The Voluntaryist

Whole Number 52 *"If one takes care of the means, the end will take care of itself."* **October 1991**

Voluntaryism and the Evolution of Industrial Standards

By Carl Watner

The State is involved in just about everything we do. The alarm clock that wakes us up in the morning is set according to government-mandated time. The radio or tv station that we turn on must have a government license. Nearly all the other appliances we use are subject to regulations regarding their manufacture and sale. If you live in an area where there is city water, you cook and shower with water you purchased from the government. Your toothpaste has been approved by some branch of the government; so has the towel you dry yourself with, as well as your clothes. The food you eat must pass certain governmental standards and labelling requirements. You drive to work in a government-approved and licensed vehicle, whose gas mileage has been certified by yet another government agency. You drive on a government-owned road, and get paid by check or cash in government-denominated units.

How has the State created all the technical standards by which it regulates and governs our lives? For the most part, the various branches of government in the United States rely upon parameters that originally evolved on the free market. Only after these standards have proven themselves workable and acceptable does the State expropriate them, and attempt to make their use compulsory. The history of the standard time zones used in the United States are a perfect example of this. First developed by the railroad industry for a safe, yet practical way of overcoming the use of local mean time across the country, the time zone plan was adopted by an early predecessor of the Association of American Railroads on November 18, 1883. The whole program was accomplished prior to the onset of the Interstate Commerce Commission, without the use of government legislation or compulsion. In fact, Congress did not make the railroad's time zone plan legally binding on the country until the passage of the daylight savings law during World War I.

In its broadest sense, standardization applies not only to weights and measures and material objects, but permeates nearly all fields of human activity. The process of establishing, by custom or general consent, a rule or model to be followed is this article's working definition of standardization. "Folkways, taboos, moral codes, ceremonies, religious rituals, educational procedures, social and business customs, industrial practices, and law itself, are all forms of standardization" described in the ENCYCLOPEDIA BRITANNICA. "Language standards enable us to articulate our thoughts; legal standards enable us to live together — all social organization would be impossible without social standards." Language, which has been discussed from a voluntaryist perspective in Whole No. 45 of THE VOLUNTARYIST, is probably man's most important example of voluntary standardization. Without agreeing on the meaning of words and sounds, there would be no way of communicating with other individuals. In so far as the English language is concerned, this has been accomplished over the centuries without government involvement.

Part of what I am trying to document in this paper are some of the ways in which industrial standards have evolved and affected our lives. The voluntary development of industrial guidelines, particularly in the United States, is an integral part of the system of private ownership and private production — which has made this country the most productive on earth. The importance of this fact, from our perspective, is that the successful formulation, implementation, and functioning of such standards is entirely dependent on voluntaryism from start to finish. The use, value, and efficiency of industrial standards clearly does not need or require compulsion of the State.

The Consensus Principle

The more important industrial customs and trade practices are, in a very real sense, industrial law, no less than statute or common law. "Often more potent than much of the legislation on the statute books, they constitute a powerful system of controls, which become generalized 'law'." Most standards have come about, like our language standards, through a more or less unconscious evolutionary process. Even the development of the common law is a remarkable example of the standardization process at work. "The common law is the result of gradual growth of a consensus of opinion as to what conduct on the whole will produce the best possible society. It is a slowly acquired body of standardized conduct," which does not depend on the legislature, but rather on the actions and acceptance of the people involved. It differs from legislation, which usually involves a majority mandate.

Howard Coonley and Paul Agnew, writers on the subject of "The Role of Standards in the System of Free Enterprise," have explicitly described the standardization process as resting on the principle of consensus. "Standards must represent an agreement among those concerned with its subject matter," whether the subject be industrial or social. Industrial standards, in particular, are "issued only when supported by a majority so substantial as to approach unanimity — almost never on a mere majority vote as so frequently happens in legislatures." They approvingly quote Sir John Salmon, author of JURISPRUDENCE (1924, p. 364) who succinctly stated the consensus principle in the following manner: "There is in general no better evidence of the justice of an arrangement than the fact that all persons whose interests are affected by it have freely and with full knowledge consented to it." If this isn't what voluntaryism is all about, what is?

One of the main purposes of standards is to remove conditions that lead to potential danger or controversy. Rules of the road like driving on the right-hand side of the road, help prevent vehicle collisions. Social standards, such as manners, are devices for reducing friction and conflict. Many industrial standards serve the same function, but are usually definitional in nature since "all buying and selling in which goods do not come under the actual eye of the buyer must necessarily be based upon some sort of standard." Other industrial standards help identify parts that do not fit, that are not suitable for their intended purpose, and that do not live up to their sales representations. Since the beginning of the Twentieth Century, such standards have often been brought into existence by a deliberately planned, cooperative effort, often spearheaded by groups known as standardizing bodies. One specific example will suffice at this point. The Chicago Board of Trade was making use of specialists to inspect and certify the quality of grain as early as 1856. Other examples include the numerous codes of ethics adopted by commercial, industrial, and professional associations; much of the work of trade associations; rules and machinery for the arbitration of commercial disputes; and the rules laid down by the governing bodies of organized sports such as baseball, football, and basketball.

History of Standards Institutions

Sometimes standardization has been brought about by the threat of State intervention in industrial affairs, and at other times it has been brought about by the requirements of government in wartime. The American National Standards Institute's (ANSI) predecessor was founded in 1918, and was given a great

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Potpourri From The Editor's Desk

1. "The Church and State Have More in Common with Each Other than with the Market Place"

"State and church, although arch-enemies over long periods of time in the annals of civilization, have more in common than either does with the economic realm—the common butt of both religious and political condemnation for its alleged crassness and egoism. And it is a fact that in the succession of power that forms the greatest single pageant in Western history, the state has succeeded the church in the detailed and minute custodianship of the individual. The state for a long time in history was obliged to wear the mantle of other, more respectable institutions. Thus the patriarchal state of yore, followed by the religious or divine-right state. But since the eighteenth century, the state has walked on legs of its own, and in so many respects has taken over once-ecclesiastical functions.

In Western Europe, throughout the Middle Ages, the majority of Europeans lived cradle-to-grave lives in the church. There was no aspect of life that was not either actively or potentially under the ordinances of the church. Birth, marriage, death were all given legitimacy by the church, not the state. Property, inheritance, work conditions, profits, interest, wages, schooling, university admissions, degrees, licenses for professional practice, workdays, holidays, feasts, and commemorations, all were subject not to secular but to ecclesiastical governance. The Middle Ages represented the height of ecclesiastical absolutism. That particular absolutism has vanished in the West—though not of course in other parts of the world, beginning with an Iran—but no vacuum has been left. Much of modern European history is the story of the gradual transfer, as it were, of ecclesiastical absolutism to monarchical and then democratic-nationalist absolutism. Medieval man was so accustomed to the multitudinous ordinances of the church governing his life that he didn't even see them. That is more and more true today of modern man, democratic man."

—Robert Nisbet,
THE PRESENT AGE, 1988, pp.55-56

2. "Voluntaryism at Work"

From time to time, I read about individuals or groups of people who are at work solving what they perceive to be some of the world's problems. They may do this as volunteers, on a non-profit basis, or they may operate a profit-seeking business. In either case, what distinguishes their efforts from others, is that they don't run to their local, state, or federal government to get help. In what used to be the American Way, they see a problem that needs their attention, and they go to work, lessening or removing it.

The following two examples have come to my attention, and I thought they were worth mentioning in THE VOLUNTARYIST. If you are aware of other voluntary, problem-solving efforts at work, please send me a brief description of their activities.

"Rescuing Horses"

During the 1970s, Sharon Jackson of Denver, Colorado, began her own personal rescue program—for horses. With the help of her husband, Steve, and friends Jill and George Pratt, who operated Q & J Lazy P Stable, they began accepting needy, abused, abandoned, or injured horses and finding them new homes. By 1989, The Colorado Horse Rescue volunteers, as Sharon's group became formally known, was processing almost a dozen horses a month. There has been such an outpouring of interest and assistance that a state-wide network of about 100 volunteers has been established, including people who help with everything from hauling horses, to mucking out stalls, to bookkeeping. Rescued horses are kept at about 50 private barns and pastures. Half-a-dozen businesses provide feed and supplies whenever necessary to save a horse, or the Colorado Horse Rescue's bank account. And several vets donate medical treatment at reduced rates. Horse groups, such as the Colorado Draft Horse Association, and several Denver-area horse clubs, are highly supportive.

—adapted from THE WESTERN HORSEMAN, June 1990

"Norm Emanuel—Guru of Tire Recycling"

"America's scrap tire problem will be solved—and perhaps faster than many people think—and Norm Emanuel intends to be a major part of that solution. The owner of Emanuel Tire Co. in Baltimore not only believes that, he's obsessed with the idea. He is without question the guru of tire recycling in the U.S.

"Emanuel is one of an elite few in the country who take scrap tires on a large scale and make money disposing of them. While others talk about scrap tire recycling, he has been doing it for 30 years. What does Emanuel believe it will take to get rid of the mountains of tire throw-aways. 'Hard work! Hustle! Private enterprise'!"

He has been processing scrap tires since 1957, and shredding them since 1979. Emanuel has operated his business without a dime of help from the public sector, and claims he is the reason that the Baltimore area has no scrap tire problem. He disposes of more than four million scrap tires a year that are collected by a network of 30 small businessmen in five states and the District of Columbia. He encourages his "collectors" to pick up tires from service stations and individuals. They charge a dollar or more per tire, and Emanuel pays them 50 cents to take the tire off their hands.

"That's free enterprise at work," says Emanuel. "The best and most efficient way to clean up any community is to make it possible for people to dispose of tires at a profit." He does this by inspecting and sorting out the tires. Some end up as casings for recaps, others are sold directly to used tire dealers. The balance are processed through an "awesome" machine that Emanuel has designed and operates. Called a "granulator," it reduces a tire to two-inch tire chips, and removes the bead wire in the process. The tire chips are then sold to businesses who burn them for fuel.

—adapted from MODERN TIRE DEALER, Mid-April 1990

3. "The Savings and Loan Fiasco: A Lesson from 19th Century Wildcat Banking"

"Wildcat banking never existed because of freedom, but became possible only through and by the use of the law-making power of the state. Did anyone ever hear of dishonest banking being conducted without a charter from the state? There is not a man in the world with knowledge enough to form an intelligent conception of the banking business who does not know that it is not possible for people doing business with a bank to have any security except such as is afforded by the intelligence and integrity of the banker. And that the only effect of legislative attempts to strengthen the security of banks is to impair their usefulness, thereby weakening instead of making them stronger. With freedom, there would be bad banking, of course, but evils of that kind would soon be corrected and would be of small concern compared to the benefits to be derived under such conditions. Men of honesty, and with reputations acquired by honest methods of banking, would soon come to the front; no

dishonest banker could long compete with a banker who was honest. Under present conditions there is no opportunity for moral considerations to have any force; it is only necessary to make people believe that bankers comply with the law, thereby giving the dishonest banker an advantage over those who conduct their banks honestly and in strict accordance with sound banking principles."

—A.W. Wright, in ELECTRIC ENGINEERING, July 1896

4. "Bagatorials!"

The Customer Company, whose principal subscribes to THE VOLUNTARYIST and who operates a large chain of convenience stores in California, has been printing messages on its paper shopping bags since the Fall of 1988. The first editorial on a bag (hence, the term—bagatorial) was "Don't Vote, It Only Encourages Them," on one side, and Bob LeFevre's "Abstain from Beans," on the other.

Approximately three-quarters of a million bags are printed for each message, and numerous other statements have been printed in the ensuing years. The following voluntaryist message, written by your editor, was printed on one of their most recent runs of bags.

Neither Ballots Nor Bullets!

By Carl Watner

America's most powerful polling booth is the cash register. There's a vote that really counts.

When you make a purchase at a Food & Liquor store, you make us a little bit stronger. It's a vote for us over our competition. Choices are made and lives are changed by the decisions you make while shopping.

Think how this differs from the government polls. The government asks you to vote occasionally. If your choice loses, tough luck. You're bound to live by the results. If the whole process turns you off, tough luck. You have no choice but to deal with the government. If they pass a law, you have to obey it. If they demand a tax, you have to pay it. Then, to add insult to injury, they tell you that what they're doing is "the will of the people."

Where Are The Real Elections?

With us, you have a choice. You can vote every day in hundreds of different ways. In our stores, you have plenty of choices (soda or beer? Pepsi, Coke or It's a Cola? Some of each?) If you don't like our store, you can go to a lot of other places, or you can decide not to shop at all. If we raise prices, you can tell us we're crazy and you can go somewhere else.

Those products that you buy and the places at which you shop prosper. Those that you ignore tend to wither away. The more you spend, the bigger and stronger the business becomes. When the business gets so big and proud that it stops caring about getting your vote, quality suffers—and you can take your business elsewhere.

After the shopping-election is over, our stores give you value for money You can take the purchase home and enjoy it. After the political election, what do you have? Promises?

Plus, your shopping-vote comes with a money-back guarantee. Try doing that with your vote at the polls! The government would suffer moral bankruptcy! Think of the returns Nixon and Carter would have had!

You Are a Self-Governor

The economic marketplace is all about self-government. You govern your own life. You make choices about when to get up, what to eat, how to budget your money, where to live, and what to do. The majority doesn't decide this for you. This is how millions of people live together in peace and prosperity.

When the government steps in, things are thrown out of whack. Every day, the government becomes more involved in our daily lives. Only more self-government and less political government will get us moving in the right direction again. After all, what can the government do that you and I, or voluntary groups of us can't do? Fight wars? Collect taxes? Maybe those things shouldn't be done anyway.

Some cry, "But the government has to pay for such-and-such." Where does all the government's wealth come from? From you and me and all the other millions of people who produce it daily. The government possesses no magical powers to create wealth.

You Can Make a Difference

If we live honestly and assume the responsibility of caring for ourselves and our families we have no need for the ballot box. This quiet way of changing society is non-violent and a-political. We each labor in our own garden, doing our best to present society with an improved product: ourselves. Focus on making yourself better as an individual. Don't waste your time waiting for everyone else to become better as a group. As individuals improve, the improvement of society will take care of itself. You are the key to a better world.

Well, what do you think? Write us at FOOD & LIQUOR, P.O. Box 886, Benicia, CA 94510

5. Proclaim liberty throughout the land, and to all the inhabitants thereof...

The following letter was published in THE WALL STREET JOURNAL, Sept. 27, 1990, in commemoration of the Jewish New Year. The essence of the message, which is that "Freedom is self-control," is a major voluntaryist theme.

"Dear People,

I offer you a gift. I hope you will accept it. Linked with the gift is a burden. I hope you can handle it.

My gift is freedom.

It means that each of you can do just about anything — say anything, use, build, or destroy anything within your grasp.

But wait — I'm giving this gift to all of you, every woman, man, and child, every race and every nation.

Ah, you see the difficulty: if all of you are to be free, each of you will have to put limits on your own actions— otherwise you'll wind up with misery, crime, chaos, and tyranny. Everything you make will be broken; every place you go will be dangerous. Only a few will be 'free,' and they'll really be enslaved to their greed and their fear of everyone else.

That's the burden linked with the gift: self-restraint.

I'm asking a lot of you. You have to make freedom work.

If unbridled greed is accepted as success, it isn't working.

If the earth is poisoned and its resources depleted, it isn't working.

If people are treated as sex objects, it isn't working.

If racial and ethnic hatreds are countenanced, it isn't working.

If people turn to drugs and alcohol, it isn't working.

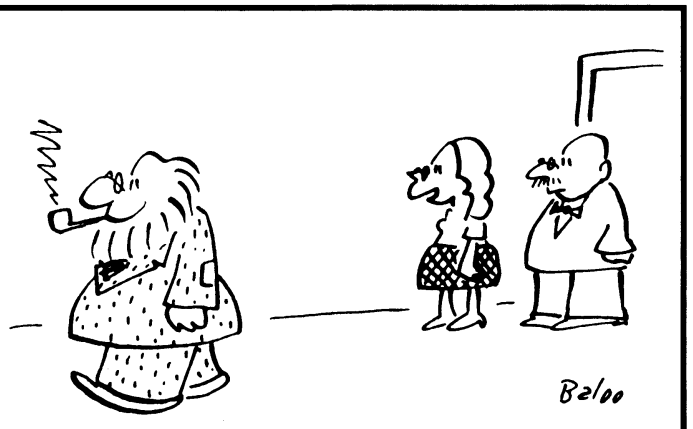
If people cheat 'because everyone cheats,' it isn't working.

And if it isn't working, the responsibility to fix it belongs to everyone of you. Unless all of you use your freedom with restraint, everyone's liberty will weaken and die. No one can be free alone.

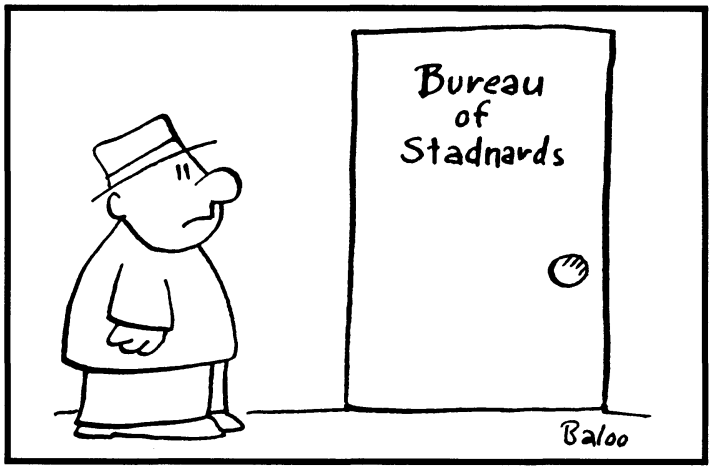
This isn't going to be easy. But it will help if you remember that the world doesn't revolve around you. It will help you remember who gave you this gift.

With love,
God"

(The 1990 High Holy Day Message of the Jewish Theological Seminary of America. Reprinted by Permission.)



"You have to hand it to Kleinzweck — he got a $300,000 government grant to write a book on free enterprise."



Industrial Standards

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boost by the standardization demands of the War Board Industries during World War I. Like its international counterpart, the International Organization for Standardization (ISO), and British sister, the British Standards Institutions (founded 1901), the ANSI considers itself part of "the world's largest non-governmental systems for voluntary industrial and technical collaboration." The tremendous amount of government involvement in such standardization bodies makes their assertion questionable (how purely voluntary are they?), but it remains true that the primary motivation for their work has usually been found in the marketplace.

The "economics of standardization" helps build healthy profits among all participants. For example, insurance companies that insure against property damage have the largest vested interest in promoting fire safety. Consequently, water hoses and fitting have always been of primary interest to them. Property damage would be likely to increase if firefighters could not connect their hoses to hydrants or their hoses to one another. This is exactly what happened during the Chicago fire of 1871, when fire engines from many other cities were sent there to augment the local equipment, and none of them could be connected to the Chicago hydrants because of the differences in the screw threads. After this experience the American Water Works Association developed a standard fire hose coupling to meet such situations in the future. Practically nothing was done about adopting the standard by local municipalities because of the cost and human inertia. The same conditions as those at the Chicago fire existed at the Boston Fire of 1872, the Baltimore fire of 1904, and the San Francisco fire of 1906. Finally, the National Board of Fire Underwriters took a hand in the matter. In the early 1920s, an American Standard for Fire Hose Couplings was published in conjunction with the American Standards Association and the American Water Works Association. Any community which adhered to the new standard obtained a lower fire insurance rate, and in a short time the standard became widely used.

One of the world's largest standardizing institutions, United Laboratories, was created because of the Chicago Board of (fire) Underwriters, needed an electrical expert to investigate the safety of the Palace of Electricity at the Great Columbian Exposition, which they were insuring in 1893. William Merrill, their safety investigator, founded the Underwriter's Electrical Bureau, the following year. Its primary purpose was to furnish fire risk data on a growing array of electrical goods. As soon as Merrill's new firm established its expertise in the fire prevention area, it was recognized by the National Board of Fire Underwriters, which began its long-time patronage of the firm. By 1901, Merrill had moved his company several times, each time to larger facilities, and changed its name to Underwriters Laboratories, Inc.

By the time William C. Robinson became the Chief Engineer in the early 1900s, the company was in a position to expand outside the fire prevention and electrical areas. Robinson's initial thrust was to establish safety standards for fire hoses, gasoline and kerosene engines, alcohol heaters, fire extinguishers, automobile headlights, bumpers, and safety glass. UL also expanded by fire-testing building materials for the National Board of Fire Underwriters and by inspecting electrical wire for the Wire Inspection Bureau, an industry association devoted to maintaining quality in the production of electric wire.

In 1915, UL's Label Service had issued 50 million labels attesting to the quality of the merchandise for which it had set production and safety standards. By 1922, the Label Service was issuing over 50 million labels per month. During this era, Underwriters Labs was employed by the National Aircraft Underwriters to certify the safety of all the aircraft they insured, and to test the proficiency of the pilots that flew these planes, whether commercial or private. "When the government ultimately took over this field, it could use UL standards as a ready point of departure. They may be considered the forerunners of today's federal flying regulations."

Underwriters Labs has always worked on the cutting edge of the new technology by meeting the need for safety certification of products and materials. Although totally independent of the insurance industry, it helps set the standards which insurance companies require. Its headquarters are in Northbrook, Illinois with three other laboratory facilities throughout the country. It is clearly international in scope, as it operates programs in about 75% of the world's political jurisdictions. That makes it the largest independent, not-for-profit safety testing organization in the world, employing more than 3800 people on its staff (nearly 1000 are graduate engineers). It publishes safety standards, product directories, and other safety-related information. It employs a network of inspectors who visit manufacturing facilities worldwide to insure compliance with UL production standards. "A product that does not comply cannot bear the UL Mark. The UL Mark is recognized by those who seek and rely on third-party certification of products." Its growth over the years is largely related to the dedication and expertise of personnel, who are devoted to UL's motto, "testing for public safety." Today, UL Marks are applied to over 13,000 different types of products. In 1989, the UL Mark appeared on more than 6 billion new products entering the marketplace. During its lifetime, UL has published more than 500 "Standards for Safety." It is an organization who. in the words of its President, has "touched the lives of almost every person living in America."

Mass Production and Standardization

Standardization in the United States was not strictly a late 19th and early 20th Century phenomenon. As early as 1801, Eli Whitney demonstrated the interchangeability of parts in rifles to government officials in Washington. "The keynote of American development was mass production of standardized articles." Standard-sized parts could be assembled quickly, were replaced easily and cheaply, and eliminated the need for hand-fitting. "From the making of muskets and revolvers this method of production spread to that of clocks, woodwork, sewing machines, harvesters, locks, and the like."

One of the most significant events in the history of mass production took part during the early part of 1908. Henry Leland of the Cadillac Motor Car Company took three newly-produced Cadillacs to London to demonstrate the interchangeability of their parts. The test took place under the supervision of a control-committee of the Royal Automobile Club of England. The cars were dismantled, and the control-committee scrambled the parts into three piles of 724 parts each, replacing 89 of the parts with new parts from stock. The reassembly was done without hand fitting — much to the astonishment of British engineers. The cars were driven 500 miles over the Brooklands track, with only one minor adjustment. This test was given world-wide publicity and exerted an important influence in the extension of mass production methods, not only in England, but in the United States and other countries.

Automobile manufacturers were some of the chief "movers and shakers" in the standardization field in the early 20th Century. The Association of Licensed Automobile Manufacturers formed a technical committee soon after its founding in 1903. Following its abandonment 1911, members of the National Automobile

Chamber of Commerce and the Automobile Board of Trade were responsible for instituting automotive cross-licensing agreements which went into effect during 1914 and 1915. The pooling effect of automobile patents was a remarkable extension of the principle of standardization through intercorporate cooperation. It reduced litigation and promoted parts compatibility throughout the industry. In some respects, it served as the forerunner of the Society of Automotive Engineers which was formed in 1917. The SAE's great work began with the standardization of spark plugs, carburetor flanges, and continued with screw threads, and bolts and nuts. Its early standards for lubricants, led to the practice of marking oil with viscosity number, a practice which it initiated in 1926. Today nearly every motorist that purchases motor oil knows that SAE 10 means a light oil, and that 50 weight oil is a heavy one.

Railroad Standardization and Other Industrial Standards

Although the automobile played a great role in standardizing parts and mass production, it was really the railroad, with its far-ranging impact on daily life, that was responsible for the origin of many industrial standards. "Before the great railway boom of the middle 1800s, markets were local and what was required could be supplied from local resources." Widespread rail transport, as well as the increasing ability to sail, and ultimately, fly across the seas, soon gave rise to the need for greater standardization whether in the realm of time-keeping, or simply in the interchange of rail cars from one railroad to another.

As mentioned earlier in this article, the railroad industry was responsible for standardizing local mean times and for implementing the system of four times zones which currently governs the keeping of standard time in the continental United States today. The idea of reducing the multiplicity of local times in use throughout the continent was largely generated out of the railroads' desire to simplify their operating schedules, improve their efficiency, and increase operating safety. The standard time plan was a voluntary arrangement implemented by an association of railroads, known as the General Time Convention.

As early as 1872, the railroads directed their attention to the problem of the proliferation of local times, and their effect on operating schedules. A meeting, in St. Louis that year, led to the formation of a permanent organization, ultimately known as the Association of American Railroads. The plan for four time zones, each one hour apart, was first promoted by Charles Dowd during the 1870s. The practical implementation of Dowd's idea was left to William Frederick Allen, the secretary of the General Time Convention, and editor of the OFFICIAL GUIDE OF THE RAILWAYS.

Allen worked out the details of four standardized time zones by relying on certain guidelines: first, "that nothing should be proposed for which there was not at least a closely approximate present example"; second, "that, as far as possible, all changes from one standard to another should be at points where changes were then (being) made"; and third that all differences in time should result in "the substitution of a variation of an even hour for one of odd minutes." His plan was first proposed in April 1883, adopted at a meeting of the General Time Convention on October 11, 1883, and set for implementation on Sunday, November 18th. This was referred to in railroad history, as the day of "two noons," since the western part of each time zone experienced a noon, according to local mean sun time, and then a second noon, according to the new standardized time.

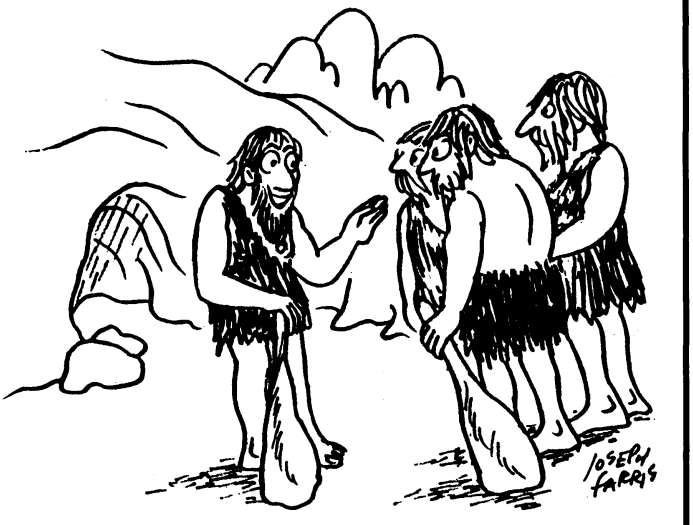
This "noiseless revolution" involved millions of people, from the Atlantic to the Pacific, who peacefully set the hands of their watches and clocks to railroad standard time. Near unanimity existed because the utility of the new time plan appealed directly to the good common sense of all. However, there were a few individuals and local communities (including the federal government's jurisdiction of Washington, D.C.), and a small number of localized railroads, that initially refused to use the "new" time. Like the old Amish today (who set their clocks an hour ahead of standard time), no one forced them to use the new time. It was up to them to determine its usefulness.

The railroads were also responsible for standardizing many other features of their operations. During the Civil War, the lack of a uniform track gauge was seen as a major barrier to efficient transportation. During the 1870s, the owners of broad gauge track found themselves handicapped by their inability to interchange traffic with the majority of lines which operated on a narrower gauge of 4 feet 8½ inches. Most of the South's track was standardized to this size during the three weeks between May 12, and June 2, 1886. "Twelve thousand miles of 5-foot track in the South was standardized with no traffic disruption longer than 24 hours." By 1890, the American railroad system of tracks was substantially standardized. "This was achieved not as the result of legislation, but of business adjustment, compromise and cooperation among the many hundreds of private companies which built and operated the American network of rails."

"As interchange of cars among railroads became standard procedure, it was found to be desirable to adopt uniform standards in other matters, too." Coupling devices, standard sizes for cars, and uniformity for brakes and axles, were some of the earliest concerns. Two of the earliest railroad groups were the Master Car-Builders Association, founded in 1867, and the General Time Convention founded in 1872, which became the American Railway Association in 1891. Some of the latter's early contributions included standard interlocking and block signal systems (1897), standard cipher code (1906), and standard code of air brake and train air signal rules (1908). A Bureau for the Safe Transportation of Explosives was established in 1905. Its rules became the basis for the ICC regulations passed in 1908.

There are literally thousands of standards, some of which have been developed by technical societies and trade associations. Groups like the American Banker's Association have established check specifications and clearing procedures; the Gemological Institute of America has standardized diamond grading; the American Society of Mechanical Engineers appointed a Standardization Committee on Pipe and Pipe Treads, which began work in 1892. The American Gas Association established a testing lab in Cleveland in 1925, and the standardization work of the American Petroleum Institute started in 1923. Pioneer work in lumber standardization was done by the various hardwood lumber associations, which for many years have maintained an elaborate inspection and grading service. The Southern Pine Association was one of the earliest to promote the use of stamps and grademarks. The National Lumber Manufacturers' Association was involved in the project of establishing national lumber grades as American standards, under the auspices of the American National Institute or its predecessors.

One of the most interesting standardization "stories," if for no other reason than it seems so pedestrian, is the history of screw thread standardization in the United States and Britain. It is one of the great ironies of industrial history that in 1864, 25 years after Sir Joseph Whitworth had standardized screw threads in Britain, that William Sellers, president of the Franklin Institute of Philadelphia developed his own system of screw threads for the United States. The system proposed by Sellers differed from Whitworth's in several respects — the sizes and pitches represented the "fair average" of American practice and were more comprehensive than Whitworth's. The system was studied by a special committee of the Franklin Institute and adopted on December 15, 1864. The committee took steps to make the standard widely known. Within a decade it was accepted by government engineers in the Army and Navy, by the Master Mechanics Association and the Master Car-Builders Association. The railroads were the strongest supporters of the standards



"I just thought of a great new idea that will benefit all mankind. I call it 'taxes'!"

because, among other things, the practice of exchanging cars from one road to another was growing, and interchangeability of nuts and bolts of other companies' cars was becoming increasingly important. The incompatibility of the Whitworth and Sellers systems created difficulty during World War I and II when British and American forces had many occasions to need interchangeable parts. Beginning in 1918, and continuing sporadically until 1948, groups in both countries tried to reconcile the two systems. At a conference in Washington in 1948, the U.S., Canada, and the U.K. adopted a Unified Thread System that incorporated features of both the Sellers and Whitworth system.

Justice In Standards of Weights and Measures

It is plainly obvious that governments can only have a limited impact in the area of standards. Much as the State would like to claim responsibility for it, many economists have pointed out that the origin of monetary standards is entirely natural. Money "is not the invention of the State or the product of a legislative act. Even the sanction of political authority is unnecessary for its existence." As with money and other standards, people cannot and will not be forced to use standards which do not adequately serve their needs. History offers repeated examples where State-imposed standards (especially monetary standards) have been cast aside because they lost their utility.

Just as Gresham's Law of Money points out that in the absence of government interference, the more efficient money will drive from circulation the less efficient money (if the individuals who handle money are left free to act in their own best interests), so in the absence of government-mandated standards, the most naturally-suited systems will drive the less satisfactory systems out of use. The advantage of market-oriented standards is that they are responsive to changes in consumer demand. If people are to be left free to determine the prices at which they buy and sell goods, why should they not be left free to define the standards of the goods which they intend to trade? Compulsory, government standards can only be changed by fiat and must be imposed by force. One of the dominant arguments against the metric system was precisely this: since compulsory laws are required to bring it about, it must not have a sufficient number of advantages and benefits which would lead people to adopt it voluntarily.

The numismatic industry, today, offers us an insight into how market-oriented standards evolve. For years, coin collectors have been faced with the problem of how to grade the rare coins which they collect. In 1949, Dr. William H. Sheldon devised a grading scheme based on a numerical rating of 1 to 70, which related to the customarily-used descriptions of large cents ("fair, good, very good, fine, very fine, extremely fine, uncirculated, and proof"). The Sheldon numerical standard was slowly adopted by hobbyists, and by the early 1970s was being applied to nearly all coins. In 1977, the American Numismatic Association endorsed the Sheldon scale.

Although there may be differences of opinion about the grade of a coin, the Sheldon system is now used by nearly everyone — from hobbyist to expert — to assign coin grades. No collector or dealer is forced to accept these grading standards when he trades coins, but they are accepted in the numismatic industry because they serve the purpose of communicating a commonly understood description of coins. COIN WORLD, one of the industry's largest papers, requires that advertisers use at least one of four authoritative grading books as the basis for describing coins listed in their ads.

The demand for more objective grading standards led to many evolutionary changes in the coin industry during the decade of the 1980s. When sellers and purchasers both had to assign and then agree on the grade of a coin they were trading, the seller naturally tended to overgrade, and the buyer to undergrade. In 1979, the American Numismatic Association Certification Service conceived of the idea of independent third-party grading. Buyers or sellers could submit their coins to an independent organization, which then assigned the coin a grade. Although there was initial reluctance to accept third-party grading, by 1987, several other companies were competing with ANACS. The most significant development involved the creation of the Professional Coin Grading Service (PCGS) which offered guaranteed third-party grading. "Never before had a grading service guaranteed that it would pay to the owner of a coin the difference in the event that standards changed, or that the coin was incorrectly graded." Guaranteed grading was soon embraced by PCGS's major competitor, Numismatic Guaranty Corporation of America (NGC), and both were instrumental in simplifying grading by encapsulating coins in holders (to prevent wear and tampering), by assessing one overall grade to the coin (rather than an obverse and reverse grade), and by expanding the Sheldon scale for mint state coins from five points (Mint State 60, 63, 64, 65, and 67) to eleven points (60 thru 70).

The coin industry has done a great deal to standardize grading and police itself during the last ten years. The growth of services like PCGS and NGC, and of dealer associations like the Professional Numismatic Guild, have brought self-respect and legitimacy to the rare coin business. "Without government intervention, the coin market has done a remarkable job of cleaning itself up. The ambiguity and biases inherent in coin grading, intentional overgrading, lack of uniform grading standards and terminology, inefficient trading methods, and poor liquidity," have been overcome by allowing free market forces to operate. All of this has come about without involving the government (except the Federal Trade Commission's investigation of PCGS which culminated in 1990) because in the absence of government intervention the most user-oriented and consumer-oriented standards and systems will survive.

The Problem of Objectivity in Standards

While the reliability, honesty, and objectivity of free market institutions are generally rated quite high by many in the numismatic industry, it must never by forgotten that coin certification companies are simply providing a service to their customers. "They render their professional opinion concerning the grade of a coin according to the standards in effect at the time they perform their service." No third party is obligated to accept their opinion concerning the grade of a coin, and there is no guarantee that any one else will grade the coin in the same fashion. Nor is there a guarantee that commonly accepted, industry-wide grading standards will not change in the future. While these third-party grading services have up-graded the professionalization of coin grading by using experts, and have helped eliminate the inherent conflict between buyer and seller as to the determination of the grade of the coins they are trading, there is no guarantee — other than wide-spread market acceptance — that their standards are any better than anyone else's. "Buyers must still examine each piece to decide for themselves if the price being paid is worth the value being received in comparison to other pieces available."

The important point here is to understand that people in

government employment, like Federal Trade Commission employees, for example, have no more special knowledge or interest in the area they regulate than do those in the free market. The only true test of the market is to rely on an outcome based on the absence of force or fraud. FTC hearing judges — even if they were coin collectors or investors themselves — are hardly any more expert than the coin graders at PCGS or NGC. Nor do they have a vested interest in establishing and maintaining the integrity and reputation required by firms like PCGS, who only obtain customers voluntarily. If people are not pleased with a grading service, they will go elsewhere, or simply grade their own coins as best they can. PCGS and the like can only succeed if they please their customers and serve the market.

This leads to the question of what is reasonable, and who decides what is reasonable when it comes to the determination of standards in general. First and foremost, any solution to this question must be based on the satisfaction of the buyer and seller in any transaction — since neither one of them is forced to enter into any exchange in which they are not satisfied with the objectivity or reasonableness of the standards by which they trade. If there is a dispute about the grade of a coin, there is the option of resolving the differences to the satisfaction of both parties, or of not completing the contemplated exchange. If a person is consistently unreasonable in his claims, he will eventually find himself without trading partners in the market, a situation which he may or may not desire. Other market participants do not coerce him into accepting their standards. He will either persist in his own ways, or the economic pressures resulting from his lack of exchanges with others will convince him to change his ways. That is the voluntaryist way.

As Ayn Rand once wrote, "Who is the final authority in ethics?... Who 'decided' what is the right way to make an automobile...? Any man who cares to acquire the appropriate knowledge and to judge, at and for his own risk and sake." Her answer is quite applicable to the use and determination of standards. Standards are based upon the laws of nature, our understanding of them, and the knowability of objective truth. When two or more persons are in disagreement about standards, whether it be the grade of a coin or the quality of steel, the voluntary way of settling their differences is by reliance on the objective evidence. The answer to the question as to who shall make the choice is: "whoever undertakes to evaluate the objective evidence." Since the human mind is finite and human problems are enormously complex, we must always remember that when two men of equal sincerity disagree, it is quite possible they may both be wrong. "But the significant thing is that their very differing is predicated upon the assumption that there is some objective truth to differ about, and that the pursuit of objective truth is worthwhile. Error is simply unintelligible without the existence of objective truth attainable by human reason."

Conclusion

Viewed historically, the evolution of the English language is a perfect example of how the market place arrives at solutions to human problems. Since there is no single group of people or institution in our society that is charged with the responsibility of promulgating rules or determining what is "proper" English, who decides? An 18th Century proponent of voluntaryism in language, argued that "the best forms of speech will, in time, establish themselves by their own superior excellence." Good usage does not depend upon the force of law, but simply rests upon the sanction of custom and good sense.

As the English language has evolved there is no absolute standard of rightness. Each speaker or writer recognizes that "good" usage is his or her own affair, with due regard to the usage of other good writers and speakers. The duty of determining what is "good" or "bad" English falls upon each of us, just as it does in every other affair of life.

This is exactly how the principle of voluntaryism operates and pervades every field of endeavor, if not trampled upon by the State. This voluntary system includes all that is not governmental or not compulsory, all that people do for themselves, their neighbors, and their posterity, of their own free will. It comprehends the efforts of parents on behalf of their children, of religious bodies, of charitable societies, of wealthy benefactors, of cooperative groups, of private associations, of industrialists and inventors trying to make a profit by offering their wares to the world. Voluntaryism is based on individual initiative and the liberty to act in a world where prior permission from anyone is not required but those with whom you interact. The voluntary principle offends no person's conscience, exacts from no person's purse an unwilling contribution, favors no sect, rejects all political parties, and neither enforces nor forbids religion. It gives no one the slightest ground for complaint because it recognizes each individual as the sole arbiter within his or her own domain.

In a very real sense all the conservational forces of civilization are within the realm of standardization. This includes our social institutions, our customs and common laws, literature and art, science and commerce. "They all involve the fixation of advances which have been made into a better understanding of the world, and such advances are in turn points from which to make fresh advances" in the future. As this article has hopefully demonstrated, voluntaryism and the voluntary principle are the underlying framework and basis for standardization and the advances which standardization makes possible. V

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The Threat of Voluntary Associations

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co-opted through infiltration by agents of the regime.

Not only is every organized social association suppressed or subverted, but informal social relationships including (indeed, especially) family relationships are controlled or perverted by the regime. The regime assumes the burden of raising and educating (indoctrinating) children. It teaches them to reserve feelings of loyalty and devotion for the regime, not their parents. Loyalty to anything or anyone other than the regime is an intolerable offense. Indeed, loyalty to the regime can best be demonstrated by betraying one's parents or loved ones by denouncing them for disloyalty to the regime.

A totalitarian regime is therefore driven to destroy all relationships that characterize a normally functioning society, because all such relationships create a contest within which opposition feeling could be nurtured, articulated, and perhaps channeled into concrete actions. To convince people that any act of opposition is futile and pointless, they must be cut off from all forms of authentic social intercourse and genuine comradeship. What is left is a collection of disconnected and disoriented individuals whose only meaningful relationship is with the regime. Indeed, any meaningful relationship to which the regime is not a party, is from the standpoint of the regime, a kind of treachery. V

(Excerpted from "The End of Communism," THE FREEMAN, March 1991, pp. 102-104.)

The Threat of Voluntary Associations

By David Glasner

The notion that a regime — even a totalitarian regime — could survive the universal disapproval of it subjects is difficult to comprehend. Ordinarily one would assume that a nearly unanimous desire by the subjects of a regime to oust it eventually would make it impossible for the regime to retain power. After all, the regime couldn't function if all those who wished to see it replaced stopped carrying out orders. However, unless a sufficient number of people simultaneously stop following orders, it is suicidal for any one person to stop obeying. The goal of a totalitarian regime is therefore to isolate individuals: to manipulate the information available to them so completely that they do not realize that opponents are in the majority, or, even if they do realize it, that they don't trust their compatriots enough to risk exposing themselves.

What a regime must avoid at all costs is a chain reaction in which the opposition of a single individual or a group induces others to resist its authority. That is why it is so important for an unpopular regime to create the illusion of popular support, misleading its opponents into believing that they, and not the regime and its supporters, are in the minority. There is strength in numbers. And believing in one's strength creates courage.

Control over information is absolutely necessary for such a regime. Not only would information about the true (miserable) state of affairs create further opposition, but even the existence of internal opposition cannot be acknowledged. The transmission of such information could encourage latent opposition to surface elsewhere. Individuals must be convinced 1) that opposition does not exist, and 2) that even if it did, its chances for success would be nil. If there are opponents they must be branded as tools of external forces and condemned as traitors.

The few people who start an uprising must take extraordinary risks, because they must expose themselves in the expectation that their example will attract the support of others who will join them in defying the regime. But if too few follow their lead, the leaders will have sacrificed themselves in a futile gesture. Moreover, any organized opposition to the regime requires communication between individuals. If no one expresses his thoughts of opposition to anyone else, opposition to the regime can be virtually unanimous and yet be ineffectual.

Thus, to eradicate all possible opposition, an unpopular regime determined to stay in power must suppress any form of social intercourse — indeed any social relationship — that is outside the master-subordinate relationship it imposes on it subjects. Any social relationship is a potential threat to the regime because it allows the transfer of information that could be inimical to its interests. But more fundamentally, even the mere expression of thoughts, feelings, and emotions creates a degree of intimacy, trust, and obligation that the regime cannot easily tolerate. Even if the thoughts, feelings, and emotions are completely unrelated to the regime (which as the regime becomes more intrusive into the lives of its subjects becomes ever less likely) the expression of those thoughts, feelings, and emotions is potentially subversive because such expressions build the mutual trust that would allow people to discuss the regime and to voice (however softly and discreetly) their opposition to it.

It was thus profoundly insightful for George Orwell in *1984* to have focused his portrayal of Big Brother's destruction of all opposition on the power to force two lovers to betray each other. Any feeling of intimacy, trust, and mutual dependence by two people for each other was by its nature subversive to Big Brother and had to be extirpated.

All voluntary associations of individuals are suspect under a totalitarian regime and are either suppressed or subverted. Obviously no independent political parties or political associations, no independent labor unions or professional associations, no independent business or enterprise, not even an independent sports team or cultural organization can be tolerated. Religious institutions must therefore either be suppressed outright or

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