



THE SECRETARY OF COMMERCE
WASHINGTON 25

December 15, 1944

Dear Sir:

At the request and in the name of the Secretary of Commerce of the United States, you are hereby invited by the Visiting Committee of the National Bureau of Standards to attend a "Conference on Standardization" at the University Club, One West Fifty-Fourth Street, New York, on Friday, January 12, 1945, at 10 A.M.

This conference is called to consider a report to the Secretary of Commerce dated December 3, 1943, and revised September 15, 1944, by Mr. Carroll L. Wilson, Consultant to the Secretary of Commerce, entitled "Standards in Commerce - a Basis for Action" of which a copy, which speaks for itself, is enclosed.

This invitation is issued to a relatively few leaders interested in standardization, for the purpose of recommending action that will meet a large volume of criticism received by the Department of Commerce, leveled at alleged inadequacy of function and lack of coverage by the existing organizations in the standardization field.

Many of the criticisms urge the Department of Commerce to take over and enlarge as a government function the work of standardization hitherto performed by private bodies, principally the American Standards



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Association and its participating and cooperating agencies. There has been a strong demand for the provision of performance standards for consumer goods and standards in fields not hitherto covered.

This demand has arisen partly as a result of charges of inefficiency against existing standardizing bodies, and partly as a result of the enormous industrial expansion of the United States, which by the creation of new articles and new materials and the great recent progress in science and invention, has called for a corresponding expansion of the function of standardization. It has taken place more rapidly than the facilities for dealing with it have been expanded by the private bodies now in the field.

Since the report of December 3, 1943, was first written, the American Standards Association (hereafter referred to as the ASA) and other private bodies in the field have taken cognizance of these demands, and, at a meeting on May 19, 1944, under the vigorous leadership of Mr. Henry B. Bryans, President of the ASA, aided by Mr. Harold S. Osborne, Chairman of the Standards Council, and its newly created Planning Committee, the Directors of the ASA took the following action:

"RESOLVED that in the opinion of the Board, because of the growing importance of standards for consumer goods, the scope and work of the ASA be broadened and clarified by removing the present restrictions which limit the work of the ASA to the engineering field; and that the ASA should be so organized that it can handle any standard or standardization project which deserves national recognition, whether in the field of engineering, accounting, business practice, or consumer goods."

On the same date, other resolutions were adopted proposing basic changes in the Constitution of the ASA to implement the above resolution of policy, and to bring about the necessary changes in the structure of the ASA. These changes are designed to adapt it, in a

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broadened field of standardization, to become an agency which the Department of Commerce feels is essential to meet the rapidly growing demand for enlarged standardization services.

Proposals had been received by the Department of Commerce that the Bureau of Standards should become the chief factor in such an agency, but these proposals have not been encouraged in view of the many representations, in harmony with the views of the Visiting Committee, that such a function for the Bureau would impair its scientific work and the success and prestige with which it has in the past devoted itself to the creation and development of standards of exact measurement in the field of the physical sciences.

Stress was laid upon the view of the Visiting Committee, which was created by Congress to watch over and advise on the operations of the Bureau, that the true function of the National Bureau of Standards lay in that domain of standardization that rested upon exact physical measurement, and not on such standardization as involved negotiations, opinion, judgment, and compromise. This view may ultimately involve the transfer out of the Bureau of Standards of its present Division of Trade Standards and Simplified Practice into the Department of Commerce, there to be operated as a part of the Bureau of Foreign and Domestic Commerce, or otherwise provided for.

So complete was the recognition by the ASA of the national need for the additional functions that, with the Department's approval, a general conclusion was reached that, provided suitable procedure was developed and suitable progress was made, the reorganization in the field of standardization could now safely be left to the leadership

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of the ASA itself, subject to the guidance and advice of the Department in respect to the extent to which the reorganization met the requirements which, in its opinion, the public interest demanded.

It is recognized that effective private control and leadership involve government participation and cooperation. In this the Bureau of Standards would continue to be an important factor, but on the lower level of operation as distinguished from the level of policy.

In order to be suitably advised in respect to such participation and cooperation, the Secretary of Commerce has felt it desirable that a call be issued thru the Visiting Committee for a meeting of individual leaders in the standardization field.

The meeting hereby called will be opened by the Secretary of Commerce or, in his absence, by the Chairman of the Visiting Committee and then turned over to the chairmanship of Mr. Henry B. Bryans, President of the ASA, for discussion and recommendations upon the tentative agenda prepared by Mr. Carroll L. Wilson, of which also a copy is enclosed.

It is thought that the session may profitably be given over first to general discussion, followed by the discussion of specific measures and the appointment of committees. The group is invited to luncheon at the club.

If the meeting progresses along lines that are hoped, it is expected that the report of the conference back to the Secretary of Commerce thru the Visiting Committee, with any modifications that

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may be made, will be approved by the Secretary of Commerce, and that from then on under the leadership of the ASA, a new and broader era will have been instituted in the function of standardization in the United States.

Will you please advise Mr. Henry B. Bryans, President of the American Standards Association, 1000 Chestnut Street, Philadelphia 5, Pa., whether you may be expected to attend the meeting.

Respectfully yours,

Frank B. Jewett

President, National Academy of Sciences
President, New York Museum of Sciences and
Industry

William D. Coolidge

Vice President and Director of Research
General Electric Company

Vannevar Bush

President, Carnegie Institution of Washington
Director, Office of Scientific Research
and Development

Karl T. Compton

President, Massachusetts Institute of Technology
Chief Field Service, Office of Scientific
Research and Development

(Gano Dunn)

President, the J.G. White Engineering Corporation
President, Cooper Union for the Advancement
of Science and Art
Chairman of the Visiting Committee of
the National Bureau of Standards

December 3, 1943.
Amended as of September 15, 1944.

Report to the
Secretary of Commerce

STANDARDS IN COMMERCE -- A BASIS FOR ACTION

This report recommends action by the Secretary. It aims to improve the Department's effectiveness in fostering the development of commercial and industrial standards as aids to the expansion of commerce. The entire approach is based on one assumption -- borne out by careful analysis; namely, that the inherent nature of this work demands close collaboration between the government and private business.

Current Controversial Approach Rejected

Standards development has been active in this country since the start of the century. Most of the work has been carried on under private initiative, through the efforts of several hundred business organizations and a much larger number of individual concerns. Many government agencies have also contributed, notably the Department of Agriculture, the Food and Drug Administration, and the National Bureau of Standards. The focal clearing house of private activity has been the American Standards Association (of which the Department of Commerce has long been a member). This body had its beginning in the first World War, which indeed gave a great lift to the whole movement, both here and abroad. The commercial work of the NBS likewise got its real start at that time.

Today the United States leads the standards world, thanks to the widespread interest and initiative applied by its citizens in this field during the past generation. In the basic arts of measurement the NBS appears to have achieved almost unique stature. But in the application of standards to commerce, the actual achievements of both NBS and ASA seem to have fallen short of their opportunities. Such shortcomings had no very serious consequences, while the commercial standards dealt with by these two organizations were confined largely to "industrial goods." But if standards are to be extended as aids to the ultimate consumer, a far more effective performance will be essential.

Current discussion of the standards movement and its future goes on in an atmosphere of intense controversy. As long as standardization was confined chiefly to industrial goods, the rivalry and contention appear to have been about what might normally be expected in any field of technical progress. But recent developments, in particular the work

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of the Office of Price Administration, have heavily emphasized the likelihood that standards may come to be applied extensively to consumer goods. This prospect has whetted the edge of old rivalries and injected new elements of controversy, bringing the subject almost to an explosive state. Under these conditions people interested in standards tend to fall into opposing camps. For example, many contend vigorously that only the government through the NBS can deal effectively with the consumer goods problem; others are just as insistent that the ASA is incomparably the better vehicle for leadership. The first propose that the Department withdraw from membership in the ASA; the second counter (in effect) with a proposed Congressional Charter for the ASA. This sort of personalized controversy confuses the real issues and obscures the constructive possibilities; it is emphatically rejected as a basis for this analysis.

Future Needs -- Business to Lead -- Government to Help

The truly significant questions are these: How real and how extensive is the need for more active standards development? What kind of standards will be most in demand? How can the NBS and the Department contribute most effectively? What have other government agencies to offer? What specific contribution can a private clearing house such as the ASA be expected to make?

It is probable that the next two decades will bring a strong growth in consumers' demand for facts on the performance of things they buy. From this demand will come the need for many performance standards. To develop this and other new consumer aids effectively, and to exploit the industrial goods area still untouched, will call for more intensive, more skillful cultivation of the whole standards field than has heretofore been applied. Only if the need were predominately for compulsory standards would there be a clear case for government to assume active leadership. But the great majority of standards in prospect involve no questions of health, personal safety or protection of property. Accordingly, compulsory standards can legitimately play only a secondary part. Therefore, the public should look primarily to business rather than government, to evolve the performance data it will want. Likewise, standards development should follow the voluntary agreement process as its main channel. For this work the Department and the NBS (and also other government agencies) can provide facts, measurements, and technical assistance; these will be their best contributions.

The opportunities for more effective collaboration between the Department and private organizations are truly substantial. Light is shed on this by a glimpse at the processes of establishing a new standard -- promotion or education, formulation, review, advance acceptance, compliance.

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Consider a performance standard for some consumer item; for example, the durability of shoe soles, or the accuracy of an alarm clock. Before there can be such a standard there must be an effective demand for performance data. Somebody has to sell the idea. Here the mail order houses have already taken the lead, because the facts help them sell goods. This practice will surely spread to other merchandising fields. It is not too clear that the Department can make any substantial contribution to this promotional work. There will be opportunities for consumer organizations to do pioneering, and for spreading knowledge about standards through the public school system.

The actual development of a specific standard rests on negotiation, to which the Department can contribute but little of intrinsic value. But this stage also calls for facts, research on testing methods, market analysis; here the Department and the NBS have much to offer. The public acceptance of any standard will depend heavily on the rigor of the tests that it meets for adequacy and equity. If a "court of review" (such as the ASA Standards Council) is required, it should be judged by its own acts; the direct participation of any governmental agency here could distract attention from the actual quality of the "court's" performance and conversely, could embarrass the government. Finally there are the advance acceptance and compliance stages. To the extent that these latter may be necessary in any given case, there is definite opportunity for the Department to contribute a point of registry, as well as statistics and other facts. In short, even such a brief review of the standardizing process suggests ample opportunities for collaboration.

New Competitive Standard Proposed

One potent source of the current controversy is inherent in the prevailing standards concepts. These are unsuitable for application to most consumer goods. The most important are minimum standards, grade labeling, over-all specifications or "design" standards, and the "trade standards" fostered by the NBS. Of these the first three either ignore the competitive process or tend to hamper its operation. The "minimum standards" concept seeks to establish a definite level of quality below which competition is in effect to be treated as illegitimate. This concept is satisfactory where questions of health, safety or property protection are involved; but there is no satisfactory basis for determining such a level where these criteria are missing, as is the case for most consumer goods. Indeed, rigorous interpreters of prevailing anti-trust philosophy would rightly frown on this practice. The grade labeling approach is an effort to simplify quality and performance information; but if applied to any but the simplest type of product (such as canned vegetables?), it is inevitably misleading. The complete standard of design and workmanship (implicit in earlier

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proposals of the British Standards Institute?) is a grossly impractical attempt to predetermine the complex matrix of qualities that make for general desirability. Finally, the NBS "trade standard" with its labeling provision is weak, in that it is not specifically designed to give the consumer adequate buying information.

A type of performance standard designed explicitly to implement the competitive process, is proposed for consideration. The following example, deliberately oversimplified for the sake of clarity, will illustrate both how such a standard might be established and how it could be used as a tool in competition:

Assume that a satisfactory test on men's business shirts has been devised, equivalent to actual laundry wear. Assume that performance under this test is expressible in simple terms easily grasped by the consumer, -- number of trips to the (standard) laundry. Let a sample check be taken of the average performance of all such shirts sold. Say this average wear comes out at 40 standard trips. Let this average be adopted as the "comparative standard", to be used at will as a target in competitive selling:

"Our Premium Brand shirt gives you 80 trips, yet it sells for only 50 cents more than typical prices for standard 40-trip shirts." "Our Truvalue shirt gives you only 30 trips; but you pay only half the usual price for the 40-trip standard article." "Mr. Main Street! Your town is clean. Why pay for laundry wear you don't need? Compare our finely tailored formfit shirt. Yet it costs no more than ordinary shirts that only give you 5 more unneeded launderings." "Try Gentle's Patent Laundry. Kind treatment converts your 40-trip standard to an 80-trip deluxe." "Fink's Finest Forty -- Meets every standard test -- Sets the standard for value."

There's plenty of room for selling ingenuity when a standard is used in this manner. Leave it primarily up to the individual seller himself, to decide whether or not to stress the wear performance factor; but give the standard wide independent circulation (through the schools, etc.) among consumers, to spur demand for such information. Take new sample checks at intervals -- say every 5 years -- and raise or lower the (average) standard accordingly. Repeat the process developing new "Comparative Standards" for other qualities, such as shrinkage, whenever a substantial potential demand is uncovered.

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This proposal has yet to be submitted to the experts. It is not offered as a universal panacea; but it would meet many needs that are missed by the standards concepts now prevailing -- and it would work with competitive merchandising, not against it.

Stronger Private Standards Body Needed

There is a strong case for a single private body to serve as a focal point of leadership in standards development, for both industrial and consumer goods. Its logical functions would be: to promote actively the use of standards; to assist in the actual development of individual standards through voluntary agreement by producers, merchants, and users; to maintain on a high plane its own rules of equity and adequacy as rigorous tests of all standards issued in its name. It would call upon both government and private sources, for aid in developing tests and for market information. To the extent that advance acceptances and performance checks might be required, it could enlist government collaboration. To carry out these general functions, a single agency dealing with all types of standards problems (including simplified practices) should be feasible.

To provide effective leadership such a standards agency would itself have to meet certain minimum requirements. It would have to be completely above suspicion of undue financial control by special interests. Its top management should reflect equitably the points of view of producers, merchants, and consumers; but it should be free of all official entanglements with other organizations, free to act as a single purpose body. It should be led, particularly in the next few years, by an able enterprise builder devoting all or a large share of his attention to its development. Its staff should include men competent not alone in engineering, but in negotiations, in market analysis and in promotion. Its procedures should facilitate the most direct contact with the best technical skills -- including merchandising -- available throughout the country. Furthermore, these procedures should combine equity with realistic speed, speed in tune with the actual pace of industrial progress.

Fortify National Bureau of Standards, -- Citadel of Measurement

The future development of commercial and industrial standards will probably place a heavily increased burden on the technical facilities of the NBS. Steps should be taken to strengthen the Bureau accordingly. In particular, more direct and more adequate legislative authorization

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should be provided for work to be done without charge by the NBS, on request from tax-exempt private organizations judged to be operating in the broad public interest. While the present survey has not been focussed on the Bureau's work related to Federal procurement, there is evidence that a thorough study of this function might point to substantial improvement. It has been suggested that the Bureau's basic scientific work suffers perennially from lack of funds. If further study should support this claim, steps should be taken to apprise business and the scientific professions of the facts; for theirs is the primary responsibility for informing the Congress on services required from the Bureau. Finally, the Commercial Standards and Simplified Practice Divisions should be removed from the Bureau as soon as it may be feasible. Their work, being primarily involved in questions of business judgment, is out of place in this otherwise exclusively scientific and technical body.

Rejuvenate Department's Commercial Standards Work

These commercial activities of the NBS should be transferred, either to the Office of the Secretary or to the Bureau of Foreign and Domestic Commerce. But the move should be made only when a feasible administrative plan can be devised and put into operation. The work of the Commercial Standards and Simplified Practice Divisions should be continued. The demand for commercial standardizing activity in the Department is quite likely to increase in any event, even though establishment of the new private standards body should call for a change in the nature of this work. It is reasonable to proceed on the assumption that the Department's experienced and competent personnel will prove capable of adapting themselves to such evolution in the character of their work as circumstances may require.

If and when the transfer of the Commercial Standards and Simplified Practice Divisions from the NBS is made, it should not be necessary thereafter merely to stereotype the Department's commercial standards work in terms of existing routine. On the contrary, if an approach along the general lines recommended in this report is adopted, it should be possible to proceed almost immediately with experiments looking to material improvement in the art of standardization. These might include study of the available means for detecting need for consumer goods standards, sampling as a tool in formulating standards or simplified practices for consumer goods, the active use of advance acceptance as a device to speed the effective adoption of new standards, the possible use of periodic performance surveys as an aid to standards progress, and the development of more effective procedures for reaching voluntary agreements on standards in process. Also if the recommended new type of performance standard discussed in this report should pass

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the test of advance criticism by experts, it would be highly desirable to select some promising items and develop the entire procedure on an experimental basis. In short, there should be plenty of valuable new work ahead for the Department's commercial standards group. However, this work should eventually be concentrated on experimental development and service. Private organizations, including the proposed new standards body, should be led to accept full responsibility for promoting new standards. They should carry on such promotion in their own name, without leaning unduly on the public good will attached to the reputation of any government agency.

Conclusion -- Towards a Conference With Standards Leaders

To conclude, the outlook calls for more effective leadership in future standards development than has previously existed. The new emphasis is likely to be on performance information and related standards, for consumer goods. To contribute most effectively, the Department should foster active collaboration by its agencies, the NBS, and (probably) the BF&DC, with private standardizing activities. In particular there is need for rebuilding the American Standards Association, in order to provide an effective spearhead of leadership.

The NBS needs stronger legislative authorization for contributing its measurement skills to the anticipated new developments. As a corollary, its scientific work and its procurement testing for the Federal Government might well be subjected to review, with real prospect of enhancing their effectiveness. The commercial activities of the NBS should be transferred elsewhere in the Department, and continued. There will be immediate opportunities for pioneering experiments by the group transferred, looking to basic improvement in the whole standardizing art, applied particularly to consumer goods. In particular, it is suggested that a radically different type of comparative performance standard for consumer goods might be developed, for systematic use as a device to sharpen the edge of competitive merchandising.

The key recommendation is the complete rebuilding of the American Standards Association into a new, exclusively private standards body, capable of dealing effectively with both industrial and consumer goods. The Secretary of Commerce can legitimately lend his good offices to this venture, by reason of the Department's long continued membership in the Association, and more important, because of his broad responsibility for promoting commerce. However, adoption of these recommendations would have far-reaching effects on future operations of the National Bureau of Standards. Hence this report should first be submitted to the Bureau's Visiting Committee for their consideration. The Secretary might suggest that this Committee join him in preparations for calling a conference of business executives and other leaders interested in the future development of standards in the United States.

Carroll L. Wilson
Consultant