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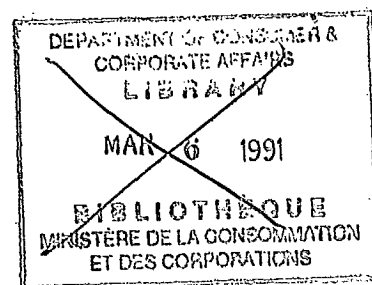
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PRODUCT STANDARDS - IS IGNORANCE BLISS FOR CONSUMERS?

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PRODUCT STANDARDS - IS IGNORANCE BLISS FOR CONSUMERS?

1. Purpose

The purpose of this paper is to look at different types of product standards and their role in the marketplace, with particular reference to their impact on consumers. International harmonization is discussed in the context of the developing global market. Finally, some wider standards issues related to departmental operations are explored and some suggestions made for future action in this area. Standards for services are dealt with in another paper.

2. Introduction and Definitions

Although no product could be made without the use of standards, most consumers take their existence for granted. Standards are ubiquitous in our daily lives: when we buy a kilogram of flour, or put a plug into an electrical socket, from crib safety to screw threads, standards are essential. A standard establishes formal requirements, procedures or definitions to provide a common base for producing and purchasing goods and services, for influencing economic activity, for transferring technology, and for public protection. The original standards were physical weights and measures, but the concept has broadened until, now, all laws are, essentially, standards. The Criminal Code establishes standards for socially acceptable behaviour in the same way that the Hazardous Products Act sets standards for safety. In simple terms, a standard is a level which, if met or exceeded, makes a product (or activity) "acceptable". Clearly, there are an inestimable number of standards which influence, or even control, the way we behave. Just imagine the chaos that could result if the colours of traffic lights had different meanings in different locations.

For the purposes of this paper, "standards" will be restricted to those related to the consumption of goods but, even with this limitation, there are many different types of standards, for example:

Uniformity Standards - Standards for uniformity are those developed to provide for product interchangeability, e.g., lamp sockets and light bulbs, and product simplification, e.g., screw threads. The primary objectives of uniformity standards are lower costs to producers because of the economy of scale gains and the provision of better safety for consumers.

Quality Standards - Quality standards provide consumers with information and reduce the risk and uncertainty associated with some purchases, e.g., safety standards for cribs.

Standards may be developed by government (possibly in consultation with interested parties), by a standards writing organization such as the Canadian Standards Association (generally known as a "consensus" standard), by an industry, or even by a company. Some consensus standards are developed internationally by organizations such as the International Organization for Standards (ISO) or the International Electrotechnical Commission (IEC).

Standards may be voluntary or mandatory:

Voluntary Standards: A voluntary standard is one whose use is left to the discretion of the supplier of the product or service in question (e.g., the ISO standard for writing dates is Year-Month-Day).

Mandatory Standards: A mandatory standard is one which is incorporated into a law or a regulation enforced by government and/or its agencies (e.g., the National Building Code).

A further distinction should be made with respect to design and performance standards.

Design Standards: A design standard is one which has been written in terms of construction specifications. In this way, it could be somewhat restrictive in nature; for example, a design standard for an airplane would describe exactly how and of what material it should be built - its wing span, the size of fuel tanks, etc. In the consumer area, the spacing of bars in cribs is an example of a design standard.

Performance Standards: A performance standard is one which is written in terms of functional requirements. A performance standard for an airplane would describe how it should perform - its rate of climb, fuel consumption, etc. Performance standards are broad in nature and may need to be supported by standard test procedures to measure the performance. The standard for flammability requirements for children's sleepwear is an example of a performance standard.

3. The Importance and Use of Standards

In general, producers have more knowledge concerning their products than do consumers, especially if the product is very complex. Consumers, therefore, can be at a disadvantage when purchasing and they may not be able to make the most informed choice. However, by producing to a standard, consumers can be reassured about their purchase: highly technical information can be conveyed in a

manner which is easily understood. Thus, the information gap between producers and consumers is reduced, and consumers' ability to differentiate between product choices may be enhanced.

Standards, because they establish guidelines for product acceptability, reduce the risk of product failure from a producer's point of view and they may also reduce the level of hazard from a consumer's point of view.

Standards, depending on how they are developed and implemented, can increase or decrease the level of competition in an industry. Companies may attempt to use standards to increase their market power, which can rebound to the detriment of consumers.

Uniformity standards may improve the competitive position of small firms more than for larger firms which are already scale-efficient. Standards may also eliminate some product differentiation, and thus encourage more vigorous price competition.

Quality standards affect industry structure through their impact on the ease of entry of new firms and new products into the market. An excessively high quality standard could inhibit competition by restricting entry to, for example, only those companies able to afford some expensive piece of specialized equipment that is necessary in order to produce to the quality standard.

Standards also have an impact on industry exposure to and participation in international trade. If national standards are compatible with international standards, producers will have easier access to export markets and will possibly have access to lower-cost imported raw materials. Exports increase the total market for a product and allow firms to reduce costs through economies of scale. Imports increase competition and may lower input costs and final prices for consumers.

Standards designed to reduce needless variety may inadvertently restrict entry. Smaller firms may be less able than larger firms to change their production processes and product characteristics to meet the new standards. In addition, small firms often operate in niches in the market, i.e., they produce specialized products that may be eliminated when rationalization occurs. Quality standards, especially if they are mandated, may eliminate products valued by some consumers from the market. Domestic standards which differ from international standards may reduce both imports and exports, raise costs and prices, and misallocate resources in production and consumption.

These negative aspects of standardization may be unavoidable; however, it is more likely that they will occur if firms with market power (or hoping to gain it) push for the development of standards which are specific to their product and/or are overly stringent and costly to implement specifically for the purpose of entrenching or establishing their market position. This can best be avoided by developing consensus standards with well-balanced committees, or by government with full consultation.

In terms of price, quality and availability of products, standards can have effects in different directions. Uniformity standards tend to reduce prices and certainly improve availability, but they may reduce the choice of quality. Video cassettes are now almost all in VHS format at lower prices and in wider distribution than when there was competition with Beta. However, purists insist that Beta quality was superior.

Most standards for consumer products include safety requirements. There can be no absolute safety, and the level of safety determined by a standards setting committee will usually reflect community perception of acceptable risk. This may not accord with an individual's perception of that risk, and there will be some people complaining that they have to pay a premium for safety they do not need, while others may complain that the product is not safe enough for their lifestyle. The flammability standard for mattresses was criticized by non-smokers' organizations who objected to paying for safety features that were designed to reduce the dangers of smoking in bed. On the other hand, complaints are received that the safety standards for some toys are too low when, for example, a two-year old injures himself while playing with a toy that is designed for (and meets the standards for) an eight-year old. High safety standards may also restrict the availability of products. Baby walkers are no longer available in Canada because manufacturers cannot meet the safety standards at a price consumers are prepared to pay.

Standards do not, in general, affect redress except for product liability suits, where the safety specifications for the product are frequently pivotal to a case.

Annex A is a table illustrating the influence of standards by the major family expenditure categories.

In summary, the positive aspects of the use of standards in production are that they lead to:

- the realization of economies of scale
- increased compatibility and interchangeability among products

- increased export activity if the standards are international

The negative aspects of the use of standards in production are that they:

- may prevent new firms from entering the market
- may be purely design oriented and thus curtail innovation
- may create obstacles to trade if standards are not compatible between countries
- may increase the cost of products unnecessarily

The positive aspects of the use of standards in consumption are that they:

- enhance product safety and facilitate consumer choice
- enable interchangeability and facilitate repairability
- protect consumers against product misrepresentation

The negative aspects of the use of standards in consumption are that they:

- may give a false sense of security
- may reduce desired variety of products
- may be interpreted as meaning more than they are intended to

4. The National Standards System in Canada¹

In Canada there are five independent organizations that develop voluntary consensus standards within the National Standards System; the Standards Council of Canada (SCC) coordinates their work. Because these organizations meet the criteria established by the Council, they have become "accredited". They are:

Bureau de normalisation du Québec (BNQ)
Canadian Gas Association (CGA)

¹ Extracted from the SCC publication Symposium - A Guide to Accessing Standards Information in Canada.

Canadian General Standards Board (CGSB)
Canadian Standards Association (CSA)
Underwriters' Laboratories of Canada (ULC)

Standards published by the five accredited standards-writing organizations are developed by committees whose members represent those segments of society that may be affected by such standards. These standards represent a consensus of a group of experts on the best solution to a problem -- taking into account all pertinent factors, at the time the standard is developed. Subject areas are divided among the five organizations to minimize or eliminate duplication of effort.

Some Canadian standards are classified as **National Standards** by virtue of their development and publication meeting criteria prescribed by the SCC.² These criteria ensure that, among other considerations, such a standard responds to an identified national need.

The SCC and the accredited standards-writing organizations take part in international standardization activities through a number of bodies. Much of this activity is through the International Organization for Standardization (ISO), and the International Electrotechnical Commission (IEC).

ISO is a specialized international agency for standardization. Its members are the standards bodies of some 90 countries representing over 95 percent of the world's industrial production. Standards published by ISO encompass a great number of finished products and raw materials. However, their standards do not include the electrical and electronics fields. ISO is a non-governmental agency established for the purpose of developing world-wide standards, to improve international communication and collaboration, and to promote the smooth and equitable growth of international trade.

The IEC has essentially the same structure and goals as ISO but specializes in the electrical and electronic fields.

² SCC's publication, CAN-P-2, entitled *Criteria and Procedures for the Preparation and Approval of National Standards of Canada*, outlines 15 criteria for National Standards. CAN-P-2 is available from SCC.

5. Consumers' Problems with Standards

5.1 Certification Marks

Certification is the method of informing consumers that a product meets a standard. It may be the approved label of a standards writing organization (e.g., the CSA mark on electrical appliances) or a set of descriptions (e.g., the Canada Standards Sizing Scheme for children's clothes, or the grading descriptions for canned pineapples). In the case of electrical appliances, the certification mark is not very informative for consumers because:

- i) the Canadian Electrical Code (mandated by all provinces and territories) requires the CSA mark on all electrical appliances sold in Canada, and
- ii) the mark applies only to electrical safety (not mechanical or structural safety).

The mark is frequently interpreted by consumers as meaning that the product is totally safe and/or is of high quality. This illustrates the dangers of certification marks - that they may be taken as having more than their real significance. Organizations concerned with standards have been aware of these limitations for many years, but there is no easy solution - information is the key.

Certification schemes and other methods of conveying standards information to consumers have been investigated in some depth by various organizations including the University of Guelph, who did a study (unpublished) for the Standards Council in 1987. The general conclusion was that consumers did not recognize certification marks and had very little idea of what they meant. Although this was rather discouraging to the standards writing organizations, it does beg the question of how much consumers need to know about the underlying standards in order to make a sensible purchase decision. Comparative labelling schemes (Cantag and the U.K.'s Teltag) which gave quantified comparative information about all the products of a line, such as carpets, were popular in the early 70's but the expense of setting standard methods of measuring performance, testing the products and producing and promoting the labels far exceeded the benefits. Consumers judged the labels too complicated and preferred a "seal of approval". However, a seal has other limitations because not all consumers want the same qualities from a product and no one set of criteria can be developed to satisfy everybody.

5.2 Grading Schemes

Grading schemes are based on i) a series of standards to set levels and ii) to nomenclature for those levels. In addition, the standards that define the levels of a grading scheme are generally not publicized and consumers must place considerable faith in the developers of the scheme. This faith may well be misplaced because, for example, most agricultural grading schemes are designed by and for producers.

The nomenclature chosen in many grading schemes are not understood by consumers -- only the labelling cognoscenti know which is better between Canada Choice and Canada Fancy for certain food products. Many consumers think that a "CSS size 3" label will be on a garment that will fit a 3-year old, but, in reality, it is only a designation and the actual 3-year old may require a size 5.

5.3 Standards Development and Implementation

Voluntary, consensus standards can only be effective if manufacturers adopt them. If, for whatever reason, manufacturers do not want to adopt them, then there is very little that consumers can do to exert persuasion. The notion that purchasers will buy only products made to a consensus standard assumes a greater knowledge and sophistication by consumers than currently exists. Similarly, consumers can advocate standards that they believe will be beneficial, but the final decision whether or not to implement them rests with manufacturers. Thus, consumers' influence in setting priorities for standards development is minimal. Examples of this have occurred in recommendations from the Standards Council's Advisory Committee on Standards for Consumers. The Committee, which represents consumer interests to the Standards Council, has advocated national standards for subjects as diverse as driving schools, luggage and pantyhose. The industry groups concerned with these subjects have not been favourably inclined to commit finances to the development of standards or, presumably, if standards were developed, to implement them. Hence, there has been no action, and consumers are faced with driving schools that have no common criteria, luggage which may look good but falls apart, and pantyhose which does not fit in spite of the label which suggests it "fits all".

5.4 Consumer Representation

Representation of the consumer point of view is generally recognized to be inadequate in standards development. It is extremely difficult to get people with suitable expertise to devote the time necessary to sitting on standards committees to represent the consumer/public interest. This applies to both the policy and technical levels. Strenuous efforts have been made by standards bodies and

consumers' organizations to recruit such people but with limited success. One notable exception is that of CSA's Advisory Panels set up in Halifax, Toronto, Montreal, Winnipeg and Vancouver which discuss standards matters directly with users in open fora. The interest expressed by those who attend has sometimes been extended to persuade them to take part in technical committees. Expertise does exist in government, but there is no clear policy regarding the role of government representatives on standards committees. Are they there merely as referees between the business and public interest (assuming the latter are at the table), or have they a wider remit to represent consumers/users?

6. International Standardization

The international harmonization of standards is a popular topic and generally thought to be of benefit to consumers. Harmonized standards facilitate the globalization of trade but are not essential for it. There are many organizations involved in promoting international standardization which can mean the development of international standards or the harmonization of existing national standards.

6.1 International Standards

Organizations such as ISO or IEC write international standards. Their technical committees are composed of representatives from interested nations, and all member countries of ISO and IEC have the opportunity to comment on draft standards through their national standards authorities. In Canada the SCC has this responsibility and it has established a number of Technical Advisory Committees for this purpose.

Within the current Round of Multinational Trade Negotiations, efforts are being made to strengthen the GATT Standards Code, in particular by increasing transparency, improving notification, and promoting the mutual recognition of test methods and specifications. Canada is supporting this initiative, but there are administrative problems in many countries in bringing regional, national and subnational standardization, whether voluntary or mandatory, more formally within the information and notification network of the GATT.

One of the criticisms of standardization processes in general, and international standards development in particular, is the slow pace of progress in developing new standards. Innovative approaches to meet urgent needs, particularly in the development of voluntary standards, have been the subject of experimentation at the national level and might be usefully extended to international standardization. If the development of standards cannot keep up with changes in technology,

business activities have to be conducted without an appropriate infrastructure, and consumers will suffer. The frequent lack of standards for compatibility and interconnection of telecommunications equipment, computers, business automation systems and consumer electronics is an example.

"Fast-track" standardization depends on a consensus on priorities and the allocation of the necessary resources. The experience with standardization in the field of new technologies cannot be easily transferred to a wide range of consumer products. However, the progress achieved by European standardization bodies in shortening the period of time for the development of safety standards is encouraging and may be transferable to the ISO and IEC.

6.2 Promotion of International Cooperation

The Canada-U.S. Free Trade Agreement requires the parties to undertake negotiations in order to "make compatible standards-related measures and product approval procedures." This relatively simple statement can lead to unforeseen complications. For example, Canadians participate in the discussions leading to an American standard, but should they vote on the draft? For American standards to be referenced in Canadian law, there must be an official French version. Who is responsible for the translation? The possibility of Mexico joining a tripartite FTA adds further complications since the Mexican standards organization lacks the sophistication of its equivalents in Canada and the U.S.

A Franco-German agreement of 1985 pioneered the bilateral (mutual) acceptance of standards. Regionally, the European Community aims to achieve common standardization and a fully harmonized standards community by 1992. However, it is doubtful whether the Community standards authority has sufficient time to develop the required standards, and more flexible solutions may have to be adopted if the deadline is to be met.

Important as they are, bilateral and regional solutions cannot replace efforts within a multilateral framework. At the intergovernmental level, organizations like GATT and OECD can play an important role not only in providing a forum for conflict avoidance or resolution, but also to promote harmonization efforts by national, regional and international bodies competent in the field of standardization.

6.3 Constraints

International harmonization of standards is generally seen as a desirable, objective in coping with the global marketplace. However, there are some very real constraints:

- i) harmonization uses resources that could be developing new standards
- ii) national requirements may differ for cultural or climatic reasons
- iii) local legal theory and practice may affect adoption of international safety specifications (product liability)
- iv) interpretation of standards may differ between national users
- v) revision of standards is slower at the international level

Another constraint to be mentioned in this context is that the development of safety standards has sometimes to take into account concerns originating from policy sectors, e.g. environmental protection or industrial safety. While these constraints have to be recognized, this does not mean that progress towards improved cooperation cannot be achieved. The challenge is to find the right policy mix that will lead to a pragmatic solution.

6.4 Implications for Canadians of Harmonization

With moves towards regional standardization in Europe and the requirements of the FTA, Canada is frequently faced with a dilemma - who should we harmonize with? Global harmonization remains the ultimate objective but the reality is that regional harmonization is the only attainable strategy in the short-term, except for developing technologies where the leading manufacturer frequently sets the worldwide standard. North American harmonization is vital to Canada's competitive position and should bring benefits to consumers, notwithstanding the impediments suggested in paragraph 6.3.

It should be recognized, however, that acceptance of global, or even regional, standards implies some loss of national sovereignty. The usual assumption is that the long-term benefits for consumers will outweigh the negative effects, but there is a dearth of data to confirm or deny the hypothesis. Signature of the GATT means that Canada must comply with certain obligations in respect of standards which may conflict with national objectives, but Canada's position has been that the benefits accruing to the Canadian economy from the GATT will be more important than the potential conflicts. No input has been made from organizations representing Canadian consumers.

On a wider scale, a paper produced by the Office of Privatization and Regulatory Affairs³ noted that Canada is losing some initiative in the adoption of its standards on a worldwide basis because of the lack of a dynamic federal government standards policy. Indirectly, such a policy could also assist consumers through a greater recognition of standards as a national resource. Efforts to redefine the national standards policy have not progressed far and bodies such as the Standards Council, which could benefit from this, have not seen fit to promote the idea.

7. Standards and CCAC

As a regulating Department, CCAC develops and uses many standards. Most of the Consumer Bureau legislation requires regulation through standards and, in recognition of the department's influence, the Minister was given responsibility for the Standards Council of Canada. In the development of standards in the past, the Department has implicitly assumed the defence of the consumer interest against the predatory practices of industry. The new era of partnership suggests a possible reassessment of the Department's role, but there will be a continuing need for a consumer advocate equipped with the necessary technical knowledge.

There is pressure from the Standards Council for a greater use of consensus standards by government in the preparation of mandatory standards.

In theory, there are a number of advantages to this approach:

- . the standards writing organizations (SWOs) arrange the process
- . the stakeholders share responsibility for the standard
- . the writing of regulations is facilitated

But there are some negative aspects:

- . the cost to government of participating in committee meetings and providing resources to the SWO is frequently greater than unilateral action
- . in its role of consumer protector, government sets a minimum acceptable level for a standard, and if this is not reached, government must act unilaterally. The consensus process is thus compromised from the outset

³ Standards in Canada: Federal Policy and Regulatory Practice into the 1990s. August 1989 (p. 108).

- . the Department of Justice imposes strict rules on the referencing of standards in regulations which makes updating of even minor changes very difficult
- . publication of draft regulations in the Canada Gazette including only the identification number of the standard is not very informative to the reader, but publication of the whole standard can be very lengthy
- . standards referenced in regulations become legal documents but are not always written with legal precision

The use of voluntary standards in place of regulations is possible in a limited number of situations. Voluntary standards cannot be used in a market where there are significant imports, and if a company is determined to flout the standards, the only recourses are regulation or media exposure. There is a fine distinction here between restraint of trade and consumer protection. Sometimes, with a cooperative industry, voluntary standards can work but, in most cases, legal authority is necessary. In the European Community, countries are mandating a general safety requirement whereby products made to approved standards are deemed "safe", thus all "voluntary" standards are given legal status. In Canada, the opinion of the Department of Justice is that this approach would conflict with the Charter of Rights.

Standards are vitally important for consumers and the Canadian economy, and yet there seems to be little recognition within CCAC or the federal government of their role. The Standards Council has traditionally kept a low profile with respect to any national standards policy and CCAC, as a Department, tends to maintain a "hands-off" attitude towards the Council, which reports directly to the Minister.

The position of the consumer would be significantly weakened if the Department relinquished its implicit advocacy role in standards activity. The difficulties of recruiting adequately qualified consumers to participate in standards committees are enormous, and standards produced by industry alone have a diminished credibility.

8. Issues to be Faced

- 1) As the Department nominally responsible for the Standards Council, should CCAC take the lead in the development of a federal standards policy, which would establish priorities for the development and use of standards in Canada as well as clarifying (and perhaps redefining) the roles and responsibilities of the various organizations concerned with standards?

- 2) Within CCAC, there are some outstanding questions on how the consensus standards process can be used to the maximum benefit, e.g.:
- Should CCAC continue to be a consumer advocate on standards committees?
 - Should CCAC accept a lower level of protection with a consensus standard than it would with a regulation?
 - To what extent can voluntary standards replace regulations?
 - What is the best way of improving the representation of the consumer view on standards committees?
 - Should CCAC promote the referencing of consensus standards in regulations?
 - Should CCAC establish a section to advise on standards policy and liaise with the SCC?

Also, the relationships with U.S. standards organizations need to be defined so that the Department can apply a consistent approach.

Examples of Consumer Standards
by Family Expenditure Categories

Shelter	National Building Code Ethical standards of real estate companies Standard mortgage forms Uniformity standards (electrical, plumbing) Weights and measures
Food	Food safety (pesticide residue levels, mercury levels) Food quality (grading schemes) Restaurant hygiene Weights and measures
Clothing	Canada Standard Sizing Textile flammability Precious metals standards Weights and measures
Household	Canadian Electrical Code Chemical safety (labelling) Other product safety Communications interfaces Weights and measures
Recreation & Leisure	Sports equipment (size of baseballs) Safety standards (ski bindings, toys) Uniformity standards (film, computers)
Transport	Emission controls Air safety (C of A) Marine safety (life jackets)
Health & Personal	Medical equipment safety Uniformity stds. (syringes, dressings) Drugs Nursing homes
Reading	Map terminology
Tobacco & Alcohol	Advertising standards Weights and measures