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IT is a long time since a Greek philosopher remarked that men cannot hope for success in life without a knowledge of standards, but it is just as true today, as it was 2,400 years ago.

Standards help the school pupil, the beginner at work, the master craftsman, the shop foreman, the general manager and the president; they guide professional men and statesmen; they are of use to everyone in judging sports, work and goods for sale.

There are people who rebel. They don't like this or that rule, though a million others may approve it. If every rule and convention and standard objected to by someone were wiped out, there would be a state of confusion worse than that in Alice's Wonderland, where people made up their own rules as they went along.

Many volumes have been written on every phase of standards. These have set up new aims, clarified old ideas, and built ideals of high principles yet to be attained. This short article is designed to draw attention to only one kind — the kind useful in producing, buying and selling.

Standards perform two functions: they enable us to identify goods and grades, thus buying with greater certainty of getting value for our money, and they enable the producer to make more goods with the same effort and investment, thus spreading commodities over a wider area at prices within the reach of more people.

What Is A Standard?

A standard is something established by authority, custom or general consent, a unit of measurement of some sort, against which an actual object or deed may be judged. The standard is something "right" or "correct" or "conforming to justice." Standards are set for the basic units of length, weight and energy. There are standards for the nutritive value of food, the use of drugs, and safety in the preparation and packing of canned goods. Makers agree on standard dimensions of parts which must fit together, such as a light bulb and its socket.

There are standards of identity, quality and quantity. The first describe the characteristics a product must have in order to be called by that name; quality standards measure the commodity against a mark indicating perfection; and quantity standards assert, for instance, that cans and jars must contain such-and-such proportions of fruit and liquid. When you buy silverware with a full-length picture of Britannia on it, you know that you are buying silver of the period 1697-1720 which has 11 ounces 10 pennyweight of fine metal to each 10 pennyweight of alloy.

Dimensional standards have been reduced to very close limits. A wonderful technical accuracy, provided by expensive machinery operated by skilled workmen, cuts and grinds and fits adjustable parts true to the ten-thousandth of an inch. How different this is from the yard-length standard which was set by King Henry I in 1101, when he decreed that a "yard" should be the length of his arm!

As we have moved along in mechanical knowledge, we have continued to trail in our wake some standards which would not be logical according to our present knowledge, but which are so woven into the web of our lives that they cannot be dispensed with. We measure steam and electric energy by horse power, and electric light by candle power. But new ways of measuring have been devised. For example, the United States Bureau of Standards broadcasts standard frequencies and standard time continuously from station WWV. These signals provide a common unit of frequency measurement both in the radio spectrum and the audible range, and a standard one-second time interval. This standard is checked astronomically, so that the error is less than one part in ten million. One practical use of the standard audible frequencies might be in tuning a piano. The tuner would carry his portable short-wave receiver to the job, and, using the standard frequency corresponding to A above middle C from the WWV broadcast, he could tune the piano to agree precisely with any other standard instrument.

Why Set Standards?

There are two ways of standardizing: we may standardize ourselves to unalterable facts around us, or we may standardize the outside facts. Some animals stay where they are in winter and grow thick fur to keep out the cold; others suit the climate to their taste by picking out the weather they want and migrating to where it is.

There is no better example of standardization than in nature. Organized life would be impossible without it. Some persons may point to the wide differences between animals, birds, fish and plants, but it should be noted that within each species there is the most minute agreement of structure and function. If human beings were not standardized in their anatomy, there could be no surgery, because the surgeon would not know where to look for an organ.

Upon this standardized basis there is built a great diversity of appearance, a circumstance which provides a hint for standardization in production and commerce. One of the most important characteristics of merchandise from the sales viewpoint is attractiveness. Nature shows that this need not be sacrificed when standardization is adopted. All the working parts, upon which efficiency depends, may be cast in the same mould but dressed in different ways. When a firm has the reputation of producing a dependable article which works according to a high standard of efficiency and length of service, then it does not have to stress this aspect of its goods, but can concentrate upon the competitive attractions of pattern and "frills."

Standardization is the key to mass production. In this sense it means using the same design to make parts so that they can be assembled readily into a completed product. The more standardized the product, the more continuous the operations; and the larger the scale of production within limits, the more cheaply and plentifully can goods be turned out.

Benefits Of Standards

In times of peace, standardization may mean that the manufacturer will have less capital tied up; greater volume of production, with lower costs; more efficient inspection and consequently better customer satisfaction; reduced accounting, record and office cost; and a more even flow of production providing improved service to purchasers in quality and in promptitude of delivery. It is obvious that a standard way of assembling a watch or an automobile will give better returns in terms of quantity and quality than a haphazard way. The problem — one of the most interesting facing manufacturers — is to know when to change the pattern. How far can the manufacturer of a washing machine go in keeping up with engineering progress and popular fancies without bankrupting himself by scrapping expensive tools ?

There are many benefits to the consumer through standardization. Let us start with one commonplace which is not enough emphasized — the fact that developments in science and technology which simplify production make it possible to place on the market many different commodities at a wide spread in prices, making them available to a broad range of customers. These buyers are given great freedom of choice, and even if they cannot buy all that they see they can select the items which will give them the greatest satisfactions.

It is said that we could increase the purchasing power of our incomes by 25 per cent or more if the buying methods of individuals were as well developed as our methods of production and distribution. It cannot be denied that a more careful selection of goods on the basis of their ability to satisfy specific wants would go a long way toward increasing the real income of any family. This would mean a change from emotional and uninformed buying to buying according to standards in terms of price, value and usefulness. That there is such a trend is evidenced by the increasing demand for information about the quality of products. Even if a woman buys a dress mainly for its style, she will be put out if it shrinks so badly on its first cleaning that she cannot wear it.

Consumers cannot write specifications of what they want in the way of radios, typewriters, or clothing, and then call for bids, but they can have their own ideas of what they desire and check these against the standards of the products on the market. They will naturally wish to know: What quantity do we get ? Will it do what I want it to do ? Is it efficient ? Is it safe to use as I intend to use it ? What is its worth relative to other things ?

Any housewife can illustrate the pertinence of these questions. She cannot standardize her work in the kitchen unless the things she uses are standardized. The ingredients of a cake must be so uniform that a level teaspoonful from one package today will give the same result as the same quantity from another package of the same brand yesterday. The housewife must know what to expect of her electric apparatus in the way of load-bearing and performance. She cannot test every article bought, and so she must rely upon the standards of the manufacturer.

It must be said that standards are only useful insofar as they are intelligently used by the consumer. A camera of a high technical standard may take wonderful pictures for the man who knows how to use it, while for an amateur it may be no better than a box with a pin-hole in it. Automobiles are built to certain standards, but one need only stand at a street corner to see how standard equipment can be abused by non-standard use.

Standard Sizes

Standardization can remove hazards and exasperation in other fields than those of quality and function. Take sizes, for example. Few persons wish to have their clothing standardized like uniforms, but everyone would welcome a uniform way of describing sizes. Ten years ago the United States Bureau of Home Economics measured 147,000 children, and as a result revealed that height and girth of hip are the best indicators of a child's size, though age had been used from time immemorial. Under a standardized size-by-measurement system of buying clothes, fitting can be based on facts instead of such guess-work as "Judith is eight, but I think she takes an age ten."

This matter of intelligent sizing can be of economic worth to manufacturers and retailers. When size is taken for granted, because purchasers can rely upon a simple standard, the manufacturer can emphasize style and quality which are better selling points; he can operate with greater efficiency and lower costs, and consistent use of the same set of standards will

promote trade confidence. The retailer's stock will keep its appearance better, because there will be fewer try-ons and less handling. There will be fewer returns, not only to retail stores but to mail order houses.

Next to sizes, since we are talking about clothing, wearing qualities, colour fastness and shrinkage resistance are important. It has been suggested that textile manufacturers, shirt makers, retailers and laundrymen should get together to establish a standard for, say, men's shirts. Specifications set by a standard laundering method could be imprinted on the shirt, indicating that it would take ten, twenty, thirty or more launderings.

Standards are important particularly to producers and tradesmen who take a long-term view of their businesses. They realize that customer satisfaction is the best builder of future sales. Consequently, people in business are realizing more and more the necessity of giving purchasers adequate information upon which to base judgments of value and usefulness.

With top management aware of the need for high standards, and craftsmen working under the best practicable conditions, more will be accomplished through the state of mind permeating the plant than by all the gauges, instructions and inspections that can be devised. A man who knows the highest standards and best methods in his job, and has professional pride and a sense of craftsmanship, will not care to fall short of the best results. This was exemplified by the reputation won by the livery companies of the City of London. The Goldsmiths' Company received its powers of assay in 1327, and the "hall mark" of the Goldsmiths' Company is still of world-wide recognition on gold and silver plate.

Qualities Of Standards

Standards need to be simple, rational, permanent yet flexible, and definite. We need to translate all standards, contents of packages, warranties and warnings into language which can be understood by the consumer. Uniform grade names are wanted, so as to give consumers the information regarding quality.

Standards must be choosen with care, because they tend to become permanent and in some fields might incline to freeze progress. It would be difficult to change such standards as weights and measures, the gauge of railway track, and the gauge of screw threads, though many of them could be improved if change were possible. Within an industry itself there is a different criterion. Standard machines and designs and methods are merely the best that are known at the time, and are subject to change whenever better tools and methods can be found. The standards in which the consumer is most interested — those of quality in the finished product — should have a permanence that can be relied upon.

Movements For Standards

Many movements which have been started toward creation of standards in various fields have succeeded well. Some are associated with trade interests, others with professional groups, and still others have no connection except with the welfare of consumers. In the first group are trade associations, better business bureaus, retailers' bureaus of standards, and magazine "institutes". In the second group are such organizations as medical associations. In the third group are consumers' clubs and various women's groups.

After the first world war the Canadian Standards Association was set up by the Canadian Manufacturers Association, professional engineering societies and representatives of industry. It fixed standards which have been accepted in the electrical, metallurgical, and building and construction fields. The Canadian Engineering Standards Association was formed to co-ordinate the efforts of producers and consumers for the improvement and standardization of engineering products, to promote the general adoption of engineering standards, and to register distinctive marks and names applicable to materials or products which are in accordance with standards. Publication this summer of the Fifth Edition of the Canadian Electrical Code, Part 1, is evidence of continuous work on nation-wide standards in the wiring of buildings and the installation of electrical apparatus. The National Office Management Association, which has branches in several Canadian cities, has set up a committee to consider standards in office furniture, paper, forms, records and procedures, supplies and business machines.

Canadian Standards Division

Canada, which was the first country to have special legislation for canned foods, has this year taken another step in standardization by setting up a Standards Division within the Department of Trade and Commerce. This Division has to do with standards for size and quality of commodities not already regulated by other government departments, and the "Canada Standard" symbol it will authorize ("CS") will represent that the goods so marked conform to the requirements established under provisions of an Act of Parliament. Establishment of this Division means that specifications for textiles, clothing and household equipment, for example, may be set up, and manufacturers who meet the standards may use the national trade mark. The standards will be determined by the National Research Council, and "CS" will be a guarantee as to quality, size, quantity and genuineness.

In introducing the new Division, the Deputy Minister of Trade and Commerce warned against expecting tremendous changes all at once. Adoption of standards will be purely voluntary and will come about as a result of agreement between manufacturers or because of consumer demand. "An essential part of the plan," he said, "is to have such an enthusiastic acceptance on the part of buyers that there will be a real demand for products made to the prescribed specifications."

Grading Of Goods

This new Division may establish grades for any commodity falling within its jurisdiction, and recommend methods of designating the grade. Many goods already are graded according to quality, and the grade is marked on the container or the article. This plan has several

advantages. Buyers are informed in regard to the articles offered, and misunderstanding is prevented. Producers of high class merchandise are protected against the competition of poorer products.

Beef, butter, fruit and other foods are graded under regulations established by the Dominion Department of Agriculture, and complete information is included in a booklet entitled "Buy By Grade" available free from that Department.

Besides the satisfaction of knowing the quality of goods sold by grade, the housewife has the advantage of being able to select food economically. She may decide, knowing what the various grades mean, whether she should pay the extra amount for a higher grade, or whether a lower, cheaper grade will do for the purpose she has in mind. Some, of course, may suffer from what Dr. Paul Agnew, Secretary of the American Standards Association, called an inferiority complex which compels them to buy the most expensive grade always. This may appear laughable to practical-minded people who recognize that there is no sense in buying canned whole fruit if the purpose is to put it through a squeezer, but it is no joke to the producer. It is, as Dr. Agnew says, a good thing that the retail trade does a job of "softening this emotional situation for us by blurring for our vision the harsh grading lines which the wholesale market finds useful."

Labeling Standards

A considerable number of manufacturers include useful information about the product on their labels. Purchasers are inclined sometimes to confuse grade marking with trade marking. These are not the same, though hundreds of manufacturers have established their trade marks as sure-enough grade marks. These firms have demonstrated the advantage of making the brand name or other designation a symbol of high standard merchandise, and it is not uncommon to hear people say "If it's So-and-so (brand name) it's OK." Such a reputation built for a brand or trade name is worth many thousands of words of high-sounding phrases which convey no real information.

It is not a simple thing to decide what information to include on a label. A statement of physical or chemical content which would be quite clear to an expert might mean nothing to the ordinary buyer, and it is difficult to translate technical data so that it will mean the same thing to all consumers and not be misleading. In some cases it is hard to get all members of an industry to agree on a standard form of language. The word "pure" may mean in various uses: free from blemish, unadulterated, sheer, or simply "good".

Advertising Standards

Somewhat similar difficulties meet the manufacturer in advertising. It is axiomatic that if consumers are to get a maximum of satisfaction from their expenditures they should have an opportunity to appraise the probable satisfaction that will attend their choice. Consumers need advertising as a directory of up to the minute information about goods. Without advertising, large-scale production, wide distribution, low prices and a high standard of living would be impossible. But advertising performs its function only when it is educational, a broadcaster of news, and a dependable guide.

Thoughtful consumers welcome precise, specific information about the product's qualities and performance. They need all the facts which will help them to judge what is the best value for the money and most suitable for their needs. It is quite possible that greater attention to the making known of quality standards and durability of goods might contribute a vitalizing element to the advertising technique of concerns willing to be specific in telling qualities which their goods possess.

Standardization Difficulties

It would be strange if there were no difficulties in the way of setting up and operating standards. Even nature makes mistakes in carrying standardization too far. Having found how to reproduce things in great numbers, nature proceeds without reserve: look at the way dandelions, grasshoppers, bud worms and rabbits multiply. Each is perfect to its own standard, but there are too many of them. The fault is not in the idea of standardization, but in its use.

Some persons fear regimentation. They confuse different aspects of things. Every man is standard, every tree is standard, and yet no two men and no two trees are exactly the same. It is inconceivable that Canadians should ever tolerate being fed alike, housed alike, clothed alike, but they might welcome standardization in the sense of a guarantee of certain specific qualities attaching to food, houses and clothes.

A man will stand having his suit standardized as to the number of pockets and the number of buttons, but he wishes to choose his material and his right of decision as to the finer points of cutting and fitting. "His wife's clothes are apparently standard only in the distance her skirt must be from the floor:" remarked K. H. Condit in an article in the Annals of the American Academy of Political and Social Science away back in 1928. (Around that time the height was hovering between 15 and 17 inches; fashion designers say that this fall's late afternoon dress hems will be 10 inches from the floor).

Freedom of choice and changing styles provide the greatest safeguards against useful standards degenerating into regimentation. Standards present facts upon which people can exercise judgment, but their judgment is moved by their desires. When consumers are willing to pay for variety and uniqueness there is no fear of manufacturers going too far in standardization. The consumer is not merely a customer: he is a compendium of biology, psychology, economics and many other sciences and some of the arts. A makeup like that does not lend itself readily or willingly to regimentation.

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