

**THE METRIC FALLACY; AN
INVESTIGATION OF THE CLAIMS MADE
FOR THE METRIC SYSTEM AND
ESPECIALLY OF THE CLAIM THAT ITS
ADOPTION IS NECESSARY IN THE
INTEREST OF EXPORT TRADE**

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The metric fallacy; an investigation of the claims made for the metric system and especially of the claim that its adoption is necessary in the interest of export trade by Frederick A. Halsey

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FREDERICK A. HALSEY

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“ Experience has shown—even if the people soon forget the lesson—that any general threat of arbitrary regulation of private lives goes unheeded until too late. People think it incredible, but it comes, just as war, which men believed could not come again, came with sudden destructiveness.”

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EXPORT TRADE

BY

FREDERICK A. HALSEY
COMMISSIONER

OF THE

AMERICAN INSTITUTE OF WEIGHTS AND MEASURES

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*" Truth wears no mask, bows at no human shrine, seeks neither
place nor applause; she only asks a hearing."*

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PREFACE

The argument for the adoption of the metric system is based upon the tacit assumption that it is a simple matter for a country to change its weights and measures. Once one has accepted that assumption, it is but a short step to the conclusion that those countries which have made the experiment have succeeded, and then another short step to the conclusion that we can succeed.

The question of the ease or the difficulty of a change in the prevailing system is, clearly, one, not of belief, but of fact. The fathers of the metric system may be excused for holding this belief since they had no experience to guide them, but the world has now a century and a quarter of experience behind it and the time has come to consult the facts. Nearly twenty years of investigation of weights and measures as used in industry and commerce throughout the world and recorded herein have demonstrated that this change of practice is of such difficulty that in no country is it complete while, in most of them, it is a grotesque failure.

The arguments for the adoption of the metric system are, furthermore, based on the tacit assumption that the old units will disappear. The researches recorded in these pages show that what is commonly called the *adoption* of the system is, in reality, nothing more than its *introduction*. The continued use of the old units along with the new can be explained in two ways—that the advantages of the metric system are not found to be such as to justify its adoption or that the difficulties of the change are so great as to make it impossible. Both are correct, but either is fatal to the metric case, for under these conditions the arguments for the adoption of the system are not only destroyed but inverted.

Thus, the argument for a uniform world system disappears in the face of the fact that the adoption of the metric system has in no country brought about a uniform system in domestic affairs. Similarly, the argument for the adoption of the system in order to do away with confusion is inverted by the fact that such "adoption" has only brought about confusion. Again, the argument for economy of time in primary education is nullified and inverted by the fact that the "adoption" of the system has increased and not diminished the work of school children. Still again, the argument that the adoption of the system leads to a saving of time in calculations is negatived and inverted by the fact that the continued use of the old system involves the addition of calculations for conversion between the old and the new, while the argument for fewer and

simpler ratios between units disappears when we consider that a dual system introduces far more and far worse ratios between old and new units than those that now obtain.

The following pages show that for many purposes the change is impossible and that the effect of the so-called adoption of the system has always been the introduction of a dual standard with results the exact opposite of those intended—complexity instead of simplicity, confusion instead of order, diversity instead of uniformity. These results have nowhere been better presented than in *The Evolution of Weights and Measures and The Metric System* by Professors Hallock & Wade—a book written to promote the adoption of the system and regarded by the metric party as a conclusive showing of the advantages of such adoption. From this book, page 170, we quote as follows:

“We are forced to consider a still more serious difficulty, namely the growth of a dual system due to the increased use of the metric system as permitted by statute. . . . Both systems being legal and the metric measures coming into more widespread use, there would result the perpetual necessity of converting from one to the other in commercial transactions, and, while the nation was waiting for the ultimate survival of the fittest system, or the birth of an ideal scheme, incalculable inconvenience and damage would ensue as has been shown many times in the past.”

The case against the adoption of the system is summed up in the statement that the problem does not lie in the introduction of the metric units, but in getting rid of the English units. In none of the so-called metric countries have the old units disappeared. Their experience is a guide—the only guide we have—and, applying it to our own case, the manner in which the argument for the simplification of our weights and measures and of the ratios between units is bound up with the disappearance of the English units and inverted by their continued use is best shown by a few examples. With the continued use of the English units such ratios as the following will be added to those we now have:

25.4 millimeters	make 1 inch
6.452 sq. centimeters	make 1 sq. inch
3.281 feet	make 1 meter
10.724 sq. feet	make 1 sq. meter
1.609 kilometers	make 1 mile
2.59 sq. kilometers	make 1 sq. mile
2.205 pounds	make 1 kilogram
28.35 grams	make 1 ounce
2.471 acres	make 1 hectare

For additional examples, without limit, the reader is referred to any engineer's reference book, or to the publications of the Bureau of Standards.

With the argument for the simplification of ratios, there goes its companion for the reduction in the number of units, which falls to the ground if the new units are merely to be added to the old. Clearly, we cannot expect the result of subtraction from the process of addition.

There is no phase or feature of the metric argument that is not destroyed and inverted by the continued use of old units in metric countries, and the confusion and complexities that result therefrom.

The facts here assembled show that the metric system is a will-o'-the-wisp which the nations of the world are always chasing but never catching, and that it leads nowhere but into a quagmire of confusion and disorder. Shall we take warning from the experience of others, or shall we jump headlong into this bottomless morass? Shall we insist on learning from our own experience, or will we learn from the mistakes of others?

Chapters IX, XVIII, XXIII and XXIV are by my cordial co-worker, in these investigations for nearly twenty years, Mr. Samuel S. Dale.

Attention is especially called to the first three paragraphs of Appendix I.