Apotex}, \textit{ibid} at 131.
\textsuperscript{445} \textit{Ibid.} at 173.
future profits and the nature and extent of use of the trade secrets by Novopharm were found to justify the application of the cost approach in this case. In addition, calculating loss of profits was overly complex and depended on cumulative assumptions that made it an unsuitable approach. The Court took a particularly punitive approach, also enjoining Novopharm from using the technology for a period of time.

This approach runs counter to efficiency objectives. Avoiding the need to compute lost profits may have saved some litigation costs. However, it is likely that quantifying the research and development costs that formed the basis for the award would also have been difficult and costly. This approach had the effect of granting Apotex a windfall. The original research and development costs were transferred to Novopharm. At the same time an injunction prevented it from using the technology for which it ultimately paid. Apotex retained the right to use the information although it no longer bore any costs of its development. It also retained any profit that it might have made using the technology before the misappropriation. In effect, the parties pre-litigation roles were reversed. The Court appears to have been unduly influenced by the commercial morality of the defendant’s conduct. The approach ignores the fact that information is non-rivalrous. Both parties can apply it at the same time to production with the only effect being an increase in competition and a potential diminution of return on investment in development for Apotex. This loss could have been adequately compensated by a loss of profits or licensing fee measure of damage. It is unlikely that this approach could ever be justified from an incentive or diffusion perspective.

B. SUMMARY

Vaver has suggested that the assessment of damages for breach of confidence should be largely discretionary and that the cases should be considered as having laid down relevant

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446 Ibid. at 175.
447 Ibid. at 131.
448 Ibid. at p161 (Finding that the court may take into account the lack of good faith and forthrightness of the defendant when granting injunctive relief. The case was also likely to have been tainted by the fact that the defendant was tried for contempt for breach of the terms of the injunction at the same time as the appeal was heard).
considerations for the exercise of the discretion as opposed to firm tests.\textsuperscript{449} However, that discretion should be subject to preferred methods of quantifying damages.

The market value of information provides an appropriate measure of the plaintiff's loss if an employer was seeking to license the use of its confidential information to a former employee. However, this need not require the employer to relinquish all control over the information. When a former employee takes information that an employer intended to keep secret, damages assessed on a loss of profits approach is most appropriate. The employer should recover such profits as it would have recovered had the information remained confidential until it could be independently discovered by accident or through reverse engineering, or until similar processes became so common that it became an aspect of industry use rather than a trade secret. The employer should have restored to it the partial inexcludability that it would have enjoyed had the employee not breached his or her obligations of confidence.

The cost approach should be rejected as an appropriate measure of damages. It results in a windfall for the plaintiff and it is unduly punitive, particularly when used in conjunction with injunctive relief. The deterrent aspect encourages socially wasteful reinvention of the wheel because the loss to the defendant is equivalent to original research and development costs. However, if the defendant carries out independent parallel invention the plaintiff is deprived of reimbursement of research and development costs. This form of deterrence results in socially wasteful duplication of effort and cost.

\textsuperscript{449} Vaver, \textit{supra} note 188 at 289.
2. ACCOUNT OF PROFITS

An account of profits focuses on employees' unjust enrichment. Employees are forced to disgorge profits derived through wrongful use of their employers' trade secrets even when use of information takes nothing from the business of their employers. This makes an account of profits a particularly useful remedy for employers that sustain no loss. The courts emphasize that an account of profits is not intended to punish employees, but to redress wrongs done to employers. In theory, because only net profits are accounted for to employers, employees are left in a financially neutral position. However, in reality the elements required to prove the remedy result in scope for inaccurate assessment and significant deterrent and punitive effects.

A. THE NATURE OF THE REMEDY

The same principles have been applied for rendering an account of profits in cases concerning breach of fiduciary duty, breach of the implied duty of good faith, passing off, copyright infringement and misuse of trademarks. They can also be assumed to apply in cases concerning post-employment breach of confidence.

An account of profits has been said to be the most common remedy in trade secret cases in the United States. However, it is less common in England and Canada. This may

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450 Firemaster, supra note 354 at para 69.
452 See generally Canaero, supra note 292.
453 See generally Firemaster, supra note 354.
454 See generally My Kinda Town, supra note 451.
455 See generally Blazik v Brown, [2000] FCJ No. 225 (FCTD) online: OL (FCJ).
456 See generally Dubiner v Cheerio Toys & Games Ltd (1966), 55 DLR (2d) 420 (Exch. CC) [hereinafter Dubiner].
457 Young, S.S. and Palladino, M.J., “Monetary Damages in Trade-Secret Cases” (1989) 25 No. 3 Trial 45 at 45 (Although including under the head of disgorgement both an account of the defendant’s profits and an account of the defendant’s savings. The latter is considered in this thesis as a damages remedy).
458 See Dubiner, supra note 456 at 431 per Noel J. (Commenting that there was a dearth of Canadian authority in this area and that in England such little use was made of the remedy of account of profits that it was difficult to produce English decisions that defined its limits with precision).
be due in part to the complex and expensive process required to render an account of profits.\textsuperscript{459} Lindley L.J. noted in \textit{Siddell v Vickers} in the late nineteenth century:\textsuperscript{460}

... I do not know any form of account which is more difficult to work out, or may be more difficult to work out than an account of profits. ... the difficulty of finding out how much profit is attributable to any one source is extremely great – so great that accounts in that form very seldom result in anything satisfactory to anybody. The litigation is enormous, the expense is great, and the time consumed is out of all proportion to the advantage ultimately attained; so much so that in partnership cases I confess I never knew an account in that form worked out with satisfaction to anybody. I believe in almost every case people get tired of it and get disgusted.

The remedy has also been recognized as time-consuming, expensive and often unsatisfactory in Canada.\textsuperscript{461}

\textbf{B. Election}

It is general practice for the plaintiff to elect damages or an account of profits as its remedy after judgment has been rendered in its favor.\textsuperscript{462} However, the ability to elect a remedy is not cast as an absolute right.\textsuperscript{463} In the exercise of its equitable discretion the court may determine whether or not an account of profits is appropriate in the circumstances of the case.\textsuperscript{464} Relevant factors will include the nature of the information and its apparent value,\textsuperscript{465} the complexity of the case and the length of the litigation to date,\textsuperscript{466} whether damages would adequately compensate the plaintiff and the difficulty,

\textsuperscript{459} See for example Beloit, supra note 451, supra note 451 at 435 per Rouleau J. (Noting that the parties had expended in excess of $2.1 million in professional accounting fees alone in that proceeding before reaching the inquiry to determine the account of profits).

\textsuperscript{460} \textit{Siddell v Vickers}, (1892) 9 RPC 152 (ChD) at 162-163; See also Dubiner, supra note 456 at 431-432.

\textsuperscript{461} \textit{Ken Graham}, supra note 420 at 439; \textit{Baker Energy}, supra note 451 at 366.

\textsuperscript{462} \textit{Peter Pan Manufacturing Corp. v Corsets Silhouette Ltd} [1963] RPC 45 (ChD) at 58 [hereinafter \textit{Peter Pan}]; \textit{My Kinda Town}, supra note 451 at 47; \textit{Firemaster}, supra note 354 at para 62; See also Vaver, supra note 188 at 297.

\textsuperscript{463} Beloit, supra note 451 at 454; \textit{Ken Graham}, supra note 420 at 440; But see \textit{Peter Pan}, ibid. at 58 (Finding that the defendants had an option to elect the remedy as of right).

\textsuperscript{464} \textit{Seager}, supra note 314 at 932 per Lord Denning \textit{M.R.}; See also \textit{Ken Graham}, supra note 420 at 440 (Exercising the discretion in a breach of confidence case to refuse to grant an account of profits); Beloit, supra note 451 at 454 (Whether the remedy is appropriate falls within the equitable discretion of the court and is not allowed simply at the plaintiff's election); See also Vaver, supra note 188 at 297.

\textsuperscript{465} \textit{Seager}, supra note 314 at 932 per Lord Denning \textit{M.R.}

\textsuperscript{466} Beloit, supra note 451 at 454 citing \textit{J.M. Voith GmbH v Beloit Corp} (1993), 47 CPR (3d) 448 (FCTD) at 472-473.
expense and time-consuming nature of the task. This discretion helps to limit inefficient litigation expenses associated with accounts of profits that involve disproportionately complicated assessments and insignificant profit.

It has been suggested that given the fusion of law and equity there may now be nothing to prevent the courts from awarding both damages and an account of profits. In the United States both remedies have been allowed without the need for an election. However, Canadian courts have consistently confirmed that the plaintiff must make an election.

The election is likely to depend on which measure of monetary relief will bring greater reward to the employer. One measure may be more difficult to prove than the other. Alternatively, the employer may have suffered no loss while the employee makes a significant profit, or vice versa. The ability for plaintiffs to make an election significantly undermines the courts’ ability to balance providing incentives to produce information against facilitating information diffusion. If an account of profits is retained as a remedy at all, which is cautioned against in this section, then the decision of which remedy best achieves this balance is more productively left to the discretion of the courts than to the financially motivated election of the plaintiff.

C. RELEVANCE OF AN ACCOUNT OF PROFITS TO THE PROTECTION OF TRADE SECRETS

From an efficiency perspective, an account of profits is an unhelpful remedy. The decision of whether to protect information or not is made after balancing factors that impact on incentives to create and diffuse information. The indicia applied by the courts in carrying out that balancing exercise include an assessment of the harm likely to result to an employer if information is not protected. Having assessed whether information qualifies as a trade secret from this perspective, it seems counterproductive to award a

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467 Ken Graham, supra note 420 at 439; at 440.
468 See Vaver, supra note 188 at 297-300 (Discussing the historical basis of the election as lying in the separation of law and equity).
469 Uniform Trade Secrets Act §3(a); But see Restatement (Third) of Unfair Competition §45(1) (requiring either an account of profits or damages based on an assessment of loss, whichever is the greater, but not both); See also Vaver, supra note 188 at 299.
470 See for example Firemaster, supra note 354 at para 62.
remedy calculated on the basis of the employee’s profit while according no relevance to
the loss sustained by the employer.

Potential for an account of profits has no *ex ante* incentive value for employers. Both the
chance of the information being misappropriated, and the value of it in an employee’s
hands are unknown *ex ante*. Employers are motivated by the value they consider that
they can derive from use of their technology. Preservation of secrecy is a means by
which that value is safeguarded. Damages protect against loss of that value so that in
turn, the incentive for future innovation is retained. Quantification of damages is also
likely to be based on the same evidence used to prove the liability claim. In contrast, an
account of profits introduces a new body of evidence as to the employee’s profit. This
imposes a new set of litigation costs on the parties and the courts.

It is possible that an account of profits may act as a proxy for a private profit sharing
agreement. Such agreements are becoming increasingly common in high technology
industry sectors.471 However, these agreements are likely to entitle an employer to a
share of profits less than the entire net profit derived from production. The potential for
an account of profits may act as a disincentive for an employer to enter a private profit
sharing agreement if it can receive the employee’s entire net profit as a remedy for
misappropriation and the costs of litigation are borne by the employee.

Justification for an account of profits rests almost exclusively on the moral rationale that
wrongdoers should not be allowed to benefit from their wrongdoing. Despite assertions
to the contrary by the courts, an account of profits has largely punitive value as a
remedy.472 An account may be coupled with injunctive relief, and even if it is not, it has
the effect of excluding an employee entirely from profitable use of the information at
issue. This exclusion may be for a limited period of time. However, that period is
arbitrarily determined. It bears no proportion to the head start gained by the employee
through use of the information. Employees are deprived of the profit of their endeavours

471 See text at 29 and footnote 95, above.
472 See for example *My Kinda Town*, supra note 451 at 55; *Baker Energy*, supra note 451 at 366; *Beloit*,
supra note 451 at 455; *Lubrizol*, supra note 451 at 33.
and they sustain an uncompensated opportunity cost for the time spent generating profit that must subsequently be disgorged. In addition, the cost of rendering an account of net profit falls on employees. Difficulties in apportioning the amount of profit attributable to use of an employer’s information means it may receive a financial windfall derived from the employee’s superior ability at exploiting the employer’s information.

On the other hand, plaintiffs may be at risk of costs if the results of assessments of profit are doubtful. They may be disappointed at the level of net profit to which they are entitled, and enquiries may be complicated if confidential information is mingled with non-confidential information in a product’s manufacture or sale.473

These difficulties make an account of profits an imperfect and expensive remedy. Its use should be limited if not abandoned. While the assessment of causation and valuation of damages brings its own difficulties, the courts appear to be more comfortable with these measures of compensation. Damages focus on factors impacting directly on the balance between providing incentives to produce information and its transfer to higher valued uses. An account of the value of the employer’s lost opportunity to exploit its own information better maintains an incentive for the production of information without chilling the productive use of information by rivals able to compensate that loss.

The following section reviews case law that has developed basic principles for awarding accounts of profits. General principles of application are derived from cases concerning passing off, infringement of patent and copyright, and breach of fiduciary duty. They demonstrate the difficulties inherent in this choice of remedy.

**D. METHODS OF ASSESSING QUANTUM OF AN ACCOUNT OF PROFITS**

Employers are entitled to recover net profits.474 However, they need prove only the amount of revenue derived by the employee from his or her infringing acts. The employee must reveal and disgorge the profits.475 He or she bears the burden of proving

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473 Ken Graham, supra note 420 at 439.
474 Ibid.
475 See for example Beloit, supra note 451 at 441.
deductible expenses and any claim to apportionment, or the lack of a causal link between the profits made and the misuse of confidential information.476

When an account is ordered, it will be taken from the time of breach to the time of the assessment.477 Only actual profits are accounted for. However, the plaintiff may waive the period between judgment and assessment if the result would be to force it to bear losses by the defendant that have resulted from the litigation or another cause unrelated to the use of the information.478 Once net profit is assessed, the defendant must also account for any benefit derived from use of the profits. This is usually awarded as prejudgment interest on the profits awarded.479

These principles force the employee to bear the costs of quantifying the remedy. Most of the complexity of an account of profits lies in determining net profit and apportionment. Combined with the fact that the defendant must bear losses not causally connected to use of the information, these factors make an account of profits a potentially severe punitive remedy despite claims by the courts to the contrary.480

i. Comparative Accounting Method

On a comparative accounting approach the plaintiff is entitled to recover the net difference between the profit made by the defendant through infringing use of the information and the profit that the defendant could have derived through the next best non-infringing means of producing the same product or process.

In Peter Pan Manufacturing Corp v Corsets Silhouette Ltd Pennycuick J. expressly rejected a comparative accounting approach.481 He considered it to be impossible to calculate what the profit would have been under a hypothetical form of manufacture.482

476 Baker Energy, supra note 451 at 367; Beloit, supra note 451 at 456.
477 Dubiner, supra note 456 at 432-433.
478 Ibid. 433-434.
479 See for example Wellcome Foundation Ltd v Apotex Inc (1998), 82 CPR (3d) 466 (FCTD) at 489 [hereinafter Wellcome].
480 See footnote 472 and text at 129, above.
481 Peter Pan, supra note 462 at 60.
482 Peter Pan, supra note 462 at 60 citing Siddell v Vickers, supra note 460 (Also leaving open whether a comparative accounting method may be more appropriate when the defendant could have
He set a simple but authoritative formula for the assessment of quantum of an account of profits:

It seems to me that upon the plain terms of those orders, what the plaintiff who elects in favour of an account of profits is entitled to, is simply an account of profits in the sense which I have indicated, that is, what has the plaintiff expended upon manufacturing these goods? What is the price which he has received on their sale? and the difference is profit. That is what the plaintiffs claim in the order for an account as formulated by them; that is simply an account of the profits made by the defendants in the manufacture and sale of the [infringing products].

A number of other courts have concurred with Pennycuick J.’s approach.\(^\text{484}\) In *Wellcome Foundation Ltd v Apotex Inc* the Court declined the defendant’s invitation to assess its actual profits as measured against the profits it would have made if it had used a non-infringing pharmaceutical production alternative.\(^\text{485}\) The Court emphasized that the comparative accounting approach increases the complexity of an already complicated exercise by requiring the courts to consider hypothetical production scenarios.

*Bayer Aktiengesellschaft v Apotex Inc* also concerned the infringement of pharmaceutical patents.\(^\text{486}\) Apotex had previously manufactured the patented drug under license. This gave a firm evidential basis for assessing a hypothetical royalty. In addition, a competitor had produced a non-infringing drug. Sales of that drug could have provided the basis for assessment of the costs and revenue of the next available non-infringing alternative means of production. Nevertheless, the court refused to compare these hypothetical revenue measures because Apotex had chosen to produce an infringing product.\(^\text{487}\)

In *Reading v Bates* the Court left open whether the comparative accounting method may be appropriate when a patent or process represents only part of the ultimate production or

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\(^\text{483}\) manufactured its product by other means but was able to do so more economically with the use of the plaintiff’s confidential information).

\(^\text{484}\) *Peter Pan*, *ibid.* at 59-60.

\(^\text{485}\) See for example *Baker Energy*, *supra* note 451 at 369-370; *Blazik v Brown*, *supra* note 455 at para 22.

\(^\text{486}\) *Wellcome*, *supra* note 479 at 480.

\(^\text{487}\) *Bayer Aktiengesellschaft v Apotex Inc* (2001), 10 CPR (4th) 151 (Ont. SCJ) [hereinafter *Bayer*].

However, these cases are better treated as cases justifying apportionment of actual profits calculated under the differential accounting method described below.

ii. Differential/Total Cost Accounting Method

Canadian courts have typically favored a differential accounting method when assessing quantum of an account of profits.489

Under a differential accounting method, the total revenue of the defendant derived from the product in question is used as a primary reference point. Only direct production costs such as labor and materials are then deducted to reach the net profit that must be disgorged. In addition, incremental revenues such as revenues received through sales of related equipment, spare parts, maintenance, increased market share and prejudgment interest are recoverable by the plaintiff.490 Under a cost accounting method all fixed costs are apportioned to the production of the infringing product on the basis of its share of production revenue or cost to the employer.

In some instances, those fixed costs that the employee would not have incurred but for the production of the infringing product are also deducted. In Wellcome the Court adopted the differential accounting method and summarized its application as follows:491

The method provides for assessment of profits by calculation of the revenues derived from infringement less those variable and fixed costs which contributed to the sums received as revenues. No part or portion of any expenditure which would have been incurred had the infringing activity not taken place is to be considered deductible. In this approach only that portion of indirect costs or fixed costs that can be fairly attributable to the infringing activity is deductible, as opposed to the absorption or full cost approach which provides for allocation of a portion of all indirect or fixed costs to be attributed to that activity.

The defendant’s attempt to have costs deducted including a portion of full fixed costs under the absorption or cost accounting method was rejected.

489 See for example Beloit, supra note 451 at 441; Wellcome, supra note 479 at 482.
490 Beloit, supra note 451 at 440.
491 Wellcome, supra note 479 at 482.
Even when the defendant has difficulty producing records of deductible expenses, such as when it does not account for the revenues and costs of individual aspects of its business, the court will not deem profit to equate to revenue.\textsuperscript{492} It will do the best it can with the information available to it to allow deductions of appropriate costs from revenue.

If an account of profits is to be used as a remedy at all, then the differential accounting method provides a less costly and more attractive method of assessment. It relies on an assessment of actual profits and avoids the added cost of assessment of hypothetical profits and comparison between the two that is required under a comparative accounting method of assessment.

\textit{iii. Apportionment}

Like any award of damages, an account of profits is predicated on proof of causation.\textsuperscript{493} The plaintiff is entitled only to profits that flow from the contribution of its information to the overall value of the defendant's product or business.\textsuperscript{494} Even though the defendant's actions may have "a continuing and lingering effect, the direct effect of the wrongful act itself must be ... time-limited".\textsuperscript{495} Only those profits obtained by the defendant during the period of breach will be accounted for. Apportionment gives rise to complexities that have rendered an account of profits one of the more expensive and complicated of available remedies. Accurate apportionment seems far more problematic than the analogous assessment of causation and loss associated with assessing damages.

Apportionment is available even when the defendant would not ordinarily manufacture and sell the specific component of the product independently. For example, the parties in \textit{Beloit} both manufactured and sold industrial paper making machinery.\textsuperscript{496} The defendant manufactured an aspect of its paper machine, the "press section", in breach of the plaintiff's patent. Apportionment of profit to the infringing press section was deemed

\textsuperscript{492} \textit{Ibid.} at 484.
\textsuperscript{493} \textit{Bayer, supra} note 486 at 156.
\textsuperscript{494} \textit{Ibid.} at 160.
\textsuperscript{495} \textit{Firemaster, supra} note 354 at para 73.
\textsuperscript{496} \textit{Beloit, supra} note 451.
possible even though that section would be unlikely to be sold separately from the machine.\textsuperscript{497}

The defendant must point to "non-infringing elements that contributed to the marketability of the product".\textsuperscript{498} In Beloit the Court also found that use of the plaintiff's patented press section did not influence the defendant's overall sales volume.\textsuperscript{499} Customers' evidence suggested that the defendant's business prospered as a result of superior design, construction, materials, service on warranties and prompt delivery.\textsuperscript{500} The plaintiffs were awarded only those profits attributable to the sale of the press section of the machines and not all profits realized from the sale of complete machines.\textsuperscript{501}

\textit{Lubrizol} provides another useful example of apportionment applied in practice.\textsuperscript{502} Imperial Oil's motor oil contained an additive patented by the plaintiff. Although the breach was recognized, the court also acknowledged that it was possible that market share and profit were attributable to factors other than the inclusion of the plaintiff's patented additive.\textsuperscript{503}

In \textit{Wellcome} a chemical compound, TMP, could be manufactured using the plaintiff’s patented chemical compound, or by using a non-infringing compound.\textsuperscript{504} The defendant used TMP in combination with a third compound in the manufacture of it’s anti-bacterial pharmaceutical. Apportionment was necessary because batches of the pharmaceutical contained patented and unpatented compounds. The ratio appearing in the final product was of one part patented to five parts unpatented compound. The Court agreed that the success of the final product was owed in part to the use of the unpatented compound.

However, the Court's quantification of apportioned profits was curiously arbitrary. It rejected apportionment on the basis of the content ratios of each compound, or on the

\textsuperscript{497}\textit{Ibid.} at 477.
\textsuperscript{498}\textit{Bayer, supra} note 486 at 160.
\textsuperscript{499}\textit{Beloit, supra} note 451.
\textsuperscript{500}\textit{Ibid.} at 458-459.
\textsuperscript{501}\textit{Ibid.} at 459.
\textsuperscript{502}\textit{Lubrizol, supra} at note 451.
\textsuperscript{503}\textit{Ibid.} at 31.
\textsuperscript{504}\textit{Wellcome, supra} note 479.
basis of the total cost of each compound as against the total cost of the final product.\textsuperscript{505} Instead the Court made a simplified, discretionary calculation. It sought to recognize in general terms that there were two active ingredients, that the patented ingredient was more significant than the other in the combination, and that the defendant had profited in part from its marketing and development of the final product. It thus apportioned 60\% of the profit to the use of the patented compound and reserved the other 40\% of the profit exclusively to the defendant.\textsuperscript{506}

The courts have applied similar discretionary awards in other cases allowing apportionment. For example, in \textit{My Kinda Town Ltd v Soll} Slade J. noted that what is required for apportionment “will not be mathematical exactness but only a reasonable approximation”.\textsuperscript{507}

Apportionment has been applied in passing off cases where not all customers were confused,\textsuperscript{508} where copyright teaching materials formed only a part of the entire teaching package from which the defendant profited,\textsuperscript{509} to determine an account of profits for misuse of a trademark,\textsuperscript{510} and when assessing profits attributable to breach of fiduciary duty.\textsuperscript{511} Factors other than the breach of duty that may impact on profit in this context include the market profile, pre-existing reputation and capabilities of the defendant’s new employer, the fact that the new employer had other competent and capable employees working on its behalf, the effect of competitive pricing, and the effect of the litigation concerning the defendant’s breach.\textsuperscript{512}

It has been suggested that apportionment might not apply when the plaintiff’s information has been used in its entirety, albeit with some modification by the defendant that has

\begin{flushleft}
\textsuperscript{505} \textit{Ibid.} at 488.  \\
\textsuperscript{506} \textit{Ibid.} at 488.  \\
\textsuperscript{507} \textit{My Kinda Town, supra} note 451 at 58; See also \textit{Dubiner, supra} note 456 at 435 (Estimating the percentage of the defendant’s profit owing to the use of the plaintiff’s trademark).  \\
\textsuperscript{508} \textit{My Kinda Town, ibid.} at 54.  \\
\textsuperscript{509} \textit{Blazik v Brown, supra} note 455 at para 43.  \\
\textsuperscript{510} \textit{Dubiner, supra} note 456 at 434.  \\
\textsuperscript{511} \textit{Firemaster, supra} note 354 at para 67.  \\
\textsuperscript{512} \textit{Firemaster, supra} note 354 at para 76.  
\end{flushleft}
increased its market value. This is contrasted with cases where apportionment may be appropriate because the information is used to improve a pre-existing product or process of the defendant. This distinction is somewhat inconsistent given that the essence of the remedy is to disgorge any profit resulting from misuse of the plaintiff’s information.

E. SUMMARY

An account of profits is historically an equitable remedy. As a consequence, quantification focuses on a measure of the employee’s gain from exploitation of protected information rather than the employer’s loss. However, an account of profits does nothing to advance the incentive objectives of intellectual property protection. By disgorging the employee’s entire profit, the remedy has a chilling effect on the diffusion of information.

The disadvantages of an account of profits highlighted in this section indicate that it is an inefficient remedy. An efficient trade secrecy doctrine should focus on the degree of loss the employer is likely to sustain if protection is denied. It is therefore inappropriate to quantify a remedy on the basis of the gain derived by the employee through his or her breach. The courts should better control the employer’s election option that enables the choice of this inefficient remedy, preferring instead to rely on a damages remedy. If an account of profits must be used because assessment of damages by any other method is impossible, the hypothetical measure of profit relied upon under the comparative accounting method should be rejected in favor of a differential accounting method. This method more equitably accounts for net profit and allows for apportionment.

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513 Teledyne Industries Inc v Lido Industrial Products Ltd (1982), 68 CPR (2d) 204 at 214 (FCTD) (Noting however that this was not an issue requiring resolution on the facts of this case); See also Bayer, supra note 486 at 158-159; at 163 (The issue not arising for consideration but noting that the fact that the patent was infringed in full raised a serious question as to the appropriateness of apportionment).
3. INJUNCTIVE RELIEF

Courts tend to prefer injunctive relief to a monetary remedy because of the inherent difficulty in quantifying damages. However, the same valuation difficulties make private bargaining unlikely to move information to higher valued uses when injunctive relief is granted. The result is that when injunctive relief is awarded, information is often frozen in an inefficient use, causing social loss in the form of the wasted innovation that might have resulted from its transfer. For these reasons, compensatory damages are preferred. Injunctive relief should be reserved for situations in which the courts are satisfied that a failure to negotiate around the relief is not harmful because the employee is unable to put the information to a higher valued use, determining substantive liability has removed the greatest impediments to private bargaining so that agreement between the parties is likely despite injunctive relief, or the cost to the courts of quantifying damages is so high as to outweigh the public interest in information diffusion.

This section reviews the approach taken by the courts when awarding interim and permanent injunctive relief. The constraints that these approaches provide on the efficiency of trade secret protection are highlighted. Methods of minimizing those constraints are indicated for application in those cases where injunctive relief must be relied upon.

A. INTERIM INJUNCTIVE RELIEF

Interim injunctive relief is intended for situations of urgency. Actual or threatened breach of confidence should be imminent such that the plaintiff requires swift action to prevent breach or mitigate the loss that may result pending trial.

Depending on its terms, an injunction may remove a former employee from the workforce, or prevent the use of allegedly confidential information until substantive trial. The relationship between a former employee and his or her new employer may suffer as a result of interim relief, especially when the new employer has no prior notice of the breach of confidence and resents being implicated in the former employee’s breach. In some cases significant time can be expected to pass before matters reach substantive trial.
Allegations may be particularly complex, requiring a large number of other interlocutory issues to be resolved. Interim relief may so frustrate the employee’s plans to compete, that it may dispose of the matter entirely. The parties may never proceed to substantive hearing. For this reason, the criteria for awarding injunctive relief should be strictly construed.

i. The Criteria for Interim Injunctive Relief

The English case of American Cyanamid Co v Ethicon Ltd remains the leading authority regarding the criteria to be applied when awarding interim injunctive relief in England and Canada.514 American Cyanamid Co was the manufacturer and patent holder for a synthetic soluble surgical suture. Its competitor, Ethicon Ltd, was the dominant supplier of soluble surgical sutures made from catgut. Perceiving the threat of competition from American Cyanamid, Ethicon planned to produce its own synthetic soluble suture. American Cyanamid alleged that this product would infringe its patent. It sought interim relief preventing Ethicon from bringing its product to market until substantive determination of the patent infringement allegations.

Lord Diplock delivered the unanimous decision of the House of Lords. He described the interim remedy in the following terms.515

My Lords, when an application for an interlocutory injunction to restrain a defendant from doing acts alleged to be in violation of the plaintiff’s legal right is made on contested facts, the decision whether or not to grant an interlocutory injunction has to be taken at a time when ex hypothesi the existence of the right or the violation of it, or both, is uncertain and will remain uncertain until final judgment is given in the action. It was to mitigate the risk of injustice to the plaintiff during the period before that uncertainty could be resolved that the practice arose of granting him relief by way of interlocutory injunction; but since the middle of the 19th century this has been made subject to his undertaking to pay damages to the defendant for any loss sustained by reason of the injunction if it should be held at the trial that the plaintiff had not been entitled to restrain the defendant from doing what he was threatening to do. The object of the interlocutory injunction is to protect the plaintiff against injury by violation of his right for which he could not be adequately compensated in damages recoverable in the action if the uncertainty were resolved in his favour at the trial; but the plaintiff’s need for such protection must be weighed against the

514 American Cyanamid Co v Ethicon Ltd, [1975] 1 All ER 504 (HOL) [hereinafter American Cyanamid].
515 Ibid. at 509.
corresponding need of the defendant to be protected against injury resulting from his having been prevented from exercising his own legal rights for which he could not be adequately compensated under the plaintiff's undertaking in damages if the uncertainty were resolved in the defendant's favour at the trial. The court must weigh one need against another and determine where 'the balance of convenience' lies.

The criteria to be satisfied are reviewed in turn below.

a. A Serious Question to be Tried

The Court of Appeal in American Cyanamid had required proof on the balance of probabilities that a permanent injunction would be justified at trial before it would grant interim relief.516 American Cyanamid was required to prove a prima facie case. On appeal, Lord Diplock rejected this standard of proof.517 It is inherent in the request for interim relief that the issues are not able to be finally resolved. The court need only be satisfied that "the claim is not frivolous or vexatious; in other words, that there is a serious question to be tried".518

Where the balance of convenience in granting or denying interim relief is finely balanced, it may be appropriate to consider the relative strength of each party's case on the evidence.519 In American Cyanamid it was considered that this should be only to the extent that there is no credible dispute that one party's case is disproportionately stronger than the other's.520

Subsequent cases have also supported assessment of the parties' prospects of success at trial as an aspect of the balance of convenience if the grant or refusal of interlocutory relief would otherwise have the effect of disposing of the action.521 The court may

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516 Ibid. at 510.
517 Ibid. at 510 per Lord Diplock; But see Terrapin, supra note 314 at 135 per Lord Evershed M.R., at 142 per Romer L.J. (Noting that if a prima facie case of breach of confidence were shown on the facts, then prima facie the plaintiffs would be entitled to interlocutory relief)
518 American Cyanamid, supra note 514 at 510 per Lord Diplock.
519 Ibid. at 511.
520 Ibid. at 511.
521 See NWL Ltd v Woods, [1979] 3 All ER 614 at 625-626 (HOL); Lansing Linde, supra note 188 at 423 per Staughton L.J.; at 430-431 per Beldam J. See also Lawrence David v Ashton, [1991] 1 All ER 385 (CA) at 395-396.
determine the extent of the assessment in its discretion. However, it may take account of its ability to facilitate a timely hearing, and whether the parties are likely to proceed to trial at all. Where the merits of the case form part of the court's consideration of whether there is a serious question to be tried, the court must be vigilant not to pre-empt any substantive outcome with the exercise of its discretion.

b. Damages as an Adequate Remedy

After determining that there is a serious question to be tried, the court must assess whether damages would provide an adequate remedy for either party. The court enquires into whether a successful plaintiff could be adequately compensated by damages for the loss sustained through the defendant's conduct pending trial. If damages would be an adequate remedy and the defendant is in a position to pay, then "no interlocutory injunction should normally be granted, however strong the plaintiff's claim appeared to be at that stage". An undertaking as to damages may remove the need for interlocutory relief if both these conditions are satisfied.

If the plaintiff could not be adequately compensated by damages an injunction may be considered appropriate. The court ought to then consider whether, if the defendant was successful at trial, he or she could be adequately compensated by damages for the loss sustained as a result of being restrained pending trial. If damages are to be preferred as a substantive remedy, injunctive relief should be necessary in only the rarest of cases. Consideration of the likely remedy at the interim stage will need to include a preliminary review of whether an employee has a

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522 Lansing Linde, ibid. at 424; See also Terrapin, supra note 314 at 133 (Predating American Cyanamid. Finding that the judge is entitled to make some conclusions of fact when exercising his discretion to balance all the circumstances of the case and to take such steps as he thinks proper to protect one party or the other or both).

523 Lansing Linde, ibid. at 424.

524 American Cyanamid, supra note 514 at 510; See also Terrapin, supra note 314 at 135 (Predating American Cyanamid and noting that the damage to be done to the plaintiffs may not be "merely a matter of compensation in pounds, shilling and pence"); at 140 (Finding that the ability to pay on a cross-undertaking for damages is relevant to assessing whether injunctive relief is justified).

525 American Cyanamid, ibid. at 510.

526 Ibid. at 510.
comparative advantage at exploiting the information, whether he or she is able to pay damages, and the likely impact on the employer of the increase in competition in the market that will result from the employee using the information.

c. Balance of Convenience

The final factor weighed in the exercise of the court's discretion is where the ultimate balance of convenience lies between the parties. Whether damages will be an appropriate remedy may independently affect the balance of convenience. However, a number of other factors may weigh in the balance.

In the event that the balance of convenience does not fall clearly in favor of one party or the other, Lord Diplock was of the view that "it is a counsel of prudence to take such measures as are calculated to preserve the status quo".

For example, in American Cyanamid Ethicon's sutures were not yet on the market. The injunction would enjoin Ethicon from an activity that it had not yet started. In contrast, to interrupt business already in progress may cause greater inconvenience to the defendant.

In American Cyanamid it was also relevant that once Ethicon's sutures were on the market it may have become commercially impractical for American Cyanamid to insist on a permanent injunction at trial. Customers would be aware that American Cyanamid was seeking to remove Ethicon's sutures from the market and this may have had a negative effect on American Cyanamid's goodwill. On balance, these factors weighed in favor of interim relief preventing the manufacture and sale of Ethicon's sutures. Other relevant factors may include the effect injunctive relief could have on

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527 Ibid. at 510.
528 Ibid. at 511.
529 Ibid. at 511.
530 Ibid. at 511.
531 Ibid. at 511; See also Coco, supra note 188 at 54 per Megarry J. (Considering that a product on the market may require protection through interim relief although an idea for a product not on the market may not require such protection).
532 American Cyanamid, supra note 514 at 512.
employees and barriers to entry to the market if those effects would have irreversibly disadvantaged the defendant if it succeeds at trial.\textsuperscript{533}

\textit{ii. CROSS UNDERTAKINGS AS TO DAMAGES}

As noted by Lord Diplock in \textit{American Cyanamid}, the plaintiff's entitlement to interim injunctive relief is subject to the requirement for an undertaking to pay damages to the defendant for any loss sustained by reason of the injunction if at trial the plaintiff is unsuccessful. In cases that proceed to trial the cross undertaking will be significant not only where permanent injunctive relief is denied, but also where the permanent relief granted is narrower than any interim relief such that the defendant sustains some loss.

The court has a discretion to award damages under the cross undertaking.\textsuperscript{534} Damages are assessed on the same basis as would apply for breach of contract if the undertaking had been a contract stipulating that the plaintiff would not prevent the defendant from doing whatever it was that the defendant was restrained from doing under the injunction.\textsuperscript{535} The court may take account of equitable principles such as the circumstances in which the injunction was obtained, the success or otherwise of the plaintiff at trial, the subsequent conduct of the defendant and other circumstances of the case.\textsuperscript{536} The court must then consider whether the defendant has in fact sustained any loss. Ordinary contractual principles as to causation and quantum will apply.\textsuperscript{537}

In cases where interim relief is necessary, a cross undertaking efficiently safeguards a defendant against loss. It also has the effect of ensuring "that plaintiffs are not encouraged to seek excessively wide interlocutory relief in the belief that if the defendant is found guilty of some lesser degree of wrongdoing the excessive benefit they have obtained will be ignored by the court".\textsuperscript{538} Potential for payment on the cross undertaking is relevant to assessing whether damages will be an appropriate remedy in any particular

\textsuperscript{533} \textit{Coco}, supra note 188 at 54.
\textsuperscript{534} See \textit{Universal Thermosensors}, supra note 227 at 857; See also \textit{Poeton}, supra note 210 at 175-176.
\textsuperscript{535} See \textit{Universal Thermosensors}, \textit{ibid.} at 857.
\textsuperscript{536} See \textit{Poeton}, supra note 210 at 175-176.
\textsuperscript{537} \textit{Ibid.}
\textsuperscript{538} \textit{Ibid.} at 177 (ChD) per Pumfrey J. (Note that the lower court decision in \textit{Poeton} was overturned on findings of liability in the Court of Appeal).
case. However, the question of the plaintiff’s ability to pay on a cross undertaking comes second to the question of the defendant’s ability to pay damages in lieu of an injunction.

**iii. SUMMARY**

The *American Cyanamid* factors have been well tried and tested in cases concerning applications for interim injunctive relief. However, it is important for the courts to recall that interim relief is discretionary. If damages will provide an adequate remedy at trial then interim relief will not be appropriate. Because damages are to be the preferred final remedy from an efficiency perspective, the need for interim injunctive relief should be rare. When interim relief is deemed appropriate the courts must be vigilant to ensure that the exercise of their discretion does not usurp the role of the substantive trial court. This is particularly the case when interim injunctive relief may have the effect of chilling the employee’s attempt at competition, avoiding substantive trial and depriving the public of the social benefit of his or her innovative ability. In essence, if a speedy trial can be assured, the need for interim relief may be avoided, saving the courts the difficult balancing task and additional litigation costs associated with an interim hearing.

**B. PERMANENT INJUNCTIONS**

Many of the same considerations that apply to granting interim relief also apply to granting permanent injunctive relief. For example, applications have been denied on the basis that the items of information were insubstantial, damage to the plaintiff would be small, and injunctive relief would be unduly oppressive to the defendant and its employees. In such circumstances, appropriate relief may be given through an award of damages assuming that any loss to the plaintiff, or benefit to the defendant can be proven at substantive hearing.

Injunctions issued in cases of breach of confidence have been divided into two distinct types. The first is an order preventing the wrongdoer from making the information public. This preserves confidentiality. The second is an order that restrains the

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539 *Ocular Sciences, supra* note 185 at 406-407.
540 *Ibid.* at 408.
wrongdoer from continuing to use or benefit from using confidential information that may have been made public subsequent to breach. This order is primarily designed to prevent the wrongdoer from benefiting from his or her conduct, or from causing the plaintiff any further harm.

i. Injunctions Against Disclosure

Even when the courts are reluctant to grant injunctions against the use of information, its disclosure may still be enjoined if only the defendant knows the information. This assessment is unlikely to cause significant difficulty for the courts. The decision of whether injunctive relief is appropriate is still subject to consideration of whether damages are an appropriate remedy within an efficiency framework.

ii. Injunctions Against Continued Use

In high technology industry sectors it will be rare that the use of trade secrets will involve simple misappropriation and replication of information. It is more likely that confidential information will form an aspect of a process of manufacture, or a building block used by the defendant to develop a new product or process. An injunction that restrains the use of confidential information may extend too far if the defendant’s products or processes do not disclose or incorporate confidential information although they owe their success to its use in their development.

This was one of the key issues facing the court in Ocular Sciences. Laddie J. pointed out that there may be two ways in which derivative works or future benefits come into issue. The first is when the information is no longer confidential but it was confidential when the defendant’s product or process was designed and implemented. This difficulty has long been treated under the auspices of the “springboard” doctrine under which injunctive relief is granted for a period of time necessary to neutralise any advantage that the employee has gained from using the trade secrets. The second issue

542 See for example Ibid. at 409 (Granting an injunction against disclosure having declined to grant an injunction against use on the basis that the injunction must not have the effect of preventing the defendants from making such disclosure as is necessary for the proper operation of their manufacturing operation).

543 Ibid.

544 Ibid. at 395.
arises when the defendant's product or process has been made using information that is still confidential but the product or process does not disclose the confidential information directly.\textsuperscript{545} Each of these issues is considered in turn below.

\textbf{a. "Springboard" Injunctions}

The "springboard" injunction owes its origins to the classic statement of Roxburgh J. at first instance in \textit{Terrapin Ltd v Builders' Supply Co (Hayes) Ltd.}\textsuperscript{546} The defendants had saved time and effort by copying drawings belonging to the plaintiff. Roxburgh J. described the scope of the doctrine as follows:\textsuperscript{547}

As I understand it, the essence of this branch of the law, whatever the origin of it may be, is that a person who had obtained information in confidence is not allowed to use it as a springboard for activities detrimental to the person who made the confidential communication, and springboard it remains even when all the features have been published or can be ascertained by actual inspection by any member of the public ... The possessor of the confidential information still has a long start over any member of the public ... It is, in my view, inherent in the principle upon which the \textit{Saltman} case rests that the possessor of such information must be placed under a special disability in the field of competition to ensure that he does not get an unfair start.

\textit{Saltman Engineering Co Ltd v Campbell Engineering Co Ltd} concerned similar facts although Lord Greene M.R. prevented the defendant from enjoying the benefit of his saving by ordering him to pay damages.\textsuperscript{548}

Injunctive relief as a means of neutralising a head start came with \textit{Terrapin}. The case has been applied with the effect that when a defendant has used confidential information to obtain an illegitimate head start, that head start is still regarded as illegitimate even if, at a subsequent date, the information becomes public.\textsuperscript{549} An injunction preventing disclosure would be of no use because the information is no longer confidential. While the rest of the world may use the information as a result, the defendant remains under a special disability against its use.

\textsuperscript{545} \textit{Ibid.} at 401.
\textsuperscript{546} \textit{Terrapin, supra} at note 314.
\textsuperscript{547} \textit{Ibid.} at 130 fn.
\textsuperscript{548} \textit{Saltman, supra} note 187 at 415 per Lord Greene; See also Seager, \textit{supra} note 314 at 932.
\textsuperscript{549} \textit{Ocular Sciences, supra} note 185 at 396-397.
A springboard injunction is intended only to neutralize the head start that the defendant has obtained through use of the plaintiff's confidential information. For this reason, it should not extend beyond the period for which the unfair advantage can reasonably be expected to continue. An advantage will rarely endure without limit. In *Roger Bullivant Ltd v Ellis* Nourse L.J. highlighted the similarities between injunctive relief and the chilling effect of a covenant not to compete. He used the period of time specified in a covenant in that case as an appropriate gauge of the period for which the plaintiffs must have regarded a head start could endure.

The restraint on use of information that is in the public domain runs counter to the notion that employers should receive no more protection against use of their secret information by a former employee than is available to protect them against competition by other industry rivals. When courts determine the period for which damages will be awarded for the lost opportunity of exploiting information free of competition, they take account of when the information might have independently entered industry use. It is a long-standing matter of policy that an injunction "should not continue beyond the time the plaintiff's trade secret remains a secret exclusively known to the plaintiff or to those to whom it has been voluntarily disclosed under conditions imposing an obligation of confidentiality upon them". If the confidentiality of the information has been destroyed then so must the duty of confidence be destroyed.

When an employee obtains a head start by misappropriating information it is more efficient to frame the remedy as an award of damages. If others may freely use the information then there is no value other than a punitive value in restraining the employee from its use. In fact, there may be a social cost if the employee is best able to exploit the information in the market. The courts have emphasized that the law does not restrain competition *per se*, and the restraint should only protect the plaintiff and not punish the

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550 *Roger Bullivant*, supra note 227 at 183; at 184; *Apotex*, supra note 183 at 162.
551 *Roger Bullivant*, ibid.
552 Ibid. at 184.
553 *International Tools Ltd v Kollar*, supra note 288 at 393.
554 See *Attorney General v Guardian Newspapers Ltd (No. 2)*, [1988] 3 All ER 545 (HOL) ("The Spycatcher case") per Lord Goff at 661-662.
A damages award also severs the relationship between the parties and avoids the additional costs associated with monitoring and enforcing injunctive relief.

Springboard injunctions are also applied to prevent former employees from deriving a benefit when they have breached confidence and continue in activities that are not in breach themselves, but build on and gain from the initial breach. In one such case, *PSM International Ltd v Whitehouse*, Lloyd L.J. acknowledged that it seemed odd and uncommercial for the court to grant a remedy that prevented either party from fulfilling contracts already entered into in breach of confidence. However, he considered the choice of remedy to lie with the plaintiffs in that case because they saw a point of principle for which they felt it worthy to stand.

The courts have not been unequivocally supportive of the springboard doctrine. In *Balston*, although not required to determine the issue, Scott J. commented that he thought it highly questionable that an interlocutory injunction could be justified as necessary to deprive a contract breaker of the fruits of his or her past breaches. Scott J.’s approach may render the springboard doctrine redundant because its purpose is specifically to deprive the defendant of the head start derived from a past breach.

However, Laddie J. concurred with the preference for a damages award in similar circumstances in *Ocular Sciences*. In Laddie J.’s opinion, the appropriate remedy for

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555 *Roger Bullivant*, supra note 227 at 183.
556 See for example *PSM International Ltd v Whitehouse*, [1992] FSR 489 (CA) at 498 [hereinafter *PSM International*] (Restraining the former employee and his new employer from fulfilling contracts made when the former employee was acting in breach of his duty of fidelity); See generally also *Roger Bullivant*, supra note 227; *Johnson & Bloy*, supra note 223; See also Brearley and Bloch, *supra* note 188 at 208.
557 *PSM International*, ibid. at 499.
558 Ibid. at 499.
559 *Balston*, supra note 196 at 341 per Scott J.
560 Brearley and Bloch, *supra* note 188 at 208.
561 *Ocular Sciences*, supra note 185.
past breaches is financial relief. He concluded:

It seems to me that, at least in the area of breach of confidence, injunctions are granted not against the continued flow of a wrongful benefit arising out of or caused by breach of the plaintiff’s rights but to prevent continuation of the breach. If a continuing activity of the defendant does not constitute a breach of confidence then it ought not to be enjoined even if it produces an unfair benefit to the defendant. ... The way the court reduces or eliminates the unfair benefit is by imposing financial penalties or, possibly, by the creation of a constructive trust.

Laddie J.’s reasoning is consistent with the approach taken in *Universal Thermosensors Ltd v Hibben* where the Court also contended with the issue of the appropriate duration and purpose of awarding interim relief. A confidential customer list had been taken by the defendants but it had not been released into the public domain. An injunction restrained the defendants from soliciting, entering into or fulfilling any contract with customers whose names appeared on the list, whether those contracts had been entered into before or after the injunction was granted. On an application for damages on the plaintiff’s cross undertaking Sir Donald Nicholls V.C. agreed that the interim injunction went beyond what was reasonably necessary to protect the legitimate interests of the plaintiffs. In particular, it ought not to have restrained the defendants from fulfilling contracts in the future with customers with whom they had already contracted. The injunction ought only to have protected against further customers being contacted. In his view, the appropriate remedy for the misuse of information that had already occurred when those customers were contacted was an account of profits or compensatory damages.

It was suggested that in some cases restraining future conduct may be appropriate if the effect would be to restore the parties to the position that they would have been in had there been no misuse, or if it would prevent the defendants from benefiting from the head

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564 *Universal Thermosensors*, supra note 227.
start they obtained.\footnote{Ibid.} However, in this case by the time the injunction was granted the defendants could have gone about compiling the information through legitimate means. They would be in substantially the same position that they were in at the time the injunction was granted without misuse of the plaintiffs’ confidential information. The effective head start had expired. For this reason, granting an injunction against fulfilment of contracts in the future would put the plaintiff in a better position than it would have been in had there been no misuse. It would have had the additional effect of running the defendants out of business.\footnote{Ibid. at 855.}

The weight of authority does not support enjoining defendants from performing contracts made in breach of confidence. Where breaches of confidence are ongoing and information is no longer confidential then injunctive relief is counterproductive. It serves only a punitive function. When breach has already occurred and information is public, or contracts and products have been developed in reliance on the information already, damages provide a more efficient remedy for the reasons described in this thesis and confirmed in Ocular Sciences.\footnote{It is also noted that Ocular Sciences, supra note 185 is a decision of the Patents Court. Universal Thermosensors, supra note 227 was decided in the Chancery Division prior to the decision in PSM International, supra note 556. PSM International and Roger Bullivant, supra note 227 are both decisions of the Court of Appeal.} Preventing the performance of contracts or production plans that utilize misappropriated confidential information is an inefficient remedy when damages would adequately compensate the former employer while at the same time making productive use of the information at issue.

b. The Product or Process Includes Confidential Information

The second of the scenarios anticipated by Laddie J. in Ocular Sciences bears some resemblance to the second category of springboard scenarios considered above. He identified that some technology, or derivative products, may be developed using misappropriated trade secrets but the product or process may not directly disclose the confidential information.\footnote{Ocular Sciences, Ibid. at 401.} In Laddie J.’s view, if the derivative products or process are regarded merely as illicit benefits flowing from the misuse of confidential information
then an injunction would be unjustified. On the other hand, if the continued use or exploitation is to be regarded as continued use of the confidential information then an injunction may be justified.\textsuperscript{572}

In the result Laddie J. was of the view that a broad principle that courts of equity should grant injunctions to prevent wrongdoers from “getting away with it” has a “tabloid appeal”\textsuperscript{573} and further:\textsuperscript{574}

I cannot believe that the use of any title which has arisen in some way, whether direct or indirect, substantial or insubstantial, proximate or remote from a breach of a right or contract will always be stopped by the court. The broad field covered by that statement of principle must contain areas into which it would be quite inappropriate for the arm of equity to reach.

It seems to me that whether or not the use of a derived product, say, should be treated as a use of the information employed in its creation must be determined on the particular facts of the case.

He went on to conclude:\textsuperscript{575}

It is not every derived product, process or business which should be treated as a camouflaged embodiment of the confidential information and not all ongoing exploitation of such products, processes or business should be treated as continued use of the information. It must be a matter of degree whether the extent and importance of the use of the confidential information is such that continued exploitation of the derived matter should be viewed as continued use of the information.

In \textit{Ocular Sciences} the information at issue was considered not to have made any significant contribution to the business of the defendant, the defendant’s consultation of the plaintiff’s information was considered not to have made any significant difference to the information it actually used, or to the time it took to develop it. Injunctive relief was denied.\textsuperscript{576}

\textsuperscript{572} \textit{Ibid.} at 401.  
\textsuperscript{573} \textit{Ibid.} at 403.  
\textsuperscript{574} \textit{Ibid.} at 403.  
\textsuperscript{575} \textit{Ibid.} at 404.  
\textsuperscript{576} \textit{Ibid.} at 404.
Cases involving derivative works may be prominent in high technology industry. They provide a perfect case for allowing use of information with payment of damages to the former employer. This result both minimizes and compensates loss to the former employer while at the same time ensuring efficient application of information to further innovation.

C. Summary

This section has highlighted the inefficient breadth of injunctive relief when compared with the flexibility of a damages remedy. It has been argued that if damages are preferred from an efficiency perspective, then damages are likely to provide a suitable remedy at substantive trial and the need for interim injunctive relief will be rare.

If information is no longer confidential, any head start achieved by an employee should be neutralized by awarding damages for the loss of an opportunity to derive future profits free from competition by the former employee. If contracts have been entered into, or products developed in breach of confidence then fulfilment of those contracts should be allowed. Springboard injunctions should be very rarely granted. When necessary, it should be only after the criteria for an award of damages prescribed in this thesis are unsatisfied, and the criteria for an award of injunctive relief are met.
4. Remedies in the United States

Both the Uniform Trade Secrets Act and the Restatement of Unfair Competition provide for injunctive and monetary relief upon proof of misappropriation.

A. INJUNCTIVE RELIEF

i. INTERIM INJUNCTIVE RELIEF

The Uniform Trade Secrets Act recognises that trade secrets have a limited life. Injunctive relief expires when the trade secret ceases to exist. However, it may be extended for an additional reasonable period of time in order to eliminate any commercial advantage that the party in breach would otherwise derive from his or her wrongdoing.\textsuperscript{577} The ability to extend the injunction beyond the life of the trade secret correlates with the commercial advantage protected by springboard injunctions at common law. The Restatement is explicit that the duration of injunctive relief ought to be limited to the time required to protect the plaintiff from harm and deprive the defendant of any benefit derived from misappropriation.\textsuperscript{578}

ii. PERMANENT INJUNCTIVE RELIEF

Usually, one of three approaches is followed in granting permanent injunctive relief in the United States.

The first, the Shellmar rule, owes it origins to Shellmar Products Co v Allen-Qualley Co.\textsuperscript{579} Proof of misuse of a trade secret is considered a breach of trust. The defendant is restrained from further use of the information in order to prevent his or her unjust enrichment. The injunction is perpetual and restrains the defendant even after the information disclosed has become public.

\textsuperscript{577} Uniform Trade Secrets Act, supra note 382, §2(a).
\textsuperscript{578} Restatement of Unfair Competition, supra note 376, §44(3).
\textsuperscript{579} Shellmar Products Co v Allen-Qualley Co, 87 F.2d 104 (7th Cir. 1936).
The second approach, the *Conmar* rule, originated in *Conmar Products Corp. v Universal Slide Fastener Co, Inc.*[^580^] Under this approach, an injunction will remain in place only as long as the information remains out of the public domain.

The third approach more closely resembles a springboard injunction. It was first articulated in the United States in *Winston Research Corp. v Minnesota Mining & Manufacturing Co.*[^581^] Under this approach, an injunction continues until the information becomes public and then for such additional time as the defendant would take to apply the information once it became public. The injunction is justified in terms of neutralizing a head start, not over the owner of the information, but over other competitors in the market.[^582^]

It has been suggested that the United States law is tending towards widespread adoption of the head start approach.[^583^] This is consistent with the statements of policy made in the provisions of the Uniform Trade Secrets Act, the *Restatement*, and in the use of springboard injunctions in England and Canada.

The *Restatement* also recommends injunctive relief to prevent a continuing or threatened appropriation.[^584^] However, in determining whether injunctive relief is appropriate, the court is advised to take into account factors akin to the *American Cyanamid* factors that would be applied in the interim setting in England or Canada, including:[^585^]

1) The nature of the interest to be protected;
2) The nature of and extent of the appropriation;
3) The relative adequacy to the plaintiff of an injunction and of other remedies;
4) The relative harm likely to result to the legitimate interests of the defendant if an injunction is granted and to the legitimate interests of the plaintiff if an injunction is denied;

[^580^]: *Conmar Products Corp. v Universal Slide Fastener Co, Inc.*, 172 F.2d 150 (2d Cir. 1949).
[^581^]: *Winston Research Corp v Minnesota Mining & Manufacturing Co.*, 350 F.2d 134 (9th Cir. 1965).
[^583^]: Cohen and Gutterman, supra note 377 at 218.
[^584^]: *Restatement of Unfair Competition*, supra note 376, §44(1).
[^585^]: *Ibid.* §44(2); See also Cohen and Gutterman, supra note 377 at 216.
5) The interests of third persons and of the public;
6) Any unreasonable delay by the plaintiff in bringing suit or otherwise asserting its rights;
7) Any related misconduct on the part of the plaintiff; and
8) The practicality of framing and enforcing the injunction.

B. THE DOCTRINE OF INEVITABLE DISCLOSURE

Part III highlighted the difficulty faced by the courts when attempting to distinguish between an employee's general skill and knowledge which he or she is free to exploit, and trade secrets that are protected. Use of damages in place of injunctive relief helps deal with ambiguous cases. In Coco v A.N. Clark (Engineers) Ltd the Chancery Division supported this approach. Megarry J. cited Seager (No. 2) and suggested that the artificiality of asking an employee to forget information that he could not help but remember, may indicate a case for a remedy of damages instead of an injunction. He saw this as an appropriate way to overcome the undesirability of expressing a doctrine of equity “in terms that included a duty which law-abiding citizens cannot reasonably be expected to perform. In other words, the essence of the duty seems more likely to be that of not using without paying, rather than of not using at all”.

However, recent developments in United States law show a preference for injunctive relief in ambiguous cases. When specific items of information are not readily separable from general skill and knowledge, the courts have restrained the employee from going to work for a competitor at all. This is on the basis that when employed by a rival the employee would inevitably disclose confidential information.

The effect of this doctrine is to replicate in common law the restraint provided by a contractual covenant not to compete. It removes the transaction costs associated with negotiating contractual covenants. However, the efficiency of enforceable covenants not to compete does not necessarily support the use of similar restraints as a common law

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586 See text at 73-79, above.
587 Coco, supra note 188 at 49-50.
588 Ibid.
589 Ibid. at 50; See also Lancashire Fires (ChD), supra note 196 at 645.
remedy. A restraint imposed ex post deprives employees of ex ante knowledge that they will be restrained from using information after termination of employment. This creates uncertainty for employees. The remedy errs on the side of protecting ambiguous information without providing an opportunity to negotiate coverage, duration or consideration for the restraint. The remedy is not applied with reference to the same considerations of reasonableness that govern the enforceability of contractual covenants not to compete. This undermines the rationale for protecting only trade secrets at common law while requiring contractual assignment of risk when non-confidential or ambiguous information is at stake. The approach also risks over-inclusion. This carries the social cost of depriving industry of innovative information, skill and knowledge.

This section briefly reviews the application of the doctrine of inevitable disclosure in *PepsiCo Inc v Redmond*, where it was first developed.\(^{590}\) The doctrine’s weaknesses, and the potential for it to impact inefficiently on high technology industry is then emphasized to support the Canadian courts’ rejection of this doctrine.

### i. Developing the Doctrine - *PepsiCo Inc v Redmond*

Mr Redmond worked for PepsiCo from 1984 until 1994. He spent time in positions as the General Manager of the business units covering Northern California, and later the business unit covering the whole of California.\(^{591}\) His employment was subject to express confidentiality undertakings although these extended no further than the protection of trade secrets.

Quaker Oats Co was PepsiCo’s greatest competitor in the fierce beverage industry market. That market included products such as Quaker Oats’ Gatorade and Snapple, Coca Cola Co’s Powerade and PepsiCo’s All Sport sports drinks. In 1994 Quaker Oats offered, and Mr Redmond accepted, a position as Vice President-Field Operations for Gatorade. He resigned from his employment at PepsiCo and prepared to start work for Quaker Oats.

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\(^{590}\) *PepsiCo Inc v Redmond*, 54 F.3d 1262 (7th Cir. 1995)

\(^{591}\) Ibid. at 1264.
PepsiCo identified a range of information that it considered qualified as trade secrets, including a strategic plan that included competition plans, financial goals and strategies for marketing, manufacturing, packaging, and distributing its products. PepsiCo alleged that the value of this information lay in its secrecy. It argued that Mr Redmond would inevitably disclose that information to Quaker Oats in his new position because he would have major input into similar planning for Gatorade and Snapple.

The District Court applied the Illinois Trade Secrets Act, almost identical to the Uniform Trade Secrets Act, and granted injunctive relief that prevented Mr Redmond from going to work for Quaker Oats. The United States Court of Appeals for the Seventh Circuit found that the Act, combined with earlier authority, allowed proof of a claim of trade secret misappropriation by demonstrating that the defendant's new employment would inevitably lead him to rely on the plaintiff's trade secrets.

The essence of the doctrine was summarized as follows:

The district court concluded on the basis of that presentation that unless Redmond possessed an uncanny ability to compartmentalize information, he would necessarily be making decisions about Gatorade and Snapple by relying on his knowledge of [PepsiCo] trade secrets. It is not the "general skills and knowledge acquired during his tenure with" PepsiCo that PepsiCo seeks to keep from falling into Quaker's hands, but rather "the particularized plans or processes developed by [PepsiCo] and disclosed to him while the employer-employee relationship existed, which are unknown to others in the industry and which give the employer an advantage over his competitors".

In reality, the information PepsiCo sought to protect amounted to no more than Mr Redmond's general skill and knowledge. It was not a "traditional trade secret case, in which a former employee has knowledge of a special manufacturing process or customer list and can give a competitor an unfair advantage by transferring the technology or customers to that competitor". The Court considered that although the PepsiCo

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592 Ibid. at 1265.
593 Ibid. at 1266.
594 Ibid. at 1269.
595 Ibid.
596 Ibid. at 1270.
problem may arise less often, it nevertheless fell within the realm of trade secret protection in the present circumstances.\textsuperscript{597}

It was significant that Mr Redmond was found to have been less than honest in his dealings with PepsiCo at the time of his resignation. His assurances that the valued information would not be relied upon were not persuasive.\textsuperscript{598} Mr Redmond was enjoined from starting work at Quaker Oats for approximately six months following the date of his resignation from PepsiCo, and from forever disclosing PepsiCo trade secrets and confidential information.\textsuperscript{599} On remand however, the District Court narrowed the injunction and allowed Mr Redmond to take the job at Quaker Oats. He remained restrained from disclosing trade secrets and confidential information while in that position.\textsuperscript{600}

\textit{ii. IMPLICATIONS OF THE DOCTRINE FOR TRADE SECRECY LAW}

The unexplained reduction of the restraint imposed in PepsiCo makes its previous scope a somewhat idle threat. In the end, only information that would readily be regarded as a trade secret at common law was granted protection against disclosure and Mr Redmond was left free to pursue employment with Quaker Oats. Any greater protection against competition on his departure would have had to be obtained by PepsiCo through the use of a contractual covenant not to compete.

However, the threat of the initial restraint has serious implications for the scope of trade secret law within and outside the United States.\textsuperscript{601}

In \textit{Future Shop} the British Columbia Supreme Court rejected application of the doctrine

\textsuperscript{597} \textit{Ibid.}
\textsuperscript{598} \textit{Ibid.} at 1267.
\textsuperscript{599} \textit{Ibid.} at 1272.
\textsuperscript{601} But see for example Miller, M.K., “Inevitable Disclosure Where No-Competition Agreement Exists: Additional Guidance Needed” 6 B.U.J. Sci. & Tech. L. 9, online: LEXIS; WL at para 32 (Suggesting that by Spring 2000 PepsiCo had been applied only twice in cases not already involving an express covenant not to compete).
in Canada on the basis that.\textsuperscript{602}

The application of this doctrine, even without the distinguishing findings of bad faith evident in [PepsiCo], in my view, would require a significant change in the tests applicable in this country.

This rejection reinforces the basic common law principles relating to the protection of free use of general skill and knowledge and the regulation of the use of trade secrets by former employees. A remedy that prevents a former employee from working for a rival altogether is inconsistent with the tendency of the courts to refuse protection to information that is not readily separable from general skill and knowledge. It provides an exception to the overriding requirement that information be readily defined and identifiable to both the employee and the court before qualifying for protection. It also has the potential to impose the social cost of idle innovative skill on industry generally. On an economic analysis that accounts for information diffusion and encouragement of innovative effort, this type of enjoinment is inefficient. Enjoining the former employee from disclosing specific trade secrets is all that is required.

The PepsiCo inevitable disclosure doctrine had the potential to give serious concern that the effect of covenants not to compete would extend outside the contractual context. However, this does not appear to have been the case.\textsuperscript{603} Commentators have suggested that the doctrine may be restricted to provide enjoinment from competition only when there is independent evidence that an employee has taken, is taking or is willing to take steps to apply the information in his or her future employment.\textsuperscript{604} The doctrine seems to apply only when the employee cannot be trusted to keep trade secrets confidential.\textsuperscript{605}

C. DAMAGES

Under the Uniform Trade Secrets Act damages may cover both actual loss and any unjust enrichment not taken into account in computing actual loss, so that double recovery is

\textsuperscript{602} Future Shop, supra note 305 at para 59.
\textsuperscript{603} See for example Miller, supra note 601 at para 32 (Suggesting that by Spring 2000 PepsiCo had been applied only twice in cases not already involving an express covenant not to compete).
\textsuperscript{604} See generally Miller, \textit{ibid.}; especially at para 49; Emmert, supra note 374 at 1203-1204.
\textsuperscript{605} See Emmert, \textit{ibid.} at 1208-1210 (Describing the process required to prove trade secrecy under the doctrine).
avoided. Damages may be calculated by any means including, but not in addition to, the imposition of liability for a reasonable royalty for unauthorized disclosure.

In contrast, the Restatement provides that a defendant ought to be liable to account for profits derived from the breach, or for the loss sustained by the plaintiff, whichever is the greater, but not both. Double recovery is thus avoided and the remedy most beneficial to the plaintiff is preferred.

The Restatement also advises that an assessment of whether an award of damages is appropriate in the circumstances of the case should depend on:

(a) The degree of certainty with which the plaintiff has established the fact and extent of the pecuniary loss or the actor's pecuniary gain resulting from the appropriation;
(b) The nature and extent of the appropriation;
(c) The relative adequacy to the plaintiff of other remedies;
(d) The intent and knowledge of the actor and the nature and extent of any good faith reliance by the actor;
(e) Any unreasonable delay by the plaintiff in bringing suit or otherwise asserting its rights; and
(f) Any related misconduct on the part of the plaintiff.

D. SUMMARY

The principles underlying the use of injunctive relief in the United States are very similar to those applied in England and Canada. Significantly, the United States' remedial approach allows some scope for regulating market competition by providing for injunctive relief to neutralize a head start achieved by misappropriation. However, in comparison with the springboard doctrine, the United States approach more specifically compares the extent of the head start against the competitive ability of other market rivals. This advances a principle that an employee should pose no greater risk to a former employer than other market rivals. However, a damages remedy applied under the

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606 Uniform Trade Secrets Act, supra note 382, §3(a).
607 Ibid. §3(a).
608 Ibid. §3(a).
609 Restatement of Unfair Competition, supra note 376, §45(1).
610 Ibid. §45(2).
optimal doctrine advanced in this thesis would enable the former employee to compete and pay damages providing that he or she also had a comparative advantage at exploiting the information and the resulting competition did not force the former employer from the market.

This section has indicated that the English and Canadian courts should continue to reject the application of the inevitable disclosure doctrine. Emmert has argued that the inevitable disclosure doctrine is not inconsistent with Californian trade secret law. However, Hyde has cautioned that the doctrine poses a threat to employee mobility and the free flow of information through informal innovation networks. PepsiCo may reach no further than the common law protection of trade secrets except in cases where the employee is guilty of particularly unconscionable conduct. However, its potential breadth should be avoided for fear of undermining the complementary protection provided under the law relating to trade secrets and express covenants not to compete.

Monetary remedies are awarded in the United States on the same varied bases as under English and Canadian common law. They may be assessed on the restitutionary basis of an account of profits based on the defendant's gain. Alternatively, they may be assessed on the basis of the plaintiff's loss of profits or business depreciation. The similarities in approach between jurisdictions invoke the same criticisms of the United States' approach to choice of remedy, and in particular, the availability of equitable remedies with primarily punitive value.

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610 See generally Emmert, supra note 374; especially at 1210-1214.
611 Hyde, "Shared Information", supra note 1 at Part III.B.
612 See Cohen and Gutterman, supra note 377 at 221-224 (Discussing the bases upon which damages may be awarded); See also generally Young and Palladino, supra note 457.
This thesis has attempted to account for the economics of trade secrecy in support of its retention as a measure of intellectual property protection in the knowledge-based economy. Trade secrecy has been largely neglected in reviews of the role of intellectual property protection in promoting economic growth. Some justifications have focussed on limiting constraints on employee mobility. Others have addressed competitive effects but the social cost of limiting information diffusion has warranted attention as only one of a number of monopoly costs. More recent attention to the capacity of labor markets to constrain the diffusion of information has criticized trade secrecy for its potential overbreadth.

This thesis has re-examined trade secrecy law in the context of the knowledge-based economy – an economy based on the production, distribution and use of knowledge and information. It has recognised the changes brought to labor markets in that context. In particular, employees in high technology industry are increasingly employed for their knowledge-based capabilities rather than for their manual skills. Those abilities may equip them to compete with former employers on bases other than the misuse of trade secrets. Traditional conceptions of unequal bargaining power within the employment relationship may be undermined by these capabilities. An employer’s greatest productive asset may now be its greatest competitive threat in industries where firms derive competitive advantage from the creation and use of information and employees provide the primary means of achieving both.

This review has extended existing analyses concerning the interrelationship between labor markets, information markets and economic growth. A neoclassical account of the classic intellectual property trade-off has been acknowledged. It is a trade-off that attempts to overcome the public goods problem with information protection while also limiting the costs of that protection. Other commentators have suggested that trade secret protection may be counterproductive in an economy that relies on information exchange to facilitate convergence on efficient new technologies. However, explicit recognition of
Romer's endogenous growth theory has supported the continued relevance of trade secret protection.

Technological change comes about through the intentional actions of firms responding to market incentives. Those incentives are consistently assured through a formal intellectual property regime such as trade secret law that grants partial excludability over information to employers producing it. By combining the insights contributed by the economic theories discussed, this thesis has focused on identifying an efficient trade secret doctrine that protects only non-rivalrous information that would not be produced without a degree of exclusivity assured to its producer. Rivalrous information, or the skill and knowledge of employees, and information that would be produced despite the inability to exclude others from its use should not be protected. Protection of these forms of information restricts information diffusion and hampers economic growth without any requisite increase in incentives to innovate.

In summary, it has been concluded that an efficient doctrine creates incentives to innovate by allowing inventors to appropriate the social value of their work for themselves. It also aims to reduce wasteful expenditure on information protection and strategies for misappropriation of information. Finally, the unique transaction costs of trading in secret information are reduced and this facilitates its transfer to higher valued uses. Care must be taken to prevent constraints being placed on employees seeking to use superior skill and knowledge that gives them a competitive advantage independent of the use of their former employer's trade secrets.

These advantages are balanced against the social costs of monopoly rights including increased prices, reduced output and limits on information diffusion. The costs are limited by careful definition of what information will be protected and what forms of misappropriation will be prohibited. In this way, trade secrecy law ensures that information is only partially excludable and that information spillovers occur.

An optimal trade secrecy doctrine was suggested in Part II on the basis of these efficiency considerations. Current doctrine was evaluated against this model in the following
chapters of this thesis. Current doctrine is efficient to a significant extent. A uniform body of trade secrecy law was identified with doctrinal similarities extending throughout England, Canada and the United States. The criteria that are applied to determine whether information is protected ensure that information is secret, it is clearly defined and readily identifiable, and that employees are aware of expectations of confidentiality. Factors such as the nature of the information, industry use and whether trade secrets can be separated from information that is not protected, provide indicators of whether alleged trade secrets derive their value from secrecy and whether their protection is required to maintain incentives to innovate. When the courts are uncertain of whether information qualifies for protection they tend to deny protection, leaving more extensive protective measures to express contract.

Potential inefficiencies, such as the potential for a departure from assessment of the likelihood of harm in trade secrecy cases in Canada, have been cautioned against. In addition, the continued use and expansion of fiduciary doctrine in the employment context should be avoided. The duty provides broad restrictions on the use of information and undermines the carefully tailored balance between providing incentives to create information and facilitating information diffusion. These objectives form the basis of the trade secrecy regime supported in this thesis. The strength of reliance on indicators of competitive conditions that forms the basis for United States law has been supported.

In addition, this thesis has emphasized the vital role that the choice of remedies has in ensuring that trade secrecy protection efficiently responds to information markets dominated by technological change, highly skilled workers and a high velocity labor market. It acknowledges that the appropriate scope of trade secrecy protection may differ depending on the technological and competitive settings of different industries. The structure of information markets and the characteristics of technology in those markets influence the appropriate balance between information protection and information diffusion. These characteristics call for a flexible remedial approach.
The requisite flexibility is derived from a preference for damages as a remedy. The likelihood that transaction costs will prevent Coasean bargaining to prevent the chilling effect of injunctive relief on information diffusion has been cited in support of a preference for damages. A damages award provides the courts with an intermediate solution when it is unclear whether information should be protected. It provides a choice between complete exclusion under injunctive relief and unencumbered competition when protection is refused. A damages remedy awards divided entitlements, for which liability rules serve as a proxy. It also explicitly accounts for mutual investments and the relative abilities of employers and employees in innovative industry in enhancing the value of disputed assets.

When it is ambiguous as to whether information should be protected, but protection is granted, damages should also be preferred. They should be relied on when the courts can satisfy themselves that an employee has a comparative advantage in exploiting information, is able to pay damages to his or her former employer for its use, that competition by the employee would not be overly destructive of joint rents and that the employer will retain some ability to exploit the information in the face of competition.

Injunctive relief should be allowed only when these indicia are not satisfied. In such a case the court is likely to be satisfied that there is no social cost to the information remaining in the hands of the employer. Injunctive relief may also be appropriate when the court is satisfied that the costs of quantifying damages are greater than the transaction costs of negotiation between the parties, or that determining liability has removed many of the impediments to bargaining previously facing the parties so that renegotiation is likely.

Using this doctrinal framework, the licensing fee and loss of profits approaches to quantifying damages should be preferred. The punitive nature of an account of profits as a remedy makes it inefficient and unpredictable. It has little incentive value. Accounts of profits should be used only in extreme cases when quantifying damages by any other means is impossible. In addition, when injunctive relief is necessary under the criteria for assessing an appropriate remedy described above, it should be limited to preventing the
use of information that is still confidential, or continued breaches of confidence. Injunctive relief should not prevent the performance of existing contracts or the marketing of developed products. Further, the potential for broad restraint under the United States' inevitable disclosure doctrine should continue to be avoided in England and Canada.

The efficiency perspective advanced in this thesis has emphasized subtle modification of many aspects of trade secrecy law. Determining whether information should be protected, and the choice of remedy awarded, both impact on the ability of the doctrine to respond to the demands of industries dominated by technological change, highly skilled workers and a high velocity labor market. However, even as knowledge and information exchange are increasingly identified as key determinants of economic growth, the efficiency of trade secrecy protection is not compromised. This changing environment demands only that an established doctrine remain adaptable and responsive to advancing the efficient and productive application of information and knowledge to innovation and economic growth in a knowledge-based economy.
1. LEGISLATION

A. CANADA

Copyright Act, RSC 1985, c. C-42.

B. UNITED STATES


i. INTERPRETIVE GUIDES

Restatement of the Law of Torts, Ch. 36, Miscellaneous Trade Practices, §757
(Washington: American Law Institute, 1939).

Law Institute, 1995)

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Balston Ltd v Headline Filters Ltd, [1987] FSR 330 (ChD).
Coco v A. N. Clark (Engineers) Ltd, [1969] RPC 41 (ChD).
Cranleigh Precision Engineering Ltd v Bryant, [1966] RPC 81 (QBD).
Faccenda Chicken Ltd v Fowler, [1984] ICR 589 (ChD).
Faccenda Chicken Ltd v Fowler, [1986] 1 All ER 617 (CA).
Ixora Trading Inc v Jones, [1990] FSR 251 (ChD).
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Regal (Hastings) Ltd v Gulliver, [1942] 1 All ER 378 (HL).
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Cadbury Schweppes Inc v FBI Foods Ltd (1999), 83 CPR (3d) 289 (SCC).
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Canadian Aero Service Ltd v O’Malley (1973), 40 DLR (3d) 371 (SCC).
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57134 Manitoba Ltd v Palmer (1989), 26 CPR (3d) 8 (BCCA).
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Physique Health Club Ltd v Carlsen (1996), 141 DLR (4th) 64 (Alta. CA).
Pre-Cam Exploration & Development Ltd v McTavish (1966), 57 DLR (2d) 557 (SCC).
Sure-Grip Fasteners Ltd v Allgrade Bolt and Chain Inc (1993), 45 CCEL 276 (Ont. CJ).
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Tree Savers International Ltd v Savoy (1991), 37 CPR (3d) 455 (Alta. QB).
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C. UNITED STATES

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PepsiCo Inc v Redmond, 54 F.3d 1262, (7th Cir. 1995).
Shellmar Products Co v Allen-Qualley Co, 87 F.2d 104 (7th Cir. 1936).
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