

**AN ENQUIRY INTO AND AN
EXPLANATION OF DECIMAL
COINAGE AND THE METRIC
SYSTEM OF WEIGHTS &
MEASURES**

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An Enquiry into and an Explanation of Decimal Coinage and the Metric System of Weights & Measures by Edwyn Anthony

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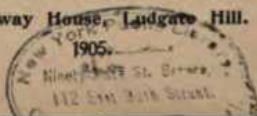
EDWYN ANTHONY, M.A., J.P.,

Barrister-at-Law; Alderman, and Chairman of the Weights and Measures
Committee, of the Herefordshire County Council; Member of the
London Mathematical Society.

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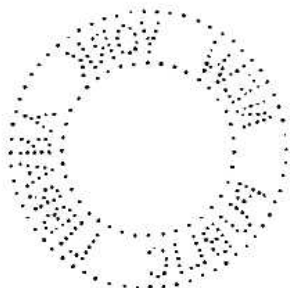
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PREFACE.

A STATEMENT of the cause which led to the writing of this book may perhaps help the reader to understand its arguments and conclusions.

By nature fond of mathematics, and having, when a young man, lived for a considerable period in Paris and later in life for several years in the United States, I have long been familiar with the actual working of decimal coinage and the metric system. My knowledge, however, was *superficial*, because I had paid little heed to the only part of the subject that really requires much attention—the best way of meeting the difficulty, confusion and expense of introducing those systems into this country with its vast array of weights-and-measures tables; its money reckoning in pounds, shillings, pence and farthings; and the intricate ratios of our units to the metric ones.

Decimal systems have two sides—an *easy* side (the arithmetical) and a *difficult* side (the practical). This fact cannot be too carefully borne in mind. Arithmetically and mathematically, decimal systems are extremely simple. They require for their understanding no knowledge whatever of mathematics, and of arithmetic very little beyond an acquaintance with its first four rules. A moment's reflection will show that this must be so; for, otherwise, how could such systems form the basis of the reckoning, weighing and measuring of a large portion of mankind? On the other hand, viewed in regard to their compulsory adoption throughout the length and breadth of the country, the question is so difficult, far-reaching and important that it is essentially a subject to be dealt with by the Government of the day, and not by private legislation.

This double aspect of the subject is unfortunate, and it produces a threefold evil.

1. A large number of people, hearing of Royal Commissions, Select Committees, &c., and thinking special study of and aptitude for mathematics necessary for its comprehension, remain in total ignorance of it, and so constitute a huge dead weight against all progress.
2. Others, finding the matter very easy from the arithmetical point of view, rush to the conclusion that its introduction is the simplest thing in the world, and give no thought to the practical difficulties which underlie it.
3. The subject being so easy arithmetically speaking, books about it abound. These for the most part err by too much copiousness, in fact, they make a mountain of a molehill, and thus help to spread

the delusion that mathematical knowledge and ability are indispensable for its understanding.

Recurring to myself, on becoming more than 13 years ago the Chairman of the Weights and Measures Committee of the Herefordshire County Council, my mind was naturally more attracted to the subject than it had been before. Giving it particular study, the value of the Metric System stood out in bolder and bolder relief, while larger and larger also loomed the practical difficulties of its introduction. I clearly realised the seriousness of the impediments in its way; they, nevertheless, appeared to me to be surmountable, and the gain so great that they must and would be surmounted. Turning, however, to the sister subject—Decimal Coinage—the Pound-and-mil scheme confronted me. That damped my ardour, because I perceived the difficulties of that system to be so formidable that this generation was not likely to see them overcome. So I became a strong advocate of decimal coinage in *theory*, but in *practice* (?). At the same time the Metric System without decimal coinage seemed to me to be a lame and impotent conclusion without historical parallel. Having thus come to a fence which I could not clear, I dropped the subject until some 18 months ago, when the Norms-and-pence system suddenly occurred to me.* At once all difficulties vanished as if by magic. Combined with the method of adoption hereinafter explained, the introduction of decimal coinage became, in my eyes, not only feasible but EASY. Whilst, therefore, the chief object of this book is to demonstrate that fact, I have also thought it desirable to deal with the whole subject and to state the conclusions at which I have arrived as to what should be the course of legislation upon this most important question.

EDWYN ANTHONY.

* *This scheme, though the fact was unknown to me at the time, was touched on by some of the witnesses before the 1856 Royal Commission.*

PREFACE TO THE SECOND EDITION.

This Edition contains a most valuable addendum; it has been enriched by the opinion of Mr. Andrew Carnegie (see page 60). It also contains other important additions to the collection of Extracts (Chapter IV.), and some interesting information with regard to the dates of the introduction of Decimal Coinage into various countries (see pp. 85–87). In other respects very few alterations have been made.

INTRODUCTION.

EVERY phase of a subject, considered with the aim of framing definite laws in regard to it, usually affects more than one practical consequence. For that reason, each chapter of this book, though in general confined to one definite part of the subject, usually influences more than one of the conclusions reached. Hence an enunciation, by way of introduction, of the several propositions which the book, taken as a whole, enforces, will conduce to a clearer apprehension of the facts and arguments it contains.

PROPOSITION 1. Decimal coinage can be introduced quickly and easily by issuing one new gold and one new silver coin, and without withdrawing any of the coins at present in circulation.

PROPOSITION 2. The Norms-pence system of decimal coinage does not affect prices in the least degree, and would not cause appreciable trouble, confusion, or expense to the public. If desired, the sovereign may continue in circulation for ever.

PROPOSITION 3. The Norms-pence system is extremely simple and easy to learn; in fact, in order to apply it to all ordinary business transactions, no knowledge of decimals is required, and it is fundamentally identical with the system in use throughout nearly the whole of the civilised world. This and the preceding proposition likewise apply to the Dollars and Cents system (see pp. 4, 5.)

PROPOSITION 4. Decimal Coinage should precede the introduction of the metric, or other decimal system, of weights and measures.

PROPOSITION 5. The Metric System ought not to be introduced into the United Kingdom except by international agreement with our Colonies and the United States.

PROPOSITION 6. Decimalisation of our weights and measures can be attained without alteration of our fundamental units. Its introduction is, therefore, a far easier task, and very much less dependent on international action, than that of the Metric System.

PROPOSITION 7. Decimal weights and measures are nearer to the Metric System than our present Imperial system. Their use would shorten arithmetical calculations and facilitate international trade.