ROBERT E BABE ASSOCIATES • CONSULTANTS

BROADCASTING • TELECOMMUNICATIONS • ECONOMICS • PUBLIC POLICY

INDUSTRIAL DESIGN FOR CANADA:

ANALYSIS OF PROPOSALS FOR LEGISLATIVE REVISIONS

Memorandum prepared for Mr. A.A. Keyes, Director of Copyright, Arts and Culture Branch, Department of Communications, pursuant to contract number 36100-3-0338, dated 23 February 1984, entitled "Legal Dimensions of Registered Industrial Designs in Canada".

March 1984.

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TABLE OF CONTENTS

PART I:

INTRODUCTION

1. Terms of Reference

The consultant has been asked to prepare an analysis and evaluation of the Report by the Bureau of Management Consulting, Supply and Services Canada, The Economic and Legal Dimensions of Registered Industrial Designs In Canada (1983). In particular, the consultant was presented with the following terms of reference:

(i) The consultant will examine the economic theory and rationale proposed in the Report for providing intellectual property protection for industrial design. An analysis of the impact of the law as it relates to the allocation of resources, the distribution of costs and benefits is required.

(ii) The consultant will analyse the validity of the theoretical reasoning and economic evidence put forward in the Report which regards industrial design as an economic incentive to increase production of new industrial designs.

(iii) The consultant will analyse those portions of the Report addressing the "fairness concept" which requires that persons of equal situation be treated equally and in particular the completeness and the validity of the evidence advanced in refuting the applicability of that concept to revision of the industrial design legislation.

(iv) The consultant will analyse the appropriateness and validity of applying the economic criteria of allocative efficiency in the economy and the optimal level of product differentiation to revision of industrial design legislation.

(v) The consultant will analyse the evidence and the method used to measure the net general effect of the Industrial Design Act, particularly the economies of scale in those Canadian industries which use the law for protecting their designs.

(vi) The consultant will, in the light of his analysis, advise on the validity and quality of the recommendations made in the Report.

The foregoing elements of the Terms of Reference are addressed herein in the following sections and pages:

(i) Economic theory and rationale for intellectual property protection of industrial designs; impact of the law on resource allocation, distribution of costs and benefits:

- Part II, Section 4(b), pp. 43-49.
- Part II, section 3(b), pp. 34-36.
- Part II, section 3(c), pp. 36-37.
- Part II, section 4(c), pp. 49-52,
- Part II, section 5, pp.52-57.
- Part III, section 1, pp. 58-59.
- Part III, section 2, pp. 59-63.
- Part III, section 3, pp. 63-68.

(ii) Analysis of theoretical reasoning and economic evidence, pertaining to industrial design as an incentive to increase production of new designs:

- Part II, section 3(a), pp. 25-31.
- Part II, section 3(b), pp. 32-36.
- Part II, section 4(a), pp. 37-43.
- Part II, section 4(b), pp. 43-49.
- Part II, section 4(c), pp. 49-52.
- Part II, section 5, pp. 52-57.
- Part III, section 2, pp. 59-63.

(iii) Analysis of the "fairness concept" and assessment of the evidence refuting the applicability of that concept to industrial design legislation:

- Part II, section 2(b), pp. 19-25.
- Part II, section 5, pp. 54-55.
- Part III, section 3, pp. 64-66.

(iv) Assessment of allocative efficiency as criterion:

- Part II, section 4(a), pp. 37-43.
- Part II, section 4(b), pp. 43-49.
- Part II, section 4(c), pp. 49-52.
- Part III, section 2, pp. 55-63.
- Part IV. p. 69.

(v) Analysis of method and evidence to measure net general effect of the Industrial Design Act; analysis of evidence pertaining to economies of scale:

- Part II, section 3(b), pp. 34-36.
- Part II, section 3(c), pp. 36-37.
- Part II, section 4(b), pp. 43-49.
- Part II, section 4(c), pp. 49-52.
- Part II, section 5, pp. 52-57

(vi) Advice concerning validity and quality of recommendations made in the Report:

- Part II, section 5, pp. 52-57
- Part II, section 6, pp. 57.
- Part III, section 2, pp. 59-63.
- Part III, section 3, pp. 63-68
- Part IV. 69.

2. Outline and Executive Summary

Part II contains six sections. The first four of these respond in turn to the following questions: (i) What is an industrial design? (ii) Should all industrial designs receive equal protection under the law? (iii) If not, how should industrial designs be distinguished so as to afford varying degrees of protection to different classes of design?

(iv) What criteria should be used in answering the foregoing questions and how should they be applied in arriving at legal definitions? Part II closes with a section summarizing the analysis and a section offering some conclusions.

Section 1 of Part II attempts to define industrial design by comparing, contrasting and showing interconnections between industrial design and both "works" and "inventions". After developing such notions as "artistic nature", "utility", "visual character", "function in form", the section concludes that we are dealing, at best, with overlapping categories. Such being the case it does not make sense a priori to support great distinctions in terms of legal protection among these three types of intellectual outworking (i.e. the material embodiment of the ideas).

Section 2 of Part II argues first that unambiguous legal demarcations, preventing overlap among inventions, designs and works, are not required, that any given intellectual outworking can be covered concurrently by more than one legislative act without in any sense detracting from the efficacy of the law. Moreover, the criterion of fairness would seem to oppose such rigid definitions insofar as such distinctions, in practice, would mean that some designs ("functional" designs) would receive no design protection, a situation inconsistent with the criterion of fairness. The dual notions of fairness, namely horizontal equity and natural rights, are explored in this section.

Section 3 of Part II addresses the categorization scheme proposed in the Report, namely the distinction between functional and visual designs. First, the "characteristics model of consumer demand" is addressed; it is noted, inter alia, that this model is inconsistent with distinguishing between functional and visual designs since consumers by this model are assumed to choose objects in accordance with the proportions of the associated features, meaning that appearance is not independent of function. Second, it is noted that technically it is frequently impossible to distinguish

function from form also inasmuch as products combine function and form. The infrequent registration of designs under current judicial interpretations of the Industrial Design Act would point to the wedding of function and form since "functional" designs at present are non-registrable.

Section 4 of Part II addresses the criterion of allocative efficiency in drafting industrial design legislation. It is noted first that allocative efficiency is a highly ambiguous concept inasmuch as "maximum" output changes with each change in distribution, making allocative and distributive effects of legislation inseparable. The Report takes an inconsistent stance on allocative efficiency in any event. For "functional" designs the Report appears to argue that no intellectual protection is desirable as this could create monopoly power; for "visual" designs the Report argues that intellectual protection should be weak in order that too much competition not be induced. In this latter regard, it is argued that too much product differentiation could inhibit the attainment of scale economies, but empirical evidence in support of this hypothesis is weak and inferential.

In concluding the discussion of Part II, the consultant suggests that the Report has not supported adequately its main recommendation, namely that design protection be afforded only to "visual" designs. No argument or documentation is presented in the Report as to why "functional" designs should not be protected (other than the occasional reference to "monopoly"); nor is it at all clear that functional and visual designs can be treated separately in any event without making the law largely irrelevent. Furthermore, the Report unduly minimizes the criterion of fairness and exaggerates the specificity of allocative efficiency.

Part III contains three sections. The first describes theoretical difficulties economists face in analysing information, information being a public good which is not confined

to any single location at a given time. The second section describes the role of law in allocating resources and addresses the question of "monopoly" as regards intellectual property. It is noted that the very short run effect of intellectual property is to increase monopoly power in the sense that unauthorized copying of a given work, invention or design is proscribed, but that the longer term effect is to increase competition among competing and substitutable designs, works and inventions through the stimulative effect of intellectual property law. Section 3 summarizes the issues as being those of fairness, social concerns, and administrative feasibility. On these bases, it is concluded in Part IV, that design protection should be afforded all designs and that the terms of protection be brought more in line with copyright and patent protection.

PART II:

BASIC ANALYSIS OF THE REPORT

The Report, The Economic and Legal Dimensions of Registered Industrial Designs, makes recommendations respecting the nature and degree of legal protection against duplication that should be accorded industrial designs. Before this issue is resolved, however, there are a number of preliminary questions that must be addressed, such as:

1. What is an industrial design?
2. Should all industrial designs receive equal protection under the law?
3. If not, how should industrial designs be distinguished so as to afford varying degrees of protection to different classes of design?
4. What criteria should be used in answering the foregoing questions and how should they be applied in arriving at legal definitions?

Part II of this document addresses each of the foregoing questions in turn. In the process an assessment of the major lines of reasoning of the Report is provided. This Part closes with a summary section and brief conclusion.

1. What Is An Industrial Design?

At the outset the authors of the Report note that the non-legal concept of industrial design is very broad:

> Industrial design is concerned with the appearance, function, and manufacturability of an item...[and concerns] a wide range of physical and functional product characteristics that bear heavily on the ultimate market success or failure of a product. (Pt. 1, pp. 2-3).

* * * * * *

> The non-legal concept of industrial design is a broad one incorporating aesthetic, functional and structural aspects of manufactured products. (Pt. 2, p.5).

The term, "industrial design", has meaning apart from any law; law is currently applied only to some types of industrial designs to prevent unauthorized copying. The protection afforded certain industrial designs ("registrable industrial designs) is therefore analogous to copyright, which is the legal protection afforded to "works", and to patents which protect "inventions". In all three cases the law is applied to the outworking or the public expression of intellectual activity but is not applied directly to the mental activity or the abstract concept itself--even though these laws have the purpose of rewarding past mental effort and inducing future intellectual effort.

Just as the three terms "industrial designs", "works", and "inventions" refer to three categories of publicly displayed outcomes of intellectual activity, so too are separate names given to the legal protection afforded these outcomes--respectively "registration", "copyright" and "patents". Insofar as not all outcomes of intellectual activity are protectable under law, we can distinguish those outworkings that are protectable by the following terms: "registrable industrial designs", "copyrightable works", and "patentable inventions". The problem posed to the authors of the Report was to determine the scope of design protection (what should constitute "registrable designs"?) and the extent of this protection.

The term "industrial design" must be considered in the context of "works" and "inventions" insofar as all three terms apply to outward expressions of mental activity.* Nonetheless,

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* Provided that a sufficiently broad definition of these terms is used, they appear to exhaust the outworkings of mental activity. "Works" must comprise more than simply artistic creations, however, if this is to be the case. See discussion infra, pp. 10-13.

even though protection is afforded these outward expressions for the purposes of stimulating further mental activity and rewarding past mental activity, for definitional purposes we must cast our attention to the outworkings themselves since it is impossible to enter the minds of the originators. It is only by the outward expressions that we can distinguish a designer from an inventor or artist. Even so, we shall see that there is no precise or unambiguous way of distinguishing inventions, works and industrial designs.

We now try to distinguish as best we can among inventions, works and industrial designs, and to show their inter-relatedness.

• Inventions are defined by the authors of the Report as "technological advance in a material form such as a product, machine, or a chemical or mechanical process" (Pt. 2, p. 7) (Emphasis added). Under Canadian law an invention comprises "any new and useful art, process, machine, manufacture or composition of matter". (Economic Council, Report on Intellectual and Industrial Property, p. 38, Emphasis added). Ideas, scientific theories or principles are not themselves inventions; rather, it is their outworking or expression in material form or process that constitutes an invention. Inventions embody ideas. The intent of patent law is to reward the inventor, that is the person who came up with the idea and was able to apply it, by protecting the manner in which the idea was expressed in material form or arrangement from unauthorized duplication or copying. Exactly when modifications to material form or arrangement are sufficient to constitute a "new" idea or invention, and hence bypass or circumvent previous patents, is a matter for interpretation. Note also the overlap between the notions of "material form" and "composition of matter" as they apply to inventions on the one hand, and "shape" or "form" as these terms apply to industrial design on the other.

• Works. The authors of the Report emphasize the artistic nature of "works", and refer to paintings, drawings, sculptures, engravings, photographs, architectural works, art, music, drama, literature and other expressions of an aesthetic nature. (Pt. 2, pp. 2, 39). Whereas inventions are "useful" devices or instruments to be applied to an objective transcending the invention itself, "works" of an artistic nature are to be appreciated primarily for themselves.

The authors insist (incorrectly, I believe) that "works" must possess an "artistic character",:

> Unless there is some requirement of an artistic character, there would be no reason why every three-dimensional object would not be a sculpture, or a copy of a sculpture. (Pt. 2, p. 60).

"Artistic character" is certainly difficult to specify, however, and may be subject to continually changing interpretations with the passage of time. Consider, for example, "found objects", considered by many (including their "finders") to be objets d'art and as being suitable for display in art galleries. Consider too artifacts uncovered through archeological explorations which become objets d'art for us. In both cases the object is wrenched out of its context and is introduced into a situation that encourages us to contemplate it.

According to Paul Weiss an aesthetic object is always a "dislocated object". It has a bounded region which is detached from the common-sense world about it, and yet is a fragment of that world. To Weiss, an aesthetic object "is torn out of its context, freed from its [normal] social role, and infused with our emotions, interests and values". (Paul Weiss, Nine Basic Arts, p. 5).

Nonetheless, while all objects, both natural and man-made, can become aesthetic when they are contemplated, to Weiss not all aesthetic objects are works of art. The additional requirement is that an artist must work upon recalcitrant materials in

order for an aesthetic object to also be a work of art (ibid, p.5).

From the foregoing comments one might conclude that context and subjective contemplation are at least as important as any essential "artistic character" residing in the expression itself, in determining what constitutes an "artistic expression".

A further clue as to what may distinguish artistic expressions from other intellectual expressions may be provided by sculptor Claus Oldenburg. He has described his work as follows:

> I do things that are contradictory. I try to make the art look like it's part of the world around it. At the same time I take great pains to show that it doesn't function as part of the world around it.*

The implication would be that artistic expressions do not function as parts of the world around them. Such a perspective would preclude TV commercials, Musak and other highly commercial vehicles of expression from being considered "art". Even on this point there is no agreement, however. Advertising has been called the art of the twentieth century, and certainly it is often carefully crafted and may be aesthetically pleasing.

It is somewhat paradoxical that the authors of the Report imply on the one hand that "artistic character" resides objectively in artistic works but that on the other hand "aesthetics are completely subjective". (Pt. 1, p.33). There are two contentions points raised here: first, that artistic "character" is something totally unrelated to artistic "merit" (Pt.2, p. 58), and second that merit (goodness or badness) is not to be a criterion in deciding what constitutes art. Others would argue that artistic merit inheres in the art object more than in subjective interpretations (hence the existence and development of the philosophic field of study known as aesthetics) and that

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*Quoted in Robert Hughes, Shock of the New, p.237. Emphasis added.

excellence is a prerequisite for an object to be considered as a work of art:

> Works of art are produced when men make use of their existent powers to create something excellent. (Weiss, p.8). (Emphasis added).

The problem, however, goes even more deeply, for the association of the term "works" with artistic or aesthetic expression alone is unduly narrow. Copyright applies to much written and oral expression. Speeches, lectures, scientific articles, newspaper editorials and so forth are "copyrightable" but are not, or need not be, primarily artistic; rather, they are frequently seen to have "utility" (as do inventions) transcending themselves. These are works not "detached from" our common-sense world but are highly integrated into it. We have a fundamental problem then in distinguishing works from original, useful objects or processes ("inventions").

Note the following comments of R.G. Collingwood who juxtaposes "art" and "craft" and highlights the origin of the term "fine art":

> "In order to clear up the ambiguities attaching to the word 'art', we must look at its history. The aesthetic sense of the word, the sense which here concerns us, is very recent in origin. Ars in ancient Latin, like τέχνη in Greek, means something quite different. It means a craft or specialized form of skill, like carpentry or smithying or surgery. The Greeks and Romans had no conception of what we call art as something different from craft; what we call art they regarded merely as a group of crafts, such as the craft of poetry.... It was not until the seventeenth century that the problems and conceptions of aesthetic began to be disentangled from those of technic or the philosophy of

> craft. In the late eighteenth century the disentanglement had gone so far as to establish a distinction between the fine arts and the useful arts; where 'fine' arts meant, not delicate or highly skilled arts, but 'beautiful' arts." *

Nonetheless, despite the foregoing misgivings as to the distinction between a work and an invention, one could hold simply that we "know" one from the other, that a telephone or shovel, we "know", were "inventions" to solve problems, whereas paintings and sculptures we "know" to be art, to be simply contemplated. The problem, however, is not so easily dismissed insofar as industrial design overlaps both inventions and works, as is often an attempt to make the "useful" beautiful. Consequently the definitional question still confronts us.

• Industrial design falls between inventions and works inasmuch as "Design means features of shape, configuration, pattern or ornament applied to an article by any industrial process or means". (Pt.2, p.4). Design is concerned with "the appearance, function, and manufacturability of an item". (Pt.1, p.3). Industrial design, then, may well add an aesthetic dimension to a "useful" object (or invention), in which case the sought-after distinction between utility and aesthetic qualities again becomes blurred.

As the authors note, "all manufactured goods must have an industrial design component, insofar as all have a shape and form". (Pt. 1, p.2). They also note that the non-legal concept of industrial design comprises not only visual aspects of shape and form, but also "functional" arrangements which need not be apparent to the eye. The wide scope of the concept is apparent.

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* R.G. Collingwood, The Principles of Art, (Oxford, 1938), pp. 5-6).

- Art, Industrial Design and Useful Objects

From the perspective of aesthetics, industrial design merges with artistic creations. From the perspective of utility or function, industrial design merges with new, useful objects (inventions). If we cannot separate the beautiful from the useful, even artistic works may overlap with inventions. Hence our definitional conundrum.

The interdependence of primarily "visual" industrial designs and "works" is noted by the authors in Part II: For example:

> Many two-dimensional and three-dimensional works, originally created simply as artistic works ... are later applied to functional articles as industrial designs. (Pt. 2, p.39).

The authors cite the example of a dinner plate carrying a copyrightable image (Pt. 2, p.39).

In order to distinguish between "work" and an industrial design in cases where a "functional article" carries a "work" the authors state:

> The essence of the distinction between copyright-protected works and industrial designs is, then, that the latter are features of appearance applied to functional or utilitarian articles.... "Functional articles" have to be defined as having some function or utility other than merely to portray the appearance of the article or to be contemplated, and other than merely to convey information. (Pt. 2, p.42). (Emphasis added.)

So, the first requirement is to distinguish between objects whose sole or main purpose is to carry a "work", convey information, or merely to be contemplated, as opposed to objects

that are "functional", i.e. whose carriage of work or whose appearance is secondary to an over-riding use to which the object is put. This is not necessarily an easy distinction to make.

A second requirement is to distinguish designs from inventions, and once again there may be considerable overlap. Accepting the Report's definition of an invention as a

> technological advance in a material form such as a product, machine or a chemical or mechanical process (Pt. 2, p.1).

then certain problems in distinguishing between inventions and industrial designs become apparent. Consider, for example, the case of aerodynamic design of automobiles, which serves simultaneously to conserve energy and to alter appearance. More generally, the authors note that good design frequently is not only aesthetically pleasing but also conserves energy, utilizes materials more effectively, increases productivity, reduces servicing and maintenance costs, and so forth. (Pt. 1, p.4).

- Conclusions

The most rigorous analysis of the concepts of industrial designs, works and inventions (or more generally new "useful" objects) indicates that we are dealing with, at best, overlapping categories. A priori, therefore, it would not seem to make sense to grant a good deal of legal protection for inventions on the one hand and to works on the other while having little legal protection for designs which mediate between and overlap inventions and works. Perhaps one could argue a case for increasing or decreasing protection as we proceed from inventions through designs to works, but dichotomous treatment of designs vs. works and inventions does not make sense a priori.

Nonetheless, before attempting to resolve this question further, we can turn to a second question, whether it is necessary or desirable for legal purposes to make precise distinctions among inventions, designs and works.

2. Should All Industrial Designs Receive Equal Protection Under Law?

We have seen that the non-legal concept of industrial design is very broad and imprecise. There is no clear demarcation between industrial designs and "works" on the one hand, and new, useful objects ("inventions") on the other.* Nonetheless, if deemed desirable or necessary, we could strive for greater precision of definition for legal purposes.

Imposing a more precise legal definition of industrial design upon the amorphous and illusive non-legal concept of industrial design is bound to exclude individual expressions which could otherwise be termed "industrial design". Therefore, an important factor to consider in contemplating legal definitions is whether we are willing to exclude certain "designs" from legal protection, and if so what types. A further consideration is whether we really need a precise legal definition at all. This section addresses these questions.

In arguing for more precision in legal definitions of industrial design there are essentially two positions that can be taken: first, that a more precise legal definition (and hence exclusion of some "designs" from industrial design protection), is necessary albeit not totally desirable; second, that such precision (and hence exclusion) is desirable in any event, whether necessary or not.

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* The authors of the Report make this point also:

"The existing [Industrial Design] Act fills an uneasy gap between design activity that is embodied in innovations eligible for protection under the Patent Act and design activity that is incorporated in artistic works eligible for protection under the Copyright Act. (Pt. 1, p.24).

(a) Necessary Albeit Not Totally Desirable

The current Industrial Design Act does not define an industrial design, and in this sense we can observe that a precise legal definition is not necessary. Nonetheless, this conclusion may be an oversimplification since, as the authors of the Report show, the courts have borrowed as a working definition the one contained in British legislation. (Pt. 2, p.4).* This could imply that the courts may very well require a precise definition, and where the definition is not made explicitly in legislation the courts will either borrow one (as from British law) or develop one as they apply the law on a case-by-case basis.

As matters currently stand the legal concept of industrial design is quite narrow. Novelty and ornamentation are major aspects of registrable industrial designs:

- Novelty. One quite justifiable requirement is that to be registrable an industrial design "must have the quality of 'newness' as related to previous registrations". (Economic Council, Report on Intellectual and Industrial Property, p.39). Exactly what constitutes newness, of course, is subject to interpretation but in any event we must agree that originality (i.e.

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*"'Design' means features of shape, configuration, pattern or ornament applied to an article by an industrial process or means, being features which in the finished article appeal to and are judged solely by the eye, but does not include a method or principle of construction or features of shape or configuration which are dictated solely by the function which the article to be made in that shape or configuration has to perform."

(British Registered Designs Act, 1949, quoted in Report Pt. 2, p.4).

intellectual activity) provides the raison d'etre for protection in the first place. Otherwise, we would be protecting copies or duplications, which is exactly what intellectual property law is designed to prevent.

• Ornamentation. The other restrictions are more controversial, however. The authors state that Canadian legal protection is accorded only to features which "appeal to the eye and are judged solely by the eye". In other words, protected "industrial design is limited by judicial interpretation of the law to the ornamental aspects of a manufactured product and excludes aspects of design dictated by the function the product is to perform or by the methods of production or principles of construction of the products". (Pt. 2, pp.5-6). This implies that Canadian courts have significantly circumscribed designs subject to legal protection, thereby in practice creating two classes of original designs: those that are protected and those that are not.

It is apparent, therefore, that the courts have engaged in policy-making. We cannot be sure whether Parliament intended all industrial designs to be protected (although this may well have been the case given the absence of definition in the legislation), but in any event the questions before us are whether such distinctions should be maintained, and whether the courts require a precise definition of industrial design in order to administer the law.

Despite the fact the courts have used a narrow definition of industrial design it can be argued that the more ambiguous and imprecise "non-legal"

notion would suffice for legal purposes. Given that the non-legal concept of industrial design falls between and overlaps "works" and "useful objects", and provided that patent law and copyright law, both of which provide greater protection than does design legislation, describe adequately their respective intellectual outworkings, then protectable industrial designs will also be defined implicitly as well--as any and all material expressions lending "newness" of form to material objects. Inasmuch as originators will seek protection under whatever law grants them the greatest protection, such a loose definition in practice would confine registered industrial designs to nonpatentable and non-copyrightable intellectual expressions, bearing the quality of "newness".

The discussion therefore now turns to whether limitations in legal definitions are desirable or not, having concluded they are not necessary.

(b) Desirable In Any Event

It can be argued that all industrial designs should be afforded equal protection under the law. This ideal of equal protection can be justified on grounds of fairness. On the other hand, it can be argued that fairness is unimportant and/or that other criteria are more important and contrary to it. The authors of the Report have taken the position that "the fairness arguement [sic] is weak in the context of much product design" (Executive Summary, p.2) and that, in any event, there are other criteria which are more important and contrary to fairness.

The remainder of this section responds to the first line of argument, namely that fairness or equal treatment is not important. The following two sections

address the second line of argument, namely that, in any event, other criteria supersede fairness and that the categorization of industrial designs for purposes of discriminatory legal treatment is justified by these other criteria.

"Fairness", as the authors point out, comprises two aspects: (i) the principle of horizontal equity, that is the principle that "individuals in like circumstances should receive like treatment" (Pt. 1, p.23); and (ii) the principle that "creators have a 'natural property right' in their own ideas", which implies that "appropriation of one's ideas by others without compensation is tantamount to stealing". (Pt. 1, p.23). I address in turn these two aspects of fairness.

• Horizontal Equity. The authors minimize the significance of horizontal equity, as related to industrial design, as follows:

> "One factor mitigating the fairness argument is the fact that industrial design activities may already receive a measure of indirect, and additional, protection under the Patent Act and the Copyright Act.... Thus, one can argue, with some merit, that most industrial designers would enjoy a significant measure of protection in the complete absence of the current Industrial Design Act or an equivalent piece of legislation". (Pt. 1, p. 24). (Emphasis added).

Before addressing the notion of horizontal equity as implied in the foregoing extract there is an empirical question raised that must be addressed. The authors here state that "works" and/or "inventions" overlap industrial design to such an extent that "most industrial designs would enjoy a significant measure of protection in the complete absence of the current

Industrial Design Act". It is beyond my terms of reference to explore empirically this contention of fact, but nonetheless it is instructive to turn to another portion of the Report where exactly the opposite argument is used, namely:

> The legal interconnections between copyright law and industrial design law are very strong. In particular, without the separate statute for designs there is a very high risk that the courts would start to interpret copyright law as being applicable to subject matter now covered by design law. The implication of such interpretations would be a dramatic extension of protection from the short ten year maximum to the potentially very long "life of the author plus fifty years". We cannot support any policy change that would have such a result, especially considering how far its impact would reach into the whole economic system. (Executive Summary, p.4).

Both of the foregoing extracts acknowledge an overlap between industrial design and copyright, but from that common base the extracts diverge. The first contends that this overlap makes inessential Industrial design protection since "most" industrial designs are now protected by Copyright; the further, and contingent, conclusion is that "fairness" is unimportant as a criterion regarding industrial design protection due to the current coexistence of copyright protection. The second extract argues the contrary position, namely that the Industrial Design Act now inhibits the extension of copyright law to industrial designs and that the main argument for maintaining the Act is to prevent this possible extension of copyright law to industrial designs; the second extract implies that "most" industrial designs are not now protected by copyright, that

it would be undesirable if they were protected by copyright, and consequently the major justification for retaining the Industrial Design Act is to prevent the protection of industrial designs by copyright.

Despite the contradictions in these two extracts, considered jointly they do lend themselves to a fuller exposition of the concept of horizontal equity. "Horizontal equity" is a double-edged sword which, when misapplied, can be used to promote and support inegality and discriminatory treatment, as well as to promote, when applied correctly, fairness and non discriminatory treatment. The key to applying the concept correctly lies in the interpretation of "like circumstances", for equal treatment is to be afforded only those in "like conditions" or "like circumstances". If the law assumes people to be situated equally when in fact they are situated unequally, then treating them "equally" is in fact discriminating against the disadvantaged. We may recall Anatole France's aphorism that the King treats everyone equally under the law since he prohibits rich and poor alike from sleeping under bridges.

The practical problem that arises in applying the concept of horizontal equity is that no two people are ever situated equally in all circumstances. (At any given time each of us occupies a unique space, for example). To apply the concept, therefore, we must take into account only "relevant circumstances" and not "all" circumstances, and we must treat equally only those in "substantially similar" circumstances as opposed to those in totally "like circumstances". Even so, we must also bear in mind that the more dissimilar are the circumstances of people, the more likely it becomes that affording them "equal" treatment will result in injustice or discriminatory treatment.

What then are "relevant circumstances", or "substantially similar" circumstances? I would argue that industrial designers form a more homogeneous group with respect to "relevant circumstances" than do all intellectual workers considered together. Industrial designers probably have more in common with other industrial designers, in other words, than they do with musical composers, writers, painters, poets, inventors, sculptors, architects, newspaper editors, and so forth. If this point is accepted, then one should not conclude that industrial designs should be protected exclusively by copyright or by patent law in order to promote "horizontal equity". Nor should one conclude that the Design Act is largely irrelevent to the issue of fairness, given the existence of patents and copyrights.

The foregoing discussion then supports the second of the two extracts quoted above, namely that industrial design protection should be maintained to prevent the extension of copyright to industrial designs. In brief, the doctrine of horizontal equity is indeed an important principle justifying the retention of industrial design legislation. A further conclusion, however, is that, if this be so, then <u>all</u> industrial designs should be protected (equally) unless one can suitably classify designs and argue convincingly that horizontal equity would be further promoted by distinguishing among classes of industrial designs. No argument is presented in the <u>Report</u> which would justify classifying types of industrial designs on grounds of horizontal equity; nor have I any arguments to make in this regard.

• Natural Rights. The second aspect of the fairness argument is that of "natural property rights" in intellectual creations. The authors of the Report minimize the importance of "natural rights" as follows:

> "Industrial design uses the expertise and knowledge of a variety of disciplines including engineers, scientists, psychologists, marketing and advertising specialists. Given that industrial design activity reflects the output of a potentially diverse set of complementary inputs, it is unclear why providers of one input (designers) are more validly entitled to property right protection than other inputs. By extension of the fairness argument, the economic, psychological and marketing expertise that influenced the nature of a design, should also be protected by intellectual property laws. And by further extension, it seems consistent to argue that the output of all forms of human capital should receive exclusive property right protection under a fairness doctrine". (Pt. 1, p.24).

In my view, these arguments are not persuasive, for a number of reasons:

First, simply because designs draw upon diverse fields of knowledge does not mean that industrial designs should not receive property protection. All human activity draws from what exists. Only God creates out of nothing.

Jacob Bronowski for example defines creative activity as placing in new juxtaposition hitherto isolated objects, ideas, shapes, colours, phenomena, etc:

> Every act of imagination is the discovery of likeness between two things which were thought unalike. And the example that I gave [in Science and Human Values] was Newton's thinking of the likeness between the thrown apple and the moon sailing majestically in the sky. A most improbable likeness, but one which turned out to be (if you will excuse the phrase) enormously fruitful. All acts of imagination are of that kind.... All those who imagine take parts of the universe which have not been connected hitherto and enlarge the total connectivity of the universe by showing them to be connected.
> (Jacob Bronoswki, The Origins of Knowledge and Imagination, pp. 109-110).

Of necessity, then, designs (like all other inventive or original activity) will reflect "the output [or preferably the combining] of a potentially diverse set of complementary inputs." (Pt. 1, p.24). Therefore, if originality or creativity in general deserves legal protection, so too should industrial design as a specific form of creative activity.

Secondly, the authors err in making the inferrence that "engineers, scientists, psychologists, marketing and advertising specialists" do not receive intellectual property right protection. Undoubtedly, they do not receive protection under industrial design legislation, but that is because they are not engaged in making industrial designs. They do, however, receive protection through copyright and/or patents.

Finally, let us consider the argument that "by further extension it seems consistent to argue that all the outputs of all forms of human capital should receive exclusive property right protection under a fairness

doctrine". We could, however, as easily and as validly argue in precisely the opposite direction and hold that interdependencies among people and indeed generations mean that no single individual originates anything by himself; therefore, no exclusive property right protection is warranted for any "output of human capital". Everything would be collectively owned, thereby abolishing all markets (since markets entail the exchange of property). It is doubtful that the authors of the Report would sanction the extension of their analysis in this manner; neither should they extend their logic to the point of absurdity in the opposite direction either.

On the basis of the foregoing comments, I conclude that the authors are mistaken when they state that "the fairness arguement [sic] is weak in the context of much product design" (Executive Summary, p.2), but I would agree that "it is not possible in practice to pursue the fairness concept without meeting some inconsistency" and that "society must make some trade-offs...." (Pt. 1, p.24).

3. If Not, How Should Industrial Designs Be Distinguished So As to Afford Varying Degress of Protection to Different Classes of Design?

Having minimized the fairness argument for affording equal protection to all industrial designs, the authors of the Report proceed to propose a categorization scheme whereby some designs will be protected and others will not be protected. This section addresses whether, and the extent to which, the scheme of categorization is real or illusory, while the following section addresses the criterion of allocative efficiency and its application to the categories of industrial designs set forth in the authors' Report.

The authors state

> The Industrial Design Act provides protection like that afforded in other areas of intellectual property. But just as the Act distinguishes between industrial designs and other forms of intellectual property, so will this study differentiate between different types of industrial designs in order to evaluate the welfare consequences of each type. (Pt. 1, p.3).

In setting out to distinguish between two types of industrial design, the authors employ the "characteristics model of consumer demand" as a theoretical underpinning (Pt. 1, pp.4-8, 16-18, 31-42). From this theoretical base they distinguish between industrial designs that are "operational" as opposed to those that are "visual" (Pt. 1, p.32).

The main line of reasoning for invoking the "characteristics model of consumer demand" is as follows:

In our economy there is a vast array of products. It would be impossible to reach conclusions on desirable industrial design legislation on a product-by-product basis, given this vast array. Therefore, we must generalize or categorize industrial designs into a few essential classifications. While this cannot be accomplished at the product level, nonetheless, if we look more deeply at products, we will see that in fact (or "in essence") products are comprised of "features" or "characteristics", which are what consumers are primarily interested in anyway. From this premise, the authors ask in effect: "Is it possible, or defensible, to categorize features (and hence designs) into only two classes: functional and visual?" It is for this reason that the "characteristics model" is used.

I raise questions in this section. First, is the "characteristics model of consumer demand" consistent with the classification scheme adapted in the Report? Second, irrespective of the "characteristics model of consumer demand", to what extent is the distinction between "functional" and "visual" designs real and/or workable?

(a) Characteristics Model of Consumer Demand.

The "characteristics model of consumer demand" as developed in the Report, may be summarized as follows: Products, or objects, are viewed not as having functions in themselves (Pt. 1, p.32); rather, they are viewed "as nothing more than the embodiment of ... (sources of utility)". (Pt. 1, p.4). In other words, products are viewed as "a collection of attributes or characteristics:(Pt. 1, p.4). Products may therefore be distinguished one from another on the bases both of the "attributes" embodied in each, and the "intensity" with which these "attributes" are present. (Pt. 1, p.5).

This model assumes that consumers do not wish to consume products as such, but desire to consume the "characteristics" which products embody:

> The characteristics model assumes that consumers wish to consume some set of characteristics, not some set of products. The particular products they purchase and consume are simply means to obtain the desired characteristics. Since various products contain various characteristics in different combinations, consumers choose mixes appropriate for themselves. (Pt. 1, p.5).

Nor are consumers concerned only with the presence and intensity of certain "attributes"; they are concerned also with the ratios or proportions among these attributes:

> [Products] have usefulness to consumers insofar as they allow the consumers to consume their characteristics or features in proportions at or as close to those which the consumers prefer, given prices, incomes and preferences. (Pt. 1, p.32).

How helpful, we ask, is the "characteristics model" to the topic at hand?*

As in some other branches of knowledge, the characteristics demand theory represents a radical re-classification of phenomena in an attempt to probe more deeply into common structural features ("structuralism"). The authors propose de-classifying objects along product lines and re-classifying the "features" of products along functional vs. visual lines. An analogy could be a physicist ignoring classification of substances according to atomic weight or properties

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* The economic theory of consumer demand for product characteristics is derived from modern marketing theory. In this view:

> The characteristics of commodities (texture, convenience, or packaging, for example) emerge in marketing theory as the real object of consumers' desires. The very solidity of the commodity appears to dissolve in the presence of the newly-acquired weight of the characteristics the commodity shares with other goods. These characteristics become objectified, reified....

Jean-Christophe Agnew, "The Consuming Vision of Henry James", p. 70.

(iron vs. oxygen vs. aluminum, etc.), and reclassifying elementary particles within substances (neutrons, protons, electrons, etc.) across all substances; or a cubist painter breaking down everyday forms and reassembling the pieces into new patterns so as to gain new insight (it is alleged).

There is, nonetheless, a fundamental problem to this "structuralist" approach which can be highlighted by quoting an emminent physicist and philosopher, Carl Friederich von Weizsacker:

> It turns out to be meaningless to talk, for example, of an isolated ("naked") electron; i.e. of an electron as it might exist without any interaction with the radiation field.... What we refer to empirically as an isolated particle is in reality already the result of its interaction with the permanently co-present environment. These considerations suggest that we should on principle regard the properties of "isolated" particles as the result of interaction. (Unity of Nature, p. 131).

The same point can be made with respect to the characteristics demand model. Just as an electron or other "isolated" particle has no meaning outside its interaction with its "permanently co-present environment", neither do product "characteristics" have any useful meaning outside the product category containing them. To cite two examples: a five-horse power motor (a "characteristic") has much different meanings when "embodied" respectively in a chain saw, an outboard motor, an automobile, and a locomotive.

Likewise, one does not care at all about shutter speed (a "feature" or "characteristic") unless one is first interested in the product category of cameras. In brief, we cannot foresake product categories in favour of "characteristics"; the latter are not an alternative to the former, but at best are an added refinement.

Whether "characteristics" become useful even in the context of product categories remains a moot point, however. There are many more "characteristics" than there are products, if characteristics are properly studied within the context of product groupings. This is because each product within a product category is made up of many characteristics, and "the number of possible designs [of products] is, theoretically, infinite because the theoretical number of possible characteristics ratios is infinite". (Pt. 1, p.30).

Even more fundamentally, it is not clear at all what constitutes a "feature" or a "characteristic" in any event. If products are said to be comprised of "features" in fixed proportions, could we not as well argue that "features" are comprised of "sub-features" in fixed proportions, an infinite regress?

Finally, and most importantly, the "characteristics model" seems to be quite inconsistent with the authors' conclusion or intent, namely to distinguish visual and functional features. Since "objects", according to the theory employed in the Report, are unique combinations of "features", including visual qualities, and since consumers choose objects in accordance with the proportions of these "features", then appearance is not independent of "function". Consumers (it is asserted) choose proportions or relations among "features", meaning that no single "feature" or "characteristic"

can be isolated; rather, a change in one "feature" changes also the "proportion" which is said to be the most important factor in consumption decisions.

An example from music may help illustrate the point.* A musical tone (or "pitch") has little meaning or significance in and of itself. However, when placed in sequence with other tones (other "characteristics") a melody becomes apparent. Melodies can be transposed into various keys in which case the relationship among the tones (known as "intervals") remains the same even while the tones ("characteristics") themselves are completely changed.

In brief, one cannot on the one hand assert that objects are chosen by consumers because of the "proportions" in which objects carry "characteristics" (the equivalent of a given melody), and on the other hand discuss individual "characteristics" (visual vs. functional) and ignore the relationship among them.

At one point the Report does acknowledge the impossibility of isolating visual and operational features on the basis of the characteristics model** but this point is subsequently forgotten and the Report continues to make the distinction.

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* See Victor Zuckerkandl, Sound and Symbol: Music and the External World, pp. 11-24.

** "If one object satisfies preferences by performing a specific task efficiencly, at the same time as another satisfies preferences performing a task inefficiently while being visually attractive, how can an outside observer determine which object is the more useful? Clearly, both have value for the consumers; if they did not, no consumer would purchase them."
(Pt. 1, p.32) [Emphasis added].

(b) Distinction Between Functional and Visual Designs.

Although the "characteristics model of consumer demand" is inconsistent with distinctions between functional and visual designs, it does not necessarily follow that the distinction is itself illusory, or impractical, provided one does not advance the characteristics model. This section analyses whether, and the extent to which the distinction between these two types of designs can be maintained as a practical matter.

Previously we noted difficulties in distinguishing precisely among inventions, industrial designs and works. In the first instance inventions have "utility" and are not merely to be contemplated whereas works (at least "artistic" works) are primarily aesthetic. Industrial design, we observed, overlaps these two classes of intellectual property insofar as industrial designs often concern the outward appearnce of "useful" objects, thereby bearing elements both of utility and aesthetics. Whether industrial designs can be categorized as being primarly visual or primarily functional concerns us now.

"Visual" is a term that seems clear-cut and unambiguous.

"Functional", however, is less clear-cut and is associated in the Report with what are subsequently termed "vertical innovations":

> Vertical innovations are resource-saving; that is, they allow the performance of some task, or the satisfaction of some consumer wants, at lower resource cost than was possible previously. (Pt. 1, p. 31)

The authors state that:

> We believe that most visual innovations will be of the product differentiation kind, with no resource-saving ["functional"] elements. (Pt. 1, p.32).

It is undoubtedly true that visual features can be added onto functional designs without technically changing other characteristics of the product. In such cases, visual design features may be distinguishable from functional design features (add chrome here, a tailfin there).

It is also quite conceivable that some (perhaps many) "vertical" innovations will be "non-visual", leaving intact outward appearance: changes in materials, introduction of integrated components, new interior parts and alignments, and so forth could be non visual.

The problematic area is when we leave the two extremes and look at the central area where function and form are co-mingled. We would want to know how important this central region is as compared with designs which can be categorized exclusively as being either visual or functional, or at least primarily visual or functional.

In both of the foregoing cases (changing visual elements leaving intact functional elements; changing functional elements leaving intact appearance) it is to be noted that we are dealing with a given product and we are making changes to it. In other words, we are talking at the margin. The distinction between visual and functional design really has meaning only when we talk of incremental changes to an existing design. In the case of new products, we are not making modifications to something that exists (which could, perhaps, be distinguished as being either visual or functional); rather, we are creating something new which can only be

described as function-in-form. This leads to the conclusion that many important innovations will combine function and form.

Just as "new" products comprise function in form, so too for existing products will design modifications often co-mingle functional and visual elements in such an intimate way as to be inseparable.

Finally, for some products, appearance defines function, for example, furniture. Again, any distinction between function and appearance is misguided.

The authors provide some inferential evidence to the effect that the extreme cases are not very common and that most industrial designs will combine visual and functional aspects. They note that designs which are "functional" will frequently be protectable under patents (Pt. 1, p.34) and that patent protection under Canadian law is stronger than industrial design protection (Pt. 1, p.47). Therefore, innovations with functional designs (whether embodying a visual component or not) will not normally seek industrial design protection. In any event, "innovations which affect the operation of the product are not [currently] eligible for design protection, though they may be able to get patent protection" (Pt. 1, p.31). These observations, in combination, would lead one to believe that applications for industrial design protection would concern designs of a primarily visual nature with little in the way of "function".

The authors state that:

> The major registrants of industrial design are firms in the furniture, games and toys, packaging and storing, apparel, household articles and electrical equipment sectors. (Pt. 1, p.59).

and this provides support for the hypothesis that most registered industrial designs are primarily visual. In 1980, only 1315 industrial designs were registered in Canada; of these only 337 designs were registered by Canadian nationals (Pt. 1, p.51). Not unsurprisingly, the Act is viewed as being "of minimal significance in innovation decisions and activity". (Pt. 1, p.54).

The infrequent registration of industrial designs, the ineligibility of functional designs per se under the current legal system, and the availability of patent protection for functional designs all point to a predominance of designs combining appearance and function.

The authors recommend that:

> The Canadian industrial design system should protect only the appearance features of designs for utilitarian articles and should exclude from protection operational features of designs for such articles.... (Pt. 2, p.10).

* * * * * * * *

In making this recommendation they note that varying policies could be adopted toward industrial designs which embody both visual and functional aspects. One possibility would be to exclude all designs from protection that have any functional aspects whatsoever. Alternatively, excluded designs could be limited to those which are "purely functional" with no visual aspects. In opting for a middle course that provides protection solely to the appearance of a utilitarian article and denies explicit protection to non-appearance features (Pt. 2, p.14), the authors state:

> Such a definition will at least prevent explicit descriptions and claims for non-appearance features of utilitarian articles from constituting protected subject matter. In addition, depending upon the

> interpretation such a provision receives, it may play some role in preventing the indirect protection of operational features through the protection of appearance features. (Pt. 2, p.14).

In brief, the authors recommend that protection be afforded visual designs only, but that if functional elements accompany visual designs this should not disqualify visual designs from protection.

(c) Summary

In practice most designs will be neither purely visual nor purely functional, but will co-mingle both elements. If industrial design legislation were to exclude all designs with functional elements, designs would probably be registered very infrequently. At present registrations under the Industrial Design Act number only about 1300 a year, even though designs with functional aspects are not automatically excluded:

> A design for a functional devise may be registered if it does not embrace every conceivable configuration for performing that function, and it also satisfies the additional object of creating a visual appeal readily discernable [sic] to the eye of the beholder. (Pt. 2, p.6).

Nonetheless, major reasons for low registrations must include the fact that the Patent Act offers greater protection for "functional designs" and that the thrust of the Industrial Design Act, as judicially interpreted, is toward "the ornamental aspects of a manufactured product and excludes aspects of design dictated by the functions the product is to perform or by the methods of production or principles of construction of the products". (Pt. 2, pp.5-6).

To conclude, the more rigidly legislation (or judicial interpretrations) preclude designs embodying functional aspects from protection, the smaller will be the purview of the Act.

The major question that now remains is whether functional designs and/or designs bearing functional aspects should be excluded from protection, assuming distinctions between function and appearance can be made.

4. Allocative Efficiency As Criterion For Discriminating In Law Between Visual and Function Industrial Designs.

We have seen above that the Report has minimized fairness as a criterion for industrial design legislation and also has argued that visual designs are largely separable from functional designs. This section disputes neither of these conclusions, but rather addresses only the further argument that the "criterion of allocative efficiency" justifies affording legal protection only to visual, as opposed to functional, designs.

In this task we must proceed through a number of steps. First, allocative efficiency must be defined and analysed. Secondly, the validity of allocative efficiency as a criterion for industrial design legislation must be assessed. Third, we must evaluate the way the Report has applied the criterion of allocative efficiency in order to ascertain whether or not the policy recommendations of the Report truly follow from the criterion used.

(a) What Is "Allocative Efficiency"

The Report defines the standard of "allocative efficiency" as

> the optimal use of the resources available in order to achieve the maximum aggregate income. (Pt. 1, p.12).

This definition raises new definitional questions: What does "optimal use" mean? What is "maximum aggregate income"?

The Report acknowledges that there are indeed "complications" in making definite sense of these terms. It states:

> It has been widely recognized that a strict application of these stringent limitations [to the meaning of allocative efficiency] would severely restrict the usefulness of most policy analysis exercises, since identification of unambiguous improvements in allocative efficiency would be virtually impossible. (Pt. 1, p.12).

At this point we should distinguish between allocative effects and the standard of allocative efficiency. An economist may very well be able to identify the direction of change in the allocation of resources stemming from legislative revisions, and do so in the absence of any criteria as to what "the best" pattern of resource allocation may be. (eg. without a firm criterion of allocative efficiency).

It is to be emphasized that the criterion of allocative efficiency, i.e. a statement of what the ideal pattern of resource allocation is, is in fact based upon "several facilitating assumptions" (Pt. 1, p.13). This means that if one changes the underlying assumptions, one also will change the "ideal state", namely the condition of allocation efficiency. All recommendations in the Report insofar as they are based on "the" criterion of allocative efficiency, are based on "several facilitating assumptions". In analysing the meaning of the term "allocative efficiency", therefore, our starting point should be these facilitating assumptions.

The remainder of this section addresses one of these facilitating assumptions, namely that wealth and/or income maximization can be discussed outside the context of wealth or income distribution (or, as the Report states, that "allocative and distributive considerations are...separable"). Part (b) below assesses a second facilitating assumption, namely that "policies affecting prices and output in one sector of the economy have, at most, marginal impact on costs and prices in other sectors". (Pt. 1, p.13).

- Non Separability of Allocation and Distribution

Consider a hypothetical economy which produces only one standardized output (say wheat). "Allocative efficiency" in such circumstances is relatively clear. To determine "maximum output" one has merely to count units of the standardized product under differing conditions of production, or so one might think. For example, if private ownership of blocks of agricultural land yields greater wheat production than farming in strips or communal ownership, then "allocative efficiency" would require resources to be privately-owned and ownership to entail fields rather than strips of land.

An important complication to even the hypothetical, single-product economy, however, is time. For "maximum output" is always defined within a lapse of time, and if the time period changes, certainly the "maximum output" will also. The problem that arises from considering time is that the "most efficient allocation of resources" may also change in accordance with variations in the time period. For example, in a period of short duration maximizing output may preclude leaving a field fallow despite the long-term benefits of so-doing ("allocative efficiency") whereas for a longer time period the same criterion (allocative efficiency) could

require a field to be left fallow. We cannot simply count bushels of wheat to determine maximum output, but we must also pass judgement as to the relative weights to be afforded to a bushel of wheat today vs. one next year and years thereafter.

Even a single product economy involves a system of prices inasmuch as a unit today is not exactly the same thing as one next year. "Maximum output" and consequently "allocative efficiency", require a system of prices to be in place, even in a single-product economy.

More generally, we have identified one aspect of the investment problem. Investment is the postponing of current consumption with a view to increasing production in the future. Unless everyone in an economy discounts the future in precisely the same way, current consumption and investment decisions will vary in accordance with the distribution of wealth and income in the society. If everyone felt that "a penny saved is a penny earned" then there would be much saving and investment to expand production in future years, whereas on the other hand, if everyone believed "live for today for tomorrow we may die" there would be greater current consumption and little investment. If both groups co-exist in our simple economy, the amount of land held fallow, i.e. the amount saved and invested, (what we may alternatively call the "term structure of interest rates") will vary in accordance with the distribution of wealth between the two groups. Even in a single product economy, there is the no notion of "maximum output" independent of the distribution of wealth and income.

Of course we do not live in a single product economy and therefore time is not the only complicating factor.

As soon as we acknowledge that multiple goods are produced we cannot simply count quantities and discount by a time factor. We also must assign weights (prices) to the different commodities to make them "comperable". We could think of a two-product economy that can produce either guns or butter or combinations of each. "Maximum output" will depend upon the relative prices of these two commodities but relative prices depend, inter alia, upon the distribution of property, wealth and incomes. Again, we can think of two groups: pacifists and war-mongers. If all people were pacifists, guns would have zero price (due to zero demand) and the economy would produce only butter; if everyone was a war-monger then only subsistence levels of butter would be produced and many guns; if both groups coexist, the relative prices will depend, inter alia, upon the distribution of wealth (purchasing power) between these two groups.

In brief summary, the state of "maximum output" (and hence the criterion of "allocative efficiency") is contingent upon the distribution of income and wealth. Therefore, changes in distribution will redefine both maximum output and "allocative efficiency".

In the Report the authors acknowledge a related, albeit secondary point, namely

> Different output positions are not strictly comparable if they are associated with different wealth distributions in society. (Pt. 1, p.12).

This is true as far as it goes, the point being that if even one person loses income or wealth as the economy changes toward a more "efficient" mode of production we cannot striclty declare this change (this approach to allocative efficiency) to be welfare improving since someone has suffered and we do not

know how to compare societal gain on the one hand and this person's (or group's) loss on the other. This is a second order problem, however, (albeit a valid one) since not only are we unable to declare "allocative efficiency" as welfare improving if some people suffer (the Report's point), but more fundamentally the very definition of "allocative efficiency" changes with each change in income and property distribution.

This is very important when we are discussing legislative changes, because legislative changes always entail a redistribution of rights, incomes and wealth, as the authors agree (Pt. 1, p.7). That being the case, we cannot "strictly" hold up an optimal state of resource allocation as the criterion by which to judge legislative changes inasmuch as legislative changes themselves change the "optimal" pattern of allocation through changes in distribution. Simply stated, maximum output (the criterion by which we are to make decisions) changes as we implement decisions trying to approach maximum output.

Consequently, to re-establish meaning to the criterion of "allocative efficiency" the Report is required to assume that "allocative and distributive considerations are separable" (Pt. 1, p.13).* How suitable such an assumption of separability is with respect to industrial design legislation is the next topic for analysis. For the question now becomes how significant

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* It is not simply a question of being "weakly separable" as the Report states, but being totally separable, which would be the case only if everyone had exactly the same tastes and preferences, that is if the same bundle of goods and services were purchased irrespective of distribution. The term "weakly separable" is applicable to the second order problem discussed in the Report; totally separable is required given the complexity I have just described.

revisions to industrial design legislation could be redistributing wealth and income in our economy.

(b) How Valid Is Allocative Efficiency As A Criterion For Industrial Design Legislation?

We have now established that "maximum output" or allocative efficiency is not a meaningful criterion for legislative action in those cases where important redistributions of wealth and income accompany proposed legislative changes. Therefore, we must ask whether rights granted through industrial design legislation do or could have important repercussions with respect to the distribution of wealth and income in the Canadian economy. If only that small segment of the population classified as industrial designers is affected in terms of income and wealth we could indeed agree that the underlying distribution of income is fundamentally independent of legislative changes as regards industrial design, and therefore it would follow that allocative efficiency could be used as an (unimportant) criterion whereby legislative changes are evaluated. On the other hand, if industrial design legislation has broader income and wealth distribution effects, the criterion of allocative efficiency becomes more dubious.

- Effects of Design Legislation on Distribution

A full or original analysis of the distributive effects of design legislation is beyond the scope of this study. Nonetheless, it is pertinent to review evidence and arguments presented in the authors' Report and to draw out their implications.

The Report devotes about two pages to distribution of income per se (pp. 24-26), isolating distribution as a potential criterion for design legislation.

> A policy which resulted in no significant change in aggregate income but accomplished a redistribution of income from high to low income groups, would (given an egalitarian ethic) be considered a welfare improvement, other things constant. (Pt. 1, p.25).

The Report then proceeds to assess briefly whether increased design protection would be egalitarian or inegalitarian.

Before we proceed any further I must caution the reader that the question the authors of the Report are posing, with respect to distribution, is quite a different question from the one I am primarily concerned with here. The authors are setting up distribution, itself, as a criterion and are asking if the effect of design legislation is egalitarian or inegalitarian. My concern on the other hand, is primarily with allocative efficiency as a criterion; I am asking whether the distributive effects of design legislation could weaken allocative efficiency as a criterion by which to evaluate legislative proposals. Given this clarification, let us return to the Report.

The major assumptions underlying the Report's analysis of distributive effects are contained in the following extract:

> It seems reasonable to assume, as a first approximation, that industrial designers and industrial design firms would likely be major beneficiaries of increased industrial design protection, although over time some of the benefits may be passed on to producers who use design services and consumers of designed products. (Pt. 1, p.25).

From this "first approximation" the Report then questions whether industrial designers as a group merit having their incomes raised by "creating a monopoly property right" (Pt. 1, p.26). The Report notes that industrial designers are relatively few in number (2000 to 3000 it is estimated) and that they appear to have above average incomes (Pt. 1, p.26). Furthermore, to the extent that benefits from design protection "spill over" to firms that employ designers and to consumers of designed products the Report argues that such protection is likely to increase inegality of income inasmuch as

> It is plausible to assume that equity owners of firms employing industrial designers, as well as consumers of highly designed products such as jewellery, furniture and automobiles, also have above average incomes. (Pt. 1, p.26).

On this basis the Report concludes:

> There is no apparent distributive argument on which to base a case for industrial design protection. (Pt. 1, pp.26-27).

Nonetheless, even while arguing in these pages of the Report that the benefits from design protection would tend to accrue to a select and wealthy portion of the population, other sections of the Report point to much wider distributive effects of industrial design itself. I will now extract some of these sections:

> - However, other design features aimed at improving marketability could include such attributes as shelf life, safety in use, ability to be displayed effectively, and compatibility with national and international standards. The industrial design function is therefore concerned

directly or indirectly with a wide range of physical and functional product characteristics that bear heavily on the ultimate market success or failure of a product. Design can thus represent a crucial creative input into the process of developing a marketable product. (Pt. 1, p.3).

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- There is no doubt that industrial design, when integrated with engineering technology to effect vertical improvements (both operational and aesthetic) in products, is an important source of economic welfare. Whether legal protection of designs embodied in such products significantly increases the incentives to do more of such designing is uncertain given already existing market incentives and protection afforded under the Patent Act. (Pt. 1, p.66).

* * * * *

- "Better design of products and processes will help to improve Canadian economic performance. For example, through design:

  - energy can be conserved;
  - materials can be better utilized;
  - productivity can be increased;
  - maintenance and servicing costs can be reduced;
  - the distribution of goods and the provision of services can be improved;
  - consumer needs can be more effectively satisfied.

  In short, better design will enhance the standard and quality of life at home, and Canada's capability to compete in foreign markets. (Pt. 1, p.4).

* * * * *

- All manufactured goods must have an industrial design component, since all have a shape and form. (Pt. 1, p.2).

To recapitulate. If industrial design legislation affects significantly the distribution of income, then "allocative efficiency" becomes a highly ambiguous criterion by which to judge design legislation. The authors agree that industrial design is fundamental to much of economic activity, and hence industrial design itself will indeed have important distributive effects. In an effort to maintain allocative efficiency as a meaningful criterion by which to judge design legislation in these circumstances, the Report proposes two arguments:

First, that design legislation is largely irrelevant in those areas of design activity that have the most significant distributive effects (i.e. functional designs); and

Second, that legislation protecting designs of a visual nature, which may stimulate visual design activity, nonetheless will affect the distribution of income in only a small segment of the economy (namely, industrial designers and upper income earners).

This subsection now explores the validity and implications of the first assertion while the following subsection explores the second.

It is argued that design legislation is insignificant in affecting functional designs since (1) "existing market incentives and protection are afforded under the Patent Act" (Pt. 1, p.66); (2) it is unclear whether the Patent Act encourages innovative activity in any event (Pt. 1, p.49); and (3) design legislation as currently interpreted protects only visual characteristics as opposed to functional designs. (Pt. 1, p.49).

Although it may be true that the Patent Act is currently more important than design legislation in protecting functional designs this does not answer the

question whether functional designs should receive greater protection. At the beginning of the Report the authors do ask

> whether the legal definition of industrial design should maintain its emphasis on visual features to the exclusion of functional elements, or whether the elements of function should be explicitly protected under the Act. (Pt. 1, pg. 7).

This question is never developed or argued in the Report. Rather an implied answer is that functional designs are more appropriately protected under the Patent Act. But that is as far as the answer goes and we are still left wondering on what basis design legislation should exclude functional designs.

On the other hand, if design legislation did or could affect functional design activity, we would then still be faced with the problem of devising a meaningful criterion of allocative efficiency in the face of important distributive effects.

Moreover, we are left wondering whether the Patent Act has important stimulative effects on inventive activity. If it does not, the implication is that design legislation, also, no matter what its scope, would be largely irrelevant in influencing functional design activity. But, if this is truly the case, then allocative efficiency no longer qualifies as a major criterion by which to judge design legislation since design legislation has (the Report asserts) little effect on allocative efficiency.

In other words, we have a double-bind situation. Either industrial design legislation does not influence functional design activity (in which case allocative efficiency cannot be used to judge design legislation); or

legislation does effect functional design activity (in which case the concomitant distributive effects largely nullify allocative efficiency as a criterion).

We have therefore answered one of the problems that were set forth at the beginning of section 4, above. Allocative efficiency does not justify a lack of legal protection to functional designs, since allocative efficiency is not a suitable criterion by which to judge legislation pertaining to functional designs.

In any event, the authors never do argue that functional designs should be unprotected for reasons of allocative efficiency or otherwise. They simply state that functional designs should not be protected and we are left to wonder why not.

(c) Allocative Efficiency Applied to Visual Designs

We are now left with the treatment of design legislation respecting visual designs. Whereas the Report alleges that design legislation is ineffective in influencing functional design activity, it asserts that it may very well stimulate visual design activity. Whether such stimulation is desirable becomes a bone of contention, however, and arguments are developed which purport to demonstrate that increased visual design activity is inefficient (i.e. moves us away from allocative efficiency).

The Report states:

> A reasonable argument can be made that encouraging additional design of a horizontal type, on balance, could lead to an excessive amount of product differentiation. (Pt. 1, p.66).

The reasoning behind this statement is as follows: Under conditions of monopolistic competition, economic theory contends that rivals will attempt to differentiate

point of view presented. Fairness would incline me to treat all designs equally, or if not to at least base differential treatment on differing circumstances among designers. The Report argues, incorrectly I believe, that equity can be more or less attained by dispensing with the Industrial Design Act altogether inasmuch as some (or "most") designs would be protected in any event through patents or copyright. This position would not promote equity among industrial designs, of course, since some would remain unprotected and among those that would be protected there would be differing degrees of protection afforded, depending upon whether they were protected by patents or by copyright. In any event, since the authors do not recommend that the Act be abolished, we should give attention to promoting fairness through the Act itself.

It becomes questionable, as a practical matter, whether the distinction between visual and functional designs can be maintained, however, without in effect, severely minimizing the subject matter under the purview of the Industrial Design Act. From the point of view of the "characteristics" demand model employed in the Report, visual and functional characteristics are interdependent in the minds of consumers, and hence this would constitute an argument for not making legal distinctions either. Moreover, inasmuch as function and form are frequently co-mingled in a technical sense, again attempts to make legal distinctions will be misguided. If the Industrial Design Act were to exclude all designs with functional elements from protection, designs would probably be registered quite infrequently, due to the inseparability of function and form.

Turning now to the criterion of allocative efficiency, the major criterion employed by the authors to analyse design policy, it is to be noted that while the

their products in order to attain market shares. Such product differentiation may be unduly costly if production is characterized by economies of scale since no single firm or product line will attain lowest possible per unit costs due to market fragmentation. On the other hand, this market rivalry will not significantly expand market demand for the product category but mainly result in brand switching among consumers of the product type. (Pt. 1, pp.41,59).

To investigate the validity of the foregoing hypothesis, a number of empirical steps are required:

(i) To ascertain whether design legislation stimulates designs of the "product differentiation" type;

(ii) If so, whether consumers indeed consider the various designs to be good substitutes for one another and hence be willing to switch from one brand to another with little inconvenience;

(iii) Whether the affected industries are characterized by economies of scale which firms cannot attain due to small production runs attributable to this product differentiation.

In the Report the following responses are given to these questions:

(i) Whether design legislation stimulates designs of the product differentiation type:

The Report notes (on p.58 of Pt. 1) design registration by product type for 1978. It states:

> The major registrants of industrial design are firms in the furniture, games and toys, packaging and storing, apparel, household articles and electrical equipment industries. These industries generally produce output for final use with an important visual component. (Pt. 1, p.56).

Furthermore, the Report asserts that within industries there are significant differences by firm in the use made of registration under the Act. The Report asserts

> It appears that registrant firms tend to emphasize appearance and style more than some of their competitors who use the registration system less. Some of the other main registrants are reported to rely on "new models" (i.e. new appearances) more than competitors who have more stable product lines. In other words, visual product differentiation seems to be important to those firms that use the design registration system intensively. (Pt. 1, p.57).

In summary, the Report presents some weak, intuitive and judgemental evidence to the effect that the Act does induce visual design activity of a product differentiation type.

(ii) Do consumers consider various designs to be highly substitutable?

No evidence is presented on this issue. A theoretical discussion is developed on pp. 35-42 whereby certain assumptions regarding substitutability are explicitly and implicitly made. However, no evidence is presented.

(iii) Whether the affected industries are characterized by unrealized economies of scale attributable to product differentiation.

The authors opt for an "informal assessment" (Pt. 1, p.59) of this issue, relying first upon concentration ratios for some of the industries concerned and second upon an intuitive grasp of other elements of market structure, including economies of scale.

The Report notes that if "excessive" product differentiation is a problem, it is more likely to be a problem

in industries where both seller concentration and barriers to entry are low. The Report states that, in general, the industries making use of registrations are:

> monopolistically competitive in nature. Specifically, there are a relatively large number of firms producing differentiated output. Entry into each industry is relatively easy, particularly for apparel, furniture and toys and games, and profit rates can be generally considered "normal".
>
> On the other hand, communications equipment and measuring instruments may be closer to oligopolistic in structure. (Pt. 1, p.60).

Treatment of economies of scale is similarly brief, general and impressionistic.

The Report concludes its empirical discussion with the statement:

> It is impossible given the available information to come to any precise and unambiguous conclusions about the net allocative benefits of industrial design protection.... (Pt. 1, p.66).

5. Summary

Part II of this study has analysed major aspects of the Report, The Economic and Legal Dimensions of Registered Industrial Designs in Canada, by addressing four fundamental questions:

1. What is an industrial design; to what extent and in what ways are industrial designs distinct from other outworkings of intellectual activity?
2. Should all industrial designs receive equal protection under the law?

3. If not, on what bases should industrial designs be classified so as to afford differential protection?

4. What criteria should be used in resolving the foregoing issues, and how should these criteria be applied?

We have noted the vagueness of the concept, "industrial design". In particular, the non-legal notion of industrial design merges with "works" on the one hand and with "inventions" (or new, useful objects and processes) on the other. We have also noted that copyright and patents both afford significantly greater legal protection against copying than does registration of industrial designs. One might well question why this should be the case, given the ambiguity and lack of clear distinction among the three activities and their outworkings.

The Report recommends, however, that for legal purposes a line be drawn between registrable industrial designs and inventions. It also suggests that "functional" designs should be distinguished from "visual" designs and that legal protection only be afforded to the latter. In this way registrable industrial designs would become more distinct from inventions, since inventions comprise new functional relationships.

The foregoing recommendation raises a number of related questions, however. Is a clear demarcation between designs and inventions desirable or required? Is making a distinction between visual and functional designs necessarily the best or only way of doing this? Indeed, can one in fact distinguish between visual and functional designs? Is it desirable to afford legal protection only to visual designs? How can we distinguish visual designs from works? Do we need to do this?

Distinguishing in legislation between designs and inventions may not be required, at least from an administrative point of view, inasmuch as an originator will seek protection under whichever law affords him the greatest protection, and in any event the protection under various statutes is not cumulative but rather is concurrent. Therefore, administratively, an intellectual outworking can be protected simultaneously under two or more statutes without causing any administrative problem.

The Report takes the position that patent protection for inventions is in place, but that "functional" designs ought not to receive design protection. This recommendation obviously implies making a distinction between functional inventions and registrable designs. However, no economic argument is developed in the Report to support this recommendation. Indeed, the Report argues that the degree of protection afforded functional designs is quite unimportant since, the Report contends, "the presence or absence of industrial design protection will not significantly affect the level of operational innovation in the economy" (Pt. 1, p.34).* The logical outcome of this contention is that distinguishing or not distinguishing between functional designs on the one hand and either inventions or visual designs on the other should hinge on criteria other than allocative efficiency. But the Report minimizes all other criteria, so we are left wondering why the Report makes these distinctions.

The Report's treatment of other criteria, however, is insufficient. Turning to the criterion of fairness, for example, I have difficulties supporting the

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* See also Pt. 1, pp. 49-50.

definition seems on the surface to be clear enough, it is actually a highly ambiguous and illusive notion. A fundamental problem with the criterion is the necessity of assuming that allocation and distribution are separable. This assumption is required insofar as each income distribution will have a unique theoretical maximum output associated with it, meaning that there are as many conditions of "allocative efficiency" as there are income distributions. To use the criterion of allocative efficiency, therefore, we must assume income distribution fixed. However, each and every policy change will change the distribution income, and consequently "the" optimal allocation position will change also. Given the centrality of industrial design to much of manufacturing activity it must be agreed that anything impinging upon design activity in an important way will have important distributive and allocative effects. Whether design legislation is one such factor is, perhaps, a mute point, but in any event there are only two possibilities: either (a) legislation will not affect significantly either allocation or distribution, in which case the legislation is irrelevant from the viewpoint of allocative efficiency, or (b) it will have important allocative and distributive effects, in which case one cannot use "allocative efficiency" as a criterion by which to judge the legislation.

The final topic explored in Part II was the authors' application of allocative efficiency to visual designs. The authors assert that design protection, as applied to visual designs, may stimulate an "excessive" amount of product differentiation, insofar as the resulting market fragmentation may preclude full attainment of possible economies of scale; nor is such product differentiation viewed by the authors as significantly increasing consumer satisfaction, in any event. While the thesis is interesting and suggestive of further work, virtually

no evidence is presented to support it. We do not really know how much consumers value product differentiation across the multitude of industries and products touched by design legislation, nor even whether generalizations are possible; we do not know whether the types of designs induced by the Act are "merely" ornamental or whether there is a co-mingling of form and function both technically and in the minds of consumers; we do not know the extent to which the affected industries are unable to achieve full scale economies and whether product differentiation and/or design legislation are factors in this regard.

6. Conclusions

I conclude that the Report has not supported adequately its main recommendation, namely that design protection be afforded only to "visual" designs. No argument or documentation is presented as to why "functional" designs should not be protected, nor is it at all clear that, as a practical matter, visual and functional designs can be separated.

Furthermore, the Report minimizes unduly the criterion of fairness for drawing up legislation, and overemphasizes the criterion of allocative efficiency. Allocative efficiency is highly ambiguous as to meaning, and in any event, the empirical evidence cited in this regard is neither thorough nor persuasive.

On the other hand, the Report has opened up a number of research questions which warrant further analysis, such as the impact of law on design activity, consumer satisfaction stemming from design variations, the effects of design differentiation on the attainment of scale economies.

PART III:

ECONOMIC THEORY AND RATIONALE FOR INDUSTRIAL DESIGN PROTECTION

> The image is also an object....
> To photograph is to appropriate
> the thing photographed.
>
> - Susan Sontag, On Photography, pp.3-4.

1. Economic Analysis and Intellectual Property Rights

Economics is primarily the study of market exchanges. A "market" is comprised, at a minimum, of four components: a seller; a buyer; a commodity or service; and something offered in exchange (frequently money). Exchanges not formally entailing property rights tend to be beyond the purview of economics.

Markets for private goods and services, those goods and services for which a single owner or user can be identified, are relatively easy to analyse. On the other hand, economic analysis of "public" goods and services, such as information or intellectual property, is more problematic insofar as property rights can be difficult to define and enforce, in which case market exchanges will break down. Whereas a private good or service can exist only in one place at a time and thereby fall under the control of a single owner such is not necessarily the case with a public good or service. For public goods, many can "possess" the good or service simultaneously, without necessarily having to enter into a formal transaction with the "owner"; the public good or service can exist in many places simultaneously.

Outworkings of intellectual activity constitute prime examples of public goods. While a loaf of bread can exist only in one place at a given time, the abstract or general

notion (or "invention") of a loaf of bread can exist all over the world simultaneously. While a car, bearing its own particular shape, can exist only in one place at a time, the design of the car can be applied to any number of automobiles and even be carried around in one's head. While a particular copy of a book can exist only in one place at a time, the manuscript can reside in many books simultaneously and be reproducible through reprography.

Consequently, when economists look at markets involving intellectual property, they are looking at highly abstract markets which are of a quite different order from markets for private goods and services. For these latter markets, legal title to an identifiable object or service is changing hands. For intellectual property it is the right to duplicate, retransmit or act upon ideas or characteristics (which may or may not be embedded in material objects), that is in question, not an object in and of itself.

2. Role of Law in Allocating Resources

In society it is the law which creates and protects property rights and which supports conditions for the exchange of property. Indeed, it is impossible to conceive of property ("the legal right to the possession, use, enjoyment, and disposal of a thing") outside the context of law. As noted elsewhere* property rights can seldom be absolute due to conflicting claims. Consequently, the legal framework plays an instrumental role in helping to determine how markets will function. Once this is realized, statements such as the following are seen to be in error:

> The basic premise is that, without the increased income available from the exploitation made possible by the intellectual property laws, market processes left completely to themselves would produce less

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* Robert E. Babe and Conrad Winn, Broadcasting Policy and Copyright Law, chapter 2.

> than "socially optimal" quantity (and possibly quality) of particular types of "intellectual" output.
> (Report, Pt. 1, pp. 5,6) (Emphasis added).

No market ever functions by "itself". All markets function only within the context of property law, which apportions rights, obligations and conditions, thereby influencing the "terms of trade" and the allocation of resources. This is because all markets entail the transference of property from one to another and the bundle of claims and duties so exchanged is created and enforced by law. Property embodies simultaneously rights and duties, and it is rights and duties which are simultaneously exchanged as enforced by law. Insofar as the rights and obligations of property are created by law, it follows that:

> Since the laws can be altered, there are no absolute rights of property.
> (Walter Lippmann, The Public Philosophy, p. 92).

Therefore, my first conclusion is that intellectual property law is in essence no different from other property law, albeit the rights and duties supported by intellectual property law may be more abstract and difficult to enforce. Nonetheless, it is also true that no market can exist without a legal framework behind it creating and supporting the bundle of rights, claims and duties that collectively comprise property. The questions that arise, then, are whether there should be a market for intellectual activity at all (with no intellectual property law there can be no market), and if there should be, what bundle of rights and duties should be attached by law to intellectual property. It is certainly not a question, however, of leaving market processes completely to "themselves".

We must now come to grips with the term "monopoly" for in the Report the authors frequently cite "monopoly" as being a detrimental aspect of intellectual property.* Insofar as market exchanges always entail the exchange of property, and inasmuch as property denotes the ability (inter alia) to exclude others, all market exchanges entail the sale of a good or service by a "single seller" (a "monopolist") who has the right to exclude others. Therefore, creation of a "monopoly right" in intellectual property is in principle no different from property protection granted to other forms of property. Private property means a single seller. Therefore, as with other property, the policy question hinges on the degree of competition, that is the extent to which one seller's property is seen as being substitutable in the eyes of buyers with the property of other sellers. If there is little substitutability, and if purchasers value the property of the single seller, then, and only then, can we speak of the existence of monopoly power.

For much of intellectual property, especially in this "information age", there are many good substitutes and little market power exists. Note that the existence of intellectual property adds property rights to all authors, composers, designers, inventors, etc. by preventing unauthorized duplication, but that these laws do not reduce competition among different novels, plays, compositions, etc. Indeed, to the extent that intellectual property law stimulates intellectual activity and increases different outworkings of intellectual activity, property law increases competition among works, designs and inventions. The only way in which intellectual property law may be said to decrease competition is by proscribing unauthorized duplication of any given work (i.e. copying). Whether such law creates monopoly power or not, as argued above, depends upon the degree to which substitutes exist

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* For example, Executive Summary, p. 2, Part 1, pp. 26, 73; Pt. 2, pp. 2, 9, 18, 19.

or the ease with which they can be brought into existence. If the law induces substitutes, a primary purpose of intellectual property law, then the monopoly power question can be set aside as largely unimportant.

There can be no doubt that, on occasion, intellectual property law does support significant market power. For example, the monopoly of the telephone industry was based originally on patents which were difficult to circumvent (i.e. to develop substitutes without patent infringement). On the other hand, again, it can be argued that the invention of the telephone might never have taken place without the prior existence of patent law, in which case we are discussing the effects of intellectual property in aiding the monopolization of a field that would not even have existed in the absence of intellectual property law.

In any event, it is easy to over-emphasize cases where intellectual property appears to perpetuate monopoly power and to under-emphasize the more general state of affairs; competition exists and is strengthened by intellectual property laws at the level of rival patents, competing designs and substitutable works. Intellectual property law bestows monopoly only in the sense that one party alone is authorized to make commercial use of a particular work, a particular invention or a particular design; intellectual property law does not bestow monopoly in the sense of restraining competition among substitutable works, rival inventions, or alternative designs, rather the opposite is true.

It is interesting to note that the authors in their Report argue from both sides of the fence in disclaiming the desirability of industrial design protection. On the one hand, for "functional" designs, the creation of monopoly power may be an undesirable result if design protection is afforded designs. On the other hand, for "visual" designs, industrial design protection may induce too much competition by stimulating competing designs, thereby making potential

economies of scale unattainable. The solution offered in the Report in both instances is weak or zero design protection, to inhibit monopoly and to inhibit competition.

3. Summary of the Issues

We are concerned with the bundle of rights (if any) that should be afforded particular types of intellectual activity. The delineation and enforcement of intellectual property rights is particularly problematic due to the public nature of ideas, thoughts, concepts, -- or more generally, information.

Information is intangible. While information is frequently encapsulated in material form, such need not be the case (the difference between an extemporaneous and a prepared speech, for example). In any event, information can be carried about in our heads.

Industrial design is the result of intellectual activity, lending shape to material objects. This intellectual activity becomes embodied or materially encapsulated in the form or shape of the product. One need only look at the product to "appropriate" the design. We can "read" products to attain their intellectual content in fundamentally the same way we read a newspaper to attain its intellectual content. Note the remarks of Anthony Smith:

> At each point information is the linkage between states; it is a kind of raw material itself which is contained within the product whose manufacture has depended upon it. Manufactured goods are in many senses frozen information. (Anthony Smith, The Geopolitics of Information, p. 112).

Another observer has remarked:

> What characterizes...artifacts is the double message that we read in them all, from the first chipped piece of stone: that tells us what they are for and

> also, at the same time, how they were made. So the artifact is an invention which carries its own blueprint with it -- as we look at it, we see forward into its use and backward into its manufacture, and it extends our culture in both senses. This double power of the artifact inheres in everything that has been made all through history and up to the present. (Jacob Bronowski, The Visionary Eye, pp. 65-66).

Industrial design legislation then assumes as it must, that in being exposed to a manufactured commodity, the viewer thereby attains the "blueprint" of the design. It is not a question of restricting access to these "blueprints", plans or ideas, for that is impossible; rather it is a question of the uses to which one can put these "blueprints", once having attained them by merely inspecting the article.

The question of the appropriate legal structure touches on three interrelated areas, as I see it: (i) fairness to the originator; (ii) social interest; and (iii) administrative feasibility.

- fairness

  The doctrine of fairness would imply that some protection should be afforded to all industrial design activity. Design law then can be viewed as a moral right which ensures that "the producer will not be deprived...of the result of his efforts".* In the absence of design legislation, designers could be so deprived in two ways: First, if designs are freely reproducible, the designer will receive lesser reward for his intellectual activity. Second, if the copied design "houses" a manufactured good of inferior quality, this will

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* R.H. Tawney, "Property and Creative Works" in C.B. Macpherson (ed), Property: Mainstream and Critical Positions, p. 136.

detract from the reputation of the original product with the same outward appearance; design, in this instance, identifies a product and thereby constitutes a trademark.

A second aspect of fairness, as treated above in Part II, entails equitable treatment among designers. The law should not arbitrarily or capriciously discriminate amongst designs or designers; rather, any differential treatment should be justified on grounds that (i) designs and/or designers are clearly categorizable, and that differential treatment increases equity or (ii) other criteria, such as efficiency, justify discriminatory treatment.

Nonetheless, having determined that designs should be afforded legal protection and that, in the absence of strong arguments to the contrary, all designs should be afforded equal treatment, the question is still unresolved as to the nature and extent of the protection to be afforded. In this respect three major questions are:

(i) What should constitute a registrable industrial design? Previously we have argued that originality or newness is the primary justification for all legal protection against copying, as otherwise the law would be protecting copies against being copied, which is absurd. But what constitutes "newness" when, as we have seen, everything that is "new" makes use of that which already existed? Obviously, judgement must be brought to bear and it is doubtful whether legislation can be very specific in defining "newness".

(ii) What constitutes an infringement and how should it be penalized? The first part of the question is the same as (i) above since, if we know what a "new" design is we will also recognize a copy.

The penalty for infringement should probably be tied to the monetary gains derived from infringing and the penalty should redound to the registered design holder.

(iii) What should be the time period protecting designs? Here again, by the criterion of fairness, the answer is not clear-cut but will be a matter of judgement. The length of the protection periods under copyright and patent law may help provide useful guidelines in this area, however.

- social issues

Although "fairness" may be viewed primarily as a concern for the individual designer, fairness is also strongly tied to broader social issues. First, society itself is richer if its individual members are treated fairly. Second, in treating fairly designers, increased designs will be forthcoming, thereby redounding to the benefit of society generally.

It is sometimes argued that industrial design protection represents a trade-off from society's point of view: protecting designs so as to secure greater activity in the field vs. lessening protection so as to erode monopoly power. From this perspective there are a number of questions to be answered, none easy and all perhaps impossible to answer with precision:

(i) What is the relationship between varying terms of protection and the amount of design activity? This is a complex question for a number of reasons. First, at any given period in our history we can have in place only one system of protection; we cannot conduct experiments to find out the impact of changing the terms of protection upon design activity. Second, in any event, designs are not homogeneous, and terms of

protection may affect different design activities differently.* In such a case, even if it were possible to determine central tendencies between variations in the terms of protection on the one hand and design "activity" on the other, central tendency (the mean or mode) may not be important if there is wide variation. Which brings us to a third point, namely placing a value on different types of designs or design activities if they respond differently to different terms of protection. All designs are not necessarily of equal value, and we would want to weight the various designs in some manner so as to appropriately correlate design protection with design activity. What weighting scheme would be used is a controversial issue, however. In my view, all of the foregoing questions remain unanswered by the Report.

(ii) What is the impact of varying terms of protection upon monopolistic restrictions?

If stimulation of design activity is perceived as being the major social benefit of design legislation, then monopoly power (or restriction on output) can be perceived as being the social cost.** However,

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* As the Report states:

> "All manufactured goods must have an industrial design component, since all have a shape and form. Whether or not there was extensive thought given to the ultimate result, there must have been some designing".

** And the Report does indeed argue this position as to benefits and costs. But, as noted above, it also argues the opposite case. Namely, that stimulation of competition is the cost of design protection (the economies of scale argument), rather than its benefit, in which case policy should reduce design protection so as to increase monopoly power.

the relationship is not a simple one, and we don't know even whether it is an important one. While design protection will reduce copying of designs, and thereby raise prices charged for registered products (a social cost), this same protection will induce new, competing designs, increasing competition and lowering prices charged for designed products (a social benefit). We have no quantitative information as to how these opposing forces interact, which dominates, or the overall level of impact. Note that the stimulation of new designs serving to lessen the monopoly power enjoyed by established designs is an additional benefit from that discussed in (i) above, namely the social benefit in new designs per se.

(iii) How do the costs and benefits vary with the terms of protection?

If we had an equation telling us how design activity varied with the terms of protection, and another telling us how monopolistic restrictions varied with the terms of protection, we could then combine them in order to "optimize" the terms of protection, assuming that the equations would remain the same over the anticipated life of the legislation. Without doubt we are far removed from this level of knowledge, and consequently what constitutes the best terms of protection remains highly uncertain.

- administrative issues

Design legislation should be feasible to administer and not hinge on dubious distinctions. Administratively, therefore, it is desirable to treat all designs equally, rather than attempting to classify them as to whether they are functional, visual , visual with functional elements, functional with visual elements, utilitarian, ornamental, etc. I question whether any economic goal would be served by such distinctions in any event, and they certainly violate the criterion of fairness.

PART IV: CONCLUSIONS

The Report, The Economic and Legal Dimensions of Registered Industrial Designs in Canada, does not provide reliable ground upon which to make legislative revisions.

1. The Report unduly minimizes the criterion of fairness. Fairness would imply providing equal protection to all designs, and setting the terms of protection in light of patent and copyright law.

2. The Report over-emphasizes allocative efficiency as a criterion, and deals with it inconsistently. We simply do not know the magnitude (or even direction) of all of the allocative effects. In any event, the case against design protection is not very convincingly argued, especially as we come to realize that design protection is disparaged by the Report on grounds both of inducing monopoly and of fostering too much competition.

3. The final policy position of the Report is unsatisfactory, namely:

> "... if one does not know whether a system 'as a whole' (in contrast to certain features of it) is good or bad, the safest policy conclusion is to 'muddle through' -- either with it, if one has long lived with it, or without it, if one has long lived without it." (Report, p.66).

4. I would recommend that, on grounds of fairness, design protection encompass all industrial designs (whether "visual" or "functional") and that the terms of protection be brought more into line with those of copyright and patents.

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