
170. Metrication in the UK

IN ESSAY 96, 'Is the Earth flat', I discussed a topic that may appear a little absurd and scientifically irrelevant, but which (I think) demonstrates that leading-edge science is not necessarily bringing the rest of society along with it. This may be harmless enough when it centres around whether the Earth is round or flat, but assumes greater importance when it concerns the societal consequences of immunisation or climate change.

Here I will make an aside from my usual scientific insights with Gaia to give some thoughts on the question of metrication... albeit central to Gaia's success!

As a scientist, and one who lived and worked in continental Europe for 30 years, the question is as 'black-and-white' as the Earth's shape – as it is for all countries in Europe except the United Kingdom, and for most other major economies across the world except the United States. Indeed, almost every other country uses, or has made the transition to, metric units.

FOR THE UK, metrication addresses the move from its historical use of yards, feet and inches to metres; from stones, pounds and ounces to kilogrammes; from fluid ounces, pints and gallons to litres; from degrees Fahrenheit to Celsius; and discarding archaic units such as horsepower (for the power of engines or motors), or British Thermal Units (BTU, the heat required to raise one pound of water by one degree Fahrenheit).

Try this: divide 5 stone 7 lb 9 oz into four equal parts. Or add 5 yds 2 ft 3 inches to 2 yds 2 ft 11 inches. To design a supersonic jet, or a high speed train, or a meteorological satellite, is unimaginable in such a system. To cling to them is like holding on to farthings and florins, perches and chains, quarts and gills.

EXAMPLES OF THE difficulties and absurdities of the imperial system are endless. So is the potential for errors, sometimes disastrous. So why is it perpetuated?

Why does the UK continue to do so much of its business in imperial units? Why is the issue of metrication so contentious? Is it a case of maintaining our sovereignty? Or the fear of transitioning from a system that has served us since the Middle Ages? Or simply xenophobia?

THE HISTORY of the move to decimal currencies offers some insights. Prior to 1971, the UK currency system of 'pounds, shillings and pence' was based on the 240:12:1 Carolingian system (introduced by Charlemagne in the late 8th century) with 12 pennies to the shilling and 20 shillings to the pound. Until 1971, the coins in circulation were guineas, pounds, crowns and half crowns, florins and shillings, sixpences, threepenny 'bits', pennies, halfpennies and (until 1961) farthings.

Russia adopted the world's first decimal currency in 1704, with France following in 1795 along with their adoption of the metric system.

The UK Parliament first considered decimalising the British currency in 1824. It was another 17 years before the Decimal Association was founded in 1841, in support of both decimalisation and use of the (SI) metric system. A report by a standards commission in the 1860s recommended metrication for Britain.

It was a further 100 years before the British Government introduced the 'Committee of the Inquiry on Decimal Currency'. Their 1963 report resulted in the final agreement to adopt decimalisation on 1 March 1966, with the approval of the Decimal Currency Act (and the setting up of a Decimal Currency Board to prepare a public information campaign) in May 1969, and the final currency changeover on 15 February 1971. The old halfpenny, penny, and threepenny coins were promptly removed from circulation, in August of the same year.

Although the 'older generation' found it more difficult, the changeover to decimal currency went smoothly. Some resisted, but I can't believe anybody today mourns the 'good old days' of pounds, shillings and pence.

THE MOVE TO the wider metric system has meanwhile been piecemeal. The UK government committed to adopting the metric system on joining the European Economic Community in 1973, and regulations in 1995 required goods to be sold in metric units. In a high profile case in 2002, five market traders lost their court battle for the right to trade in pounds and ounces. They were supported by celebrities including the comedian John Cleese, and politicians including Boris Johnson.

Sir Jacob Rees-Mogg (Minister for Brexit Opportunities & Government Efficiency, Feb–Sep 2022; and today, Secretary of State for Business, Energy & Industrial Strategy, BEIS) is a high-profile advocate of imperial measures.

In what was seen as an attempt to revive this archaic system, the BEIS conducted a consultation in Jun–Aug 2022: *‘If you had a choice, would you want to purchase items: (i) in imperial units, (ii) in imperial units alongside a metric equivalent?’* The absence of a third option, metric only, was widely criticised. With more than 100 000 responses, the majority expressing little appetite for increased use of imperial measures, the Government decided not to introduce any new legislation in this area. *‘But new guidance has been issued to promote awareness and use of imperial measurements’*. Difficult to believe?!

I WILL NOT review the many arguments for metrication, other than to say that the metre and kilogramme sit at the heart of a coherent system in which units are inter-related. Like decimal currency, it is easy to learn and to use, because it is mainly decimal. And, importantly, the same units, used exclusively across scientific research and industry, can also be used for shopping and cooking. Extensive background is given by the [UK Metric Association](#), and under wikipedia’s [metrication in UK](#).

ALMOST ALL other countries in the world have managed the conversion from imperial. This includes some of the most recent, including the Commonwealth countries of [Australia](#) in 1969 (where the Government’s decision was based on an all-party recommendation following a Select Committee inquiry), and [Canada](#) in 1970. Closer to home, [metrication in the Republic of Ireland](#), including speed limits, was officially completed in 2005.

In the UK, an enormous amount of work has been done in assembling the case for metrication. As just one example, the question of whether to convert trade and industry was the subject of a UK Government White Paper in 1951, itself the result of the Hodgson Committee Report of 1949 which unanimously recommended currency decimalisation and metrication within 10 years. The Metrication Board, to promote and plan for metrication, was set up in 1969... but wound down in 1981.

FOR THOSE CONCERNED that the ‘move to metric’ is an imposition from beyond our shores, it is useful to recall that development of the system is an ongoing international effort, notably within the framework of the [International Bureau of Weights and Measures \(BIPM\)](#) to which many British scientists continue to contribute.

And the names of British scientists are prominent amongst the measurement units of the metric system: Isaac Newton gave his name to the unit of force, James Watt to the unit of power, Michael Faraday to the unit of capacitance, James Joule to the unit of energy, and Lord Kelvin to the unit of absolute temperature.

IN CONTRAST to the views of advocates of imperial measurements, the supporters and endorsers of metrication are many and varied. And, not surprisingly, I find [their arguments](#) considerably more compelling.

Jim Al-Khalili, physicist and broadcaster, spoke for many when he said *‘As a scientist, using the metric system is for me more than just a matter of ideology, convenience or a badge of honour showing off my credentials as a progressive global citizen in the modern world. Rather, it is the only way I am able to do good science and develop my understanding and knowledge of the universe’*.

The Member of Parliament Sarah Olney has emphasised the importance for the younger generations: *‘By retaining our use of the metric system, we maintain compatibility with the overwhelming majority of nations across the globe... Ensuring our children are educated in a system that allows them to maximise their opportunities across the world is key. It is time we move away from the rhetoric and the nostalgia, and look at what is best for the educational needs of the next generation’*.

TODAY, petrol from UK pumps is sold in litres, as it has for 30 years, but efficiency is measured in miles per gallon. Milk is sold in 2.272 litre containers which, being exactly 4 pints, adheres to the letter of the legislation if not the spirit. And from 2023, wine can be sold by the pint! Roads signs are in miles (and yards), while some modern cars have reverted to speeds marked *only* in miles per hour. The Government’s rationale for rejecting [speed limit signs in km/h](#) in 1970 is illustrative.

Meanwhile, the pharmaceutical industry fully embraced the metric system in the 1960s. And while medical records, by law, now use metric units, most people in the UK, if asked their weight or height, would probably still reply in stones and pounds, or feet and inches.

WIDER SOCIETY is, I believe, confused. But it is also out-of-step both with the UK’s actual education system which is today founded on metric units, and with 90% of its trading partners around the world. The UK Government supports science, technology, engineering, and maths (STEM), fields that emphasise innovation, problem-solving, and critical thinking. But it fails to steer a clear course on metrication.

Of course it must exercise caution in imposing unnecessary laws and regulations. But the success of other countries offers both guidance and encouragement.

For me, the UK stance on metrication is a symptom of two issues of concern: a tendency by wider society to cling to some long-gone ‘glorious’ past. And the unwillingness of Government to take sufficient lead on issues critical for the long-term prosperity of the country, but that might be unpopular in the shorter term.

Is it not time to break with the US, Liberia, Myanmar, and just a few other countries that retain the imperial system? Or is it the rest of the world that has it all wrong?