

Spelling metre or meter

By Pat Naughtin

Some time ago, a journalist in the USA gently chided me for the way I spell *meter* and *metre* in the Metrication matters newsletter. In reply I wrote:

I use both meter and metre.

- ◇ *I use meter when I refer to any device that measures something (such as gas meter, parking meter, speedometer, and voltmeter) or to a particular measurement (such as diameter and perimeter).*
- ◇ *I use metre when I refer to a unit of distance (such as in micrometre, millimetre, metre, and kilometre).*

That is, as a general rule of thumb, I use meter if referring to a device that does the actual measuring or to the name of a particular measurement, and I use metre if the unit and the subject is related in any way to the metric system — more formally known as the International System of Units (SI). For example, I might use an odometer to measure a perimeter, but I would choose to do so in millimetres, metres, or kilometres.

But the reporter's question enthused me to explore this question further.

First, a little history:

- ◇ In the 1600s and early 1700s, there was no standard for English spelling anywhere in the world. The first English dictionary, *Table Alphabeticall* by Robert Cawdrey (1604), is recognised as an attempt to try to support the use of English words at a time when there was a strong inward flow of foreign words into the English language. However, this dictionary did not attempt to provide advice on spelling.
- ◇ An Englishman, John Wilkins, in *An Essay Towards a Real Character and a Philosophical Language* (1668) first described the idea for a *universal measure* of length to be used by all people in all nations. This was the first major proposal towards what eventually became the metric system and later the International System of Units (SI) (See: <http://www.metricationmatters.com/docs/CommentaryOnWilkinsOfMeasure.pdf>) To quote from John Wilkins' essay:

To which purpose, it were most desirable to find out some natural Standard, or universal Measure, which hath been esteemed by Learned men as one of the desiderata in Philosophy.

- ◇ Tito Livio Burattini was the first to use the word *metro* to mean an actual physical measure of length. He initially used the words *metro cattolico* (to mean universal measure) in 1675, but this was subsequently shortened to *metro*. It seems likely that Burattini translated John Wilkins' *universal measure* into *metro cattolico* after reading John Wilkins, *An Essay Towards a Real Character and a Philosophical Language* (1668), as there are many parallels between the Wilkins and the Burattini proposals. Apart from the idea of a *universal measure*, these parallels included the concept that a *universal measure* could be realised with the length of a pendulum that beats with a regular period of one second.
- ◇ The idea of definite advice on English spelling arose following the publication of the *Dictionary of the English Language* by Samuel Johnson (1755). Unlike modern dictionary writers, Samuel Johnson wrote prescriptively. He intended to set standard spellings (and definitions) that others would follow. Noah Webster (1758/1843) held a similar view but modern (20th century) dictionary writers moved away from this idea, following the lead of James Murray at the *Oxford English Dictionary*, and instead described the ways that a word has been used in the past as a guide to how readers might choose words in future. This idea is encapsulated in the sub-title to the *Oxford English Dictionary – On Historical Principles*.

Modern dictionaries are now descriptive rather than prescriptive. The Merriam-Webster Company now holds this view; on their web site they write about criticism of their 1961 edition, *Most of the criticism was aroused by Merriam's editorial philosophy, which holds that dictionaries shouldn't try to dictate or influence the development of language, but should only record its actual use.* You can find this reference at: <http://www.trivia-library.com/b/history-of-merriam-webster-dictionary-part-1.htm>

- ◇ In France the word *mètre* was first used as a measuring unit in 1791 after it was actively promoted by Jean-Charles De Borda (1733/1799). The French word, *mètre*, had come from the Italian word *metro* (which was derived from the Greek word μέτρον, a measure).
- ◇ When the word *metre* was first used in English in 1797 to mean a measure of length, it simply took the original spelling of *mètre* directly from French, but changed the accented é to an unaccented e.
- ◇ From 1797, the *metre* spelling became common in all English speaking countries, including the USA. For example, Benjamin Franklin, Thomas Jefferson, and John Quincy Adams all used the spelling *metre*.
- ◇ Later, the *metre* spelling was recognised by the Conférence Générale de Poids et Mesures (CGPM) and the Bureau International de Poids et Mesures (BIPM), who maintain the International System of Units (SI). In the official BIPM translation of *The International System of Units (SI)* brochure into English they use the spelling *metre* throughout.
- ◇ In 1828, the publication of *An American Dictionary of the English Language* by Noah Webster introduced many different ways of spelling words that are now characteristic of spelling in the USA. This was the first dictionary publication where the spelling, *meter*, was favored over the spelling, *metre*, for the international unit of length measurement (Webster retained the spelling of *metre* for *feet* in poetry).
- ◇ In 1866, *The Metric Act* was introduced (as H.R. 596) in the 39th Congress of the USA. The House passed it on 1866 May 17; the Senate passed it on 1866 July 27; and it was presented to the President and signed the next day. In part, it read: *It shall be lawful throughout the United States of America to employ the weights and measures of the metric system; and no contract or dealing, or pleading in any court, shall be deemed invalid or liable to objection because the weights or measures expressed or referred to therein are weights or measures of the metric system.* See: <http://lamar.colostate.edu/~hillger/laws/metric-act-bill.html> where you will notice that the spellings, *liter* and *meter*, were used throughout the document.
- ◇ In 1877, the New York Times published a pro-metric article in which it consistently spelled *metre* as *metre*. (See *Metric Today* 2008 October)
- ◇ In 1893, the Mendenhall Order of 1893 used *metre*, *litre*, and *gramme* for metric units in the USA (See <http://lamar.colostate.edu/~hillger/laws/mendenhall.html>).
- ◇ In 1906, the President of the USA, Teddy Roosevelt, proclaimed the use of 300 simple spellings based on the recommendations of an organisation called the Simplified Spelling Board. This list of words can be found at <http://www.childrenofthecode.org/code-history/300words.htm> and they include words such as: *color*, *center*, *check* meaning a bank draft, *defense*, *judgment*, and *traveled*. These words were to be implemented in government departments as standard spellings for the USA. In this list the spelling, *meter*, is shown as being preferred to the spelling, *metre*. A few weeks later, the Congress of the USA overruled President Roosevelt's proclamation on spelling, so that it never had legal effect.
- ◇ It is currently legal in the USA to use either spelling of *metre* or *meter*.
- ◇ In 1926, although Webster's New International Dictionary gave the alternative spellings *meter* and *metre* for music and poetry, this edition still gave the word for a length-measuring unit as *meter* without the alternative of *metre*. The expressions *meter-stick* and *meter-wheel* were similarly treated without the options of *metre-stick* and *metre-wheel*. It seems that the

editors of Webster's dictionary had a policy preference for the spelling, *meter*, only when it is applied to a unit of length but not when it is applied to a *foot* of poetry!

- ◇ Webster's dictionaries have not consistently applied their prejudice against the spelling of *metre* for a unit of length over the years. For example, *Webster's New School and Office Dictionary* (15 reprints from 1943 to 1960) distinguishes between a *meter* as an instrument and a *meter*, *metre* as a unit of length with these entries:
 - meter** (me'ter). n. an instrument for registering automatically; the amount measured by it.
 - meter, metre** (me'ter), n. a rhythmic arrangement of syllables in verse; unit of length in decimal system = 39.37 inches.
- ◇ In 1971 the National Bureau of Standards in Washington issued an official translation of a French document on the International System of Units (NBS Special Publication 330). This document presented the units adopted at a meeting of the Conférence Générale de Poids et Mesures (CGPM) held in Sèvres near Paris in 1960. The English translation of the definitive French document came in two separate versions, one for all English-speaking nations except the USA, and another separate one for the USA, the latter being edited by Chester H. Page of the National Bureau of Standards NBS (now National Institute of Standards and Technology NIST). It showed the basic unit of length as the *metre* and it was understood that a 'gentlemen's agreement' had been made whereby the USA would accept the -re in *metre* and *litre* as a trade-off for Britain's giving up the -me in *gramme* and *kilogramme*.
- ◇ Chester H. Page is listed as an editor of the (UK) National Physical Laboratory English language translation of *Le Système International d'Unités (SI)*, but his name does not appear on the American version because he refused to allow it when the (USA) Government Printing Office insisted that the American spelling of *metre* is *meter*.
- ◇ Beginning in late 1971, Dr. John Howard, the editor of *Applied Optics*, fought a campaign to have the *metre* spelling revert to the *meter* spelling. His writings on this included:
 - the editors of all the physics journals vote overwhelmingly not to yield the phonetic spelling of meter, liter, and diopter in any such compromise with evil, and*
 - our gram, meter, and ton are all more phonetic and logical than gramme, metre, and tonne, and we should not retreat from any phonetic spellings just because the British have multiple errors.*
- ◇ John Howard finally succeeded when, in 1975, the Board of Directors of the Metric Council changed back to its old spelling policy. Shortly after that, the Department of Commerce issued notices advising all government agencies to spell *meter* with the -er ending. In 1977 a new version of NBS Special Paper 330 was issued, that changed -re to -er. It would appear that this spelling change was made using a delegated authority by either NIST or the Government Printing Office without reference to the USA Congress.
- ◇ In 1992, Mr. G. T. Underwood, President of the American National Metric Council, was still writing editorials arguing for the spelling of *meter* rather than *metre*. We can only assume that he was reacting, by editorial, to people within the USA who still wanted to use *metre* as the spelling of the worldwide standard for the unit of length.
- ◇ Webster's New Encyclopedic Dictionary (New Revised Edition 1993) went back to favouring the spelling of *meter* and *liter* by moving the words *metre* and *litre* to a following page, well separated from *meter* and *liter*, and then defining them simply as: *variant of meter* and *variant of liter*.
- ◇ In 2009, *metre* is used as the spelling of the metric unit for length in all English speaking nations except the USA. The USA continues to use the spelling of *meter* that was promoted by one man, Noah Webster, in 1828 with no legislative support (Note: I searched for *spell* and *metre* and *meter* on the Library of Congress web site but I could not find bills containing these words. See: <http://thomas.loc.gov/home/multicongress/multicongress.html>).

Webster's reasons for change

When Noah Webster was preparing *A Compendious Dictionary of the English Language* (1806), he was convinced that a chief part of it was to be a distinctive American language with its own idiom, pronunciation, spelling, and style. His motivation for this seemed to be based on three major ideas — an observed **rational** need for spelling reform, a need to develop **national** feelings and sentiments in the population of the USA, and a canny observation that **commercial** gain for book publishing businesses in the USA could be obtained through the reform of spelling.

Rational reasons

Firstly, there was a mood at the time in the late 1700s and early 1800s for reform of spelling. (Some would argue that there is still a need for major spelling reforms — see side bar.)

Such luminaries as Benjamin Franklin (1706/1790) actively promoted the spelling reform idea. In fact, when, in 1789, Noah Webster wrote:

An Essay on the Necessity, Advantages, and Practicality of Reforming the Mode of Spelling and of Rendering the Orthography of Words Correspondent to Pronunciation, Dissertations on the English Language:

he felt it beneficial to add a subtitle that referred to the writing of Benjamin Franklin on spelling reform:

With Notes, Historical and Critical, to Which is Added, by Way of Appendix, an Essay on a Reformed Mode of Spelling, with Dr. Franklin's Arguments on That Subject

Webster's essay is at: http://edweb.sdsu.edu/people/DKitchen/new_655/webster_language.htm

Note that although Benjamin Franklin supported spelling reform generally, he consistently used the spelling *metre* when referring to the unit of length in his own writing.

National reasons

In *An Essay on the Necessity, Advantages, and Practicality of Reforming the Mode of Spelling ...* Noah Webster wrote (in 1789):

Besides this, a national language is a band of national union. Every engine should be employed to render the people of this country national; to call their attachments home to their own country; and to inspire them with the pride of national character. However, they may boast of Independence, and the freedom of their government, yet their opinions are not sufficiently independent; an astonishing respect for the arts and literature of their parent country, and a blind imitation of its manners, are still prevalent among the Americans.

Quote from Noah Webster from *An American Dictionary of the English Language* (1828), quoted from *Units of Measurement* by J.A.M. Gaboury (1990).

As an independent nation, our honour requires us to have a system of our own, in language as well as government. Great Britain, whose children we are, and whose language we speak, should no longer be our standard; for the taste of her writers is already corrupted, and her language on the decline. ... Numerous local causes, such as a new country, new associations of people, new combinations of ideas in arts and sciences, and some intercourse with tribes wholly unknown in Europe, will introduce new words into the American (sic) tongue. These causes will produce, in a course of time, a language in North

<p>Eye halve a spelling chequer, it came with my pea sea. It plain lee marques four my revue, miss steaks eye kin knot sea. # Eye strike a key and type a word, and weight four it two say Weather eye am wrong oar write; it shows me strait a weigh. # As soon as a mist ache is maid, it nose bee fore two long And eye can put the error rite Its rarely ever wrong.</p>
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America as different from the future language of England as the modern Dutch, Danish and Swedish are from the German, or from one another.

Commercial reasons

It should be noted that one of Noah Webster's goals in encouraging spelling reform was to divide rather than unite the two nations of the UK and the USA. He specifically wanted to encourage nationalism in the USA for commercial reasons. In *An Essay on the Necessity, Advantages, and Practicality of Reforming the Mode of Spelling ...*, Noah Webster wrote:

But a capital advantage of this reform in these states would be, that it would make a difference between the English orthography and the American. This will startle those who have not attended to the subject; but I am confident that such an event is an object of vast political consequence. For,

The alteration, however small, would encourage the publication of books in our own country. It would render it, in some measure, necessary that all books should be printed in America. The English would never copy our orthography for their own use; and consequently the same impressions of books would not answer for both countries. The inhabitants of the present generation would read the English impressions; but posterity, being taught a different spelling, would prefer the American orthography.

Just compare heart, beard and heard,
Dies and diet, lord and word,
Sword and sward, retain and Britain.
(Mind the latter, how it's written.)
Made has not the sound of bade,
Say - said, pay - paid, laid, but plaid.
Now I surely will not plague you
With such words as vague and ague,
But be careful how you speak,
Say break, steak, but bleak and streak.

Webster followed this work with his outstanding, 70 000 entry, *An American Dictionary of the English Language* (1828), he continued promoting distinctive American spelling, presumably still for the reasons of rationalism, nationalism, and commercialism that he had espoused in 1789.

Webster's rules

Part of Noah Webster's distinctive spelling was his idea to rid the USA of words ending in '-re' such as calibre, centre, *litre*, meagre, *metre*, theatre, and tyre that were replaced by caliber, center, *liter*, meager, *meter*, theater, and tyer. But the last of these looked strange so he changed the y to an i to give tire.

Although Noah Webster presented the -er spelling reform to replace -re spelling, there were many other spelling reforms that he did not undertake. English is still the product of its history as a random collector of words from wherever the English language was spoken — see side bar.

The *meter* spelling became more commonly used in the USA after it was codified as 'correct' by being accepted in dictionaries other than Webster's. Although Noah Webster was an active promoter of the '-er' spellings, his attempt to produce rational spelling has had mixed results. Wikipedia (at http://en.wikipedia.org/wiki/American_and_British_English_spelling_differences) says:

British spellings theatre, goitre, litre, lustre, mitre, nitre, reconnoitre, saltpetre, spectre, centre, titre; calibre, fibre, sabre, and sombre all have -er in American spelling. The ending -cre, as in acre, lucre, massacre, mediocre, is preserved in American English, to indicate the c is pronounced /k/ rather than /s/. After other consonants, there are not many -re endings even in British English: louvre, manoeuvre after -v-; meagre, ogre after -g-; euchre, ochre, sepulchre after -ch-. In the US, ogre and euchre are standard; manoeuvre and sepulchre are usually maneuver and sepulcher; and the other -re forms listed are variants of the equivalent -er form. and

Theater is the prevailing American spelling and is used by America's national theater as well as major American newspapers such as the New York Times (theater section) to refer to both the dramatic arts as well as to buildings where performances take place; yet theatre is also current (especially in the Northeastern United States), witness Broadway and The

New Yorker. Some places in the United States have "Centre" in their names (i.e. Rockville Centre, New York), named both before and after spelling reform ... For British accoutre(ment), US practice varies: Merriam-Webster favours the -re spelling, American Heritage the -er spelling.

Spelling metre or meter and the law

By 1866, when the USA decided to make the metric system legal for internal and international trade, spelling of *metre* as *meter* had become so common in the USA that the government had to provide for the two different spellings in all metric laws and regulations. Lawmakers in the USA still have to do this for all metric laws and regulations that might become involved in imports and exports. Such attention to spelling detail is of course charged at lawyers' rates of payment.

The present situation is that the spellings of *metre* and *meter* are both regarded as correct in the USA (as are *litre* and *liter*) and it is quite legal in the USA to use either *metre* or *meter*.

However, the spellings of *liter* and *meter* (as the units of volume and length) are rarely used in any other English speaking nations and whether their use is legal has to be checked on a nation by nation basis.

All contracts in all industries now have to consider whether the two spellings, *metre* and *meter*, are covered by the national and international laws of the nations with whom USA-based companies might wish to trade. This is important as many nations have a clause in their measurement laws that make a contract 'null and void' if it is not phrased using legal units of measurement and their symbols that are spelled exactly in the form provided in the legislation; for example, using mL for millilitre and ML for megalitre.

Internationally, the spelling of *metre* as the unit of length is always acceptable in all nations – including the USA. The spelling of *meter* is not universally acceptable as a unit of length. In fact, some legal jurisdictions specifically provide for the preference of the *metre* spelling in their legislation and their regulations. If choosing to use *meter* in an international contract, you should check that this spelling is legal in all of the nations where your product might be designed, made, transported or sold.

The definitive text for all intergovernmental, diplomatic, and international legal transactions is the French text of the brochure, *Le Système International d' Unités (SI)* that was published by the Bureau International de Poids et Mesures (BIPM) in 2006. The BIPM also provides an English translation of this document called *the International System of Units (SI)*. Copies of both of these documents can be downloaded from http://www.bipm.org/en/si/si_brochure/general.html and both of these documents use the spelling, metre. However, in the 'Preface to the 8th Edition' they write:

A point to note is that small spelling variations occur in the language of the English speaking countries (for instance, "metre" and "meter", "litre" and "liter"). In this respect, the English text presented here follows the International Standard ISO 31, Quantities and Units.

Readers should note that the official record is always that of the French text. This must be used when an authoritative reference is required or when there is doubt about the interpretation of the text.

In the USA, the Metric Conversion Act of 1975 gives the Secretary of Commerce the responsibility of interpreting or modifying *Le Système International d' Unités (SI)* for use in the USA. The Secretary of Commerce delegates this authority to the Director of the National Institute of Standards and Technology (NIST).

Based on this authority, the USA makes its own translation of *Le Système International d' Unités (SI)* and it is called NIST SP 330.

In NIST SP 330, *The International System of Units*, the spellings *deka*, *liter*, and *meter* are used rather than *deca*, *litre*, and *metre*, as they are spelled in the original BIPM English translation of

the definitive French text. You can download a copy of NIST Special Publication 330 (NIST SP 330) from <http://physics.nist.gov/Pubs/SP330/contents.html> where you will find that the *Foreword* says:

These differences include the following: (i) The spelling of English words is in accordance with the United States Government Printing Office Style Manual, which follows Webster's Third New International Dictionary rather than the Oxford Dictionary. Thus the spellings "meter," "liter," and "deka" are used rather than "metre," "litre," and "deca" as in the original BIPM English text; (ii) the name of the unit with symbol t and defined according to $1 t = 10^3 \text{ kg}$ is called "metric ton" rather than "tonne"; (iii) the four units curie, roentgen, rad, and rem are given in Table 10, p. 38; (iv) a number of "Editors' notes" are added in order to indicate such differences where significant (except spelling differences) and to clarify the text; and (v) a few very minor editorial changes are made in order to "Americanize" some phrases.

The translation of the BIPM brochure, *Le Système International d' Unités (SI)*, made in the USA, as NIST SP 330, is defined as the legal interpretation of the SI for the USA. All other English speaking nations refer to *Le Système International d' Unités (SI)*, using the official BIPM English translation, the *International System of Units (SI)*, as the legal basis for all of their measurements.

Attempts to divide the world of measurement by differentiating even the smallest details persist. See Appendix A to read about the continuing debate about the comma and the full stop or period.

Dictionaries and guides to English usage

Spelling meter as a measuring device

All English-speaking nations agree that *meter* can be used for an instrument for measuring. This is often used as a suffix in words such as altimeter, barometer, chronometer, micrometer, odometer, speedometer, and thermometer.

Spelling metre or meter as a unit of length

Generally, dictionaries define *metre* as UK English and *meter* as USA English. Some dictionaries from the USA go further and describe the spelling of *meter* as 'Standard English' even though it is only used in the USA. Internationally, the spelling of *meter*, for a unit of length, is simply regarded as a local variant used in the USA.

As an example of international use, the Style Guide at *The Times* in London has this to say about spelling of the words *metre* and *meter*:

metres, as in distance, poetry etc; meters, as in gas, electricity or parking etc.

For another example of the spellings, *metre* and *meter* here is a quotation from *The Cambridge Guide to Australian English Usage* by Pam Peters:

A metre is first and foremost a measure of length, the standard SI unit for it, and the one from which the metric system itself takes its name. ...

The word meter, "measuring instrument", is a native English word, based on the word mete "distribute or give out", which once meant measure.

Pam then asks about the suffixes *-metre* or *-meter* by asking the question:

Is a micrometre the same as a micrometer?

And she answers:

Not at all. The spelling - metre - is attached to words that are units of length within the metric system, like millimetre, centimetre and kilometre. A micrometre is one millionth of a metre, but the special instrument that measures minute lengths such as that is a micrometer.

Pam Peters' description of modern Australian usage is consistent with my observations. Australians know that the distinction between *metre* as a unit of length associated with the metric system and the spelling *meter* associated with any instrument used for measuring is very useful — and they enjoy using this distinction. Other words with the same sounds are distinguished by the use of different spellings. I have added a rhyme from my sheep farming background as a side bar to illustrate this.

Whether the wether
will weather it or not,
depends upon
whether the weather
is hot.

For a brief, but fascinating, history of the treatment of spelling *metre* or *meter* in the USA, see: <http://tinyurl.com/52qlo3>

Spelling meter and pronunciation

Robin Paice, the president of the UK Metric Association (UKMA) suggests that the American spelling of *meter* has led to the 'incorrect' pronunciation of 'kilometre'. Robin writes: *Measuring instruments, such as barometer, odometer, speedometer, clinometer, planimeter are spelt "er" and stressed or half-stressed on the syllable preceding "meter" - thus, "barOmeter". The SI prefix for thousand is "kilo", stressed on the first syllable, as in kilogram, kilowatt etc. However, most Americans and many other native English-speakers stress "kilometre" on the second syllable - thus "kilOmetre". This is inconsistent and illogical, and possibly derives from the failure of the American spelling to distinguish between measuring instruments and units of measurement. See also UKMA website at <http://www.ukma.org.uk/WhatIs/pronouncingmetric.aspx>*

My own preference

It would appear that I have been following the practice outlined in *The Cambridge Guide to Australian English* for some time. I have used *meter* whenever I refer to a device that does the actual measuring or to the name of a particular measurement, and I use *metre* if the unit and the subject is related in any way to the metric system. This is essentially the same position that I communicated to the journalist in the USA. I will continue to do this in my writing in general, and in writing and editing the *Metrication matters* newsletter.

However having said that, as a personal viewpoint and as a personal decision, I am aware that some people hold similar opinions while other people have different views.

Opinions, notes, and questions

As these ideas all have relevance to the debate about whether to use the spelling, *metre* or *meter*, for a unit of length, I list these opinions, notes, and questions below. They are not in any particular order. They are included simply because they might add ideas to any discussions. The way I selected items was not by selecting pro or anti points of view but simply by selecting those that contributed to the debate about the *metre* or *meter* spelling issue. These are followed by some overall conclusions.

- The *meter* spelling had the approval of Noah Webster (1828), President Teddy Roosevelt (1906), and the (USA) Spelling Society (1908).
- The *metre* spelling had the approval of the National Bureau of Standards (NBS and now NIST) in Washington in the 1970s.
- The distinction between *metre* as a measuring unit and *meter* as a device for measuring is a very useful concept.
- The public in the USA already uses many words ending with -re, even though some of these can be interchangeable with -er endings. Here are some of these: cadastre/cadaster — property register, centre/center (with central but not central), lavalier/lavalier — pendant microphone, manoeuvre/maneuver — tactical action, nitre/niter — potassium nitrate, piastre/piaster — coin, philtre/philter — potion, sceptre/scepter (with sceptral but not scepteral), spectre/specter — (with spectral but not specteral), and theatre/theater (theatrical" but not theaterical).

- Some argue the -re ending is too French, not recognising that before it was French it was Italian (with an *-ro* ending), and before that the Greek word μέτρον, that transliterates to metron.
- Some people note that the spelling of *meter* in the USA comes from the German unit of length, *Meter*. But they usually fail to point out that this causes no confusion in the German language as a measuring instrument or gauge is a *Messer* not a *Meter* and a counting instrument is a *Zähler* and not a *Meter*.
- **Question:** So what is a *metre meter*? – Is it a device (*meter*) for displaying length (*metre*)? **Answer:** I replied: 'I own such a device. It has a little wheel that causes a counter to increase as the wheel turns. The counter is calibrated in *metres* and tenths of *metres* – clearly it is a '*metre meter*' and I will label it accordingly.' (By the way, in the movie, *Thomas Jefferson in Paris*, a similar device is being used in one of the early scenes. I wonder if Jefferson called his measuring device a *metre meter* too?)
- The -re ending occurs in many place names in the USA. Examples include: Centreville in Maryland, Pierre in South Dakota, Centre Hall in Pennsylvania, Centre in California, and Centreville in Virginia.
- Now that the people of the USA have achieved exceptionalism status with their spelling of the word, *meter*, will they seek to alter other words to also be exceptions? For example, are groups in the USA now free to choose other variations that differ from the International System of Units – will the USA Department of Commerce decree that the spelling of ampere is to become ampeer, or will the energy unit joule be transmuted to jool? And will they lead others to become exceptions too; for example Wales chooses to use *metr* to avoid using the English spelling *metre*?
- Having two spellings for the *metre* takes us back to the days when an international order for pounds had to be interpreted according to the source of the order and the buyer's national concept of a pound (see side bar).
- To a storeman, does an order for 3 *metres* mean the same thing as an order for 3 *meters*? Judging by the more than 15 000 results when I typed "*metre or meter*" on Google, I suspect that many storemen are not absolutely clear whether these two differently spelled words actually mean the same thing and if they need to check the interpretation of all international trade orders because different spelling raises doubts about the true meaning of the amount of the order. This means that much time is wasted checking the status of the orders (which takes us back to the problems with different: pounds and pounds, tons and tons, and barrels and barrels).
- Often words are pronounced identically but different spelling serves as useful distinctions. Examples are: *mist* and *missed* and *stork* and *stalk* (and *metre* and *meter* outside the USA).
- The whole world has to try to accommodate the *meter* spelling into their lives because of the spell checker in word processing programs such as Microsoft Word, written in the USA.
- Whenever you see the word *metre* you know that is in some way a measure of length, but if you see the word *meter* you have to stop to evaluate whether it refers (in this instance) to a measuring device or to a measure of length. If you decide that it is a measure of length you need to consider whether the document comes from the USA or from another English speaking nation. If it is the latter, is it a misprint or is it from a piece of writing that has been specifically written for USA readers.
- A few years ago, I was the lead writer of the wool chapter for the Kirk-Othmer Encyclopaedia of Chemical Technology. This chapter was about 50 pages long and it felt quite odd to see

In 1832, the Edinburgh Encyclopedia, by David Brewster listed the different pounds used in Europe and he gave their equivalence to 100 English Avoirdupois pounds.

Brewster found more than 300 different pounds that varied from 90 English pounds per 100 pounds to 140 English pounds per 100 pounds.

meters, millimeters, and micrometers on all of those pages wherever I had written metres, millimetres, and micrometres.

- The International Bureau of Weights and Measures recommends the spelling, *metre*.
- Not all people in the USA choose to use the spelling, *meter*. Many academics, researchers, scientists, manufacturers and traders from the USA, especially if they operate in an international environment, use the spelling, *metre*. As an example, the American Society for Testing and Materials (ASTM), in its standard: *E 621 Standard Practice for the use of Metric (SI) Units in Building Design and Construction* uses the *metre* spelling exclusively.
- The spelling, *meter*, is officially endorsed by the USA Department of Commerce through the National Institute for Standards and Technology.
- Wikipedia at <http://en.wikipedia.org/wiki/Metre> chooses to use the spelling, *metre*.
- Spelling reform attempts by the USA have had the effect of adding to the social isolation of the USA from the rest of the English-speaking world.
- Spelling checkers that are supplied with word processors cannot distinguish between whether a *meter* as a device and a *meter* as a measurement of length. If you are writing anything for readers in the USA it is best to use *metre* for length and *meter* for anything that measures, then change the *metre* to *meter* in your final edit. Otherwise you have to stop to consider the meaning at each appearance of the word *meter* every single time that it occurs.
- A very irate email arrived from a teacher in New Zealand who was angry at having to correct the work of all her students from *meter* to *metre* because the school's word processors defaulted (as she put it) to *Microsoft English*. She concluded her email by writing: *Every child in every subject, for every written assignment, in every school in New Zealand sits in front of a computer that constantly defaults to liter and meter even though I set it to Australian spelling. I feel like I'm living in a nightmare. (Hhhrrrrmmph!)* The teacher then went on to describe Microsoft's default margins in inches with quarters and halves in most ungracious terms — most unladylike!
- Be aware that the spelling checker in your USA designed word processor will revert to USA spelling of *meter* every time you do a cut and paste from a second document. The word processor package seems to assume that my choice to use Australian English was only a temporary aberration and that I will be delighted to return to using USA English as soon as possible. The constant reversion to *meter* spelling by Microsoft Word whenever you import any text becomes rather annoying when it occurs more than (say) 100 times in a day.
- The -re and -er spellings of word endings can provide us with many useful distinctions between words (Some words that don't have these useful spelling differences are shown in the side bar). Here are a few examples from the USA: acre/acer — area measure/genus of maple trees, eagre/eager — a tidal bore/zealous, fibre/fiber — edible/largely inedible, livre/liver — French coin/body organ, louvre/louver — museum in Paris/type of window blind, mitre/miter — a bishop's hat/a woodworking cut, timbre/timber — of a voice or musical instrument/wood and wood products, and tire/tier — for wheels of motor vehicles/row of seats in a stadium or theatre.
- Citizens in the USA are already having trouble adapting to the international metric system. Presenting them with two metric systems (international and USA brands) has probably contributed to more confusion and delay.
- Having to distinguish between the two words, *metre* and *meter* occurs more frequently than most people realise. When many of us see the word, *meter*, we think immediately of

<p>The bandage was wound around the wound.</p> <p>The farm was used to produce some produce.</p> <p>The dump was so full that it had to refuse more refuse.</p> <p>We must polish the Polish furniture.</p> <p>Since there is no time like the present, he thought it was time to present the present.</p>
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something like a voltmeter, and it takes a little time to realign our thoughts to the concept of a *meter* being a unit to measure length. Every time this happens there is a cost of both time and money.

- Who cares? It's a language difference, simple as that. Meter, metre — doesn't matter — Both of them are better than feet and inches!
- When a suffix is added to *metre* or *meter*, they both drop the e and keep the r (regardless of the order) because the er (or re if you like) syllable collapses to a non-syllabic r. Examples are: arbiter/arbitration, centre/center/central, enter/entrance, neuter/neutral, and of course, metre/meter/metric.
- **Question:** What right have the people of the USA got to make a unilateral decision such as the spelling of *meter* instead of the internationally accepted *metre* when they only represent less than 5 % of the world's population? I thought that the idea was to have a universal system that was relevant for everyone in the world? **Answer:** I'm not sure whether to take this as a serious question or just as an anti-USA rant, but assuming it's a serious question, I will answer by saying, *The people of the USA did not make this decision; it was a small group of language enthusiasts whose decision about changing the spelling of metre, to meter, was then effectively promoted by Noah Webster through the sale of his dictionaries.*
- The extra cost to industry of these spellings has not been calculated. For example, motor vehicles made in the USA have to have parts and all documentation use *metre* for export to Canada while keeping *meter* for internal sales. This requires dual inventories and constant supervision to get the right spelling with each product. Dual labels and dual documents add to export costs and decrease both income and profit.
- The -re ending for *metre* virtually guarantees that this word refers to a length and not to a measuring device. This is true even when it has a preceding prefix as in micrometre, millimetre or kilometre. Consider the sentence, *You need a micrometer to measure a micrometre* where it is clear from the word ending which is the measuring device unit and which is the length.
- There are groups who are working on spelling reforms and the future will, no doubt, contain many debates and discussions about the spelling of *metre* see: http://www.simple.wikipedia.org/wiki/Wikipedia_talk:Basic_English_alphabetical_wordlist Here are some samples taken from that page:

You call U.K. spellings a minority. Maybe they are, but it's a huge (!) minority: U.K., Australia, Ireland, India, South Africa, Canada (with some exceptions) and the rest of the Commonwealth, the European Union, the United Nations (U.K. official standard!), the WTO, ISO, NATO, IOC (Olympic Movement) ...

"For ease of understanding in the digital age, I have allowed the spell checker to change spelling to "Microsoft American." There may be slight spelling and pronunciation differences around the world - the British may include some silent letters; the French may add accents, the Dutch will no doubt double some letters - but the words should be understandable." One more thing I noticed while reading the International word list. It uses "meter" and "liter". Now, you may not be used to the spellings "metre" and "litre", but consider the following:

The only English-speaking country not using the metric system in daily life and business is the U.S. And the U.S. is also the only country to spell "meter" and "liter". Now, do you really think it is justified to include only "meter" and "liter" in the list, when no English-speaking country using these units spells them this way?)

And as outlined with "metre": it simply doesn't make sense to say that Basic English should only use "meter", when in every single English-speaking country where the metric system is actually used, it's spelled "metre". In fact, the international standard is "metre", ...

- In Canada, the official spelling is *metre*, no question about it. This is mainly because of the fact that English and French are the official languages of Canada. Canadians do not use the -er spellings of any words as they are used in the USA. The stupidest part of using the wrong spelling is that it throws away the advantage of distinguishing the unit of length from the instrument, for example: *Gas meters measure cubic metres of gas.*
- In England, French words are imported unchanged, so in the UK they use *metre*. Canada uses the Canadian Oxford Dictionary; Many Canadians actively avoid Webster's dictionaries.
- John Bailes, President of the Canadian metric Association writes: *I am personally in favour of metre because it does allow the elimination of any confusion about whether you are talking about a measuring instrument or a unit of length. Officially the metre as a unit of length is to be spelled just that way in both English and French. ... the Canadian Press Caps and Spelling guide says (on page 102) Spelling metre (abbreviated m singular and plural metric symbol no period); meter (gauge).*
- This gem (from memory) comes from the instructions on a home weather station: *This versatile home weather station supports remote meters. The meters can be located depending on the distance in meters from the base station. The system will work at up to 75 meters. You can order extra wire for the meters by the meter.*

As an example of a group from the USA arguing for spelling reform, you might start with this article, *Spelling in 21st Century*, at <http://www.basic-english.org/21/spelling.html> and it is certain that this discussion will continue for a long, long time.

Conclusion

As a writer who often writes about metrication and the metric system, I find that I constantly have to add clauses like:

- except in the USA
- but not in the USA
- but not now in the USA

And I make these adjustments and corrections in the full knowledge that the USA led the world in measurement reform in the 1780s, 1790s, 1860s, and the 1870s. I often wonder what has happened to USA measurement leadership since then.

From the point of view of someone like me who lives outside the USA, the spelling of *metre* as *meter* is firstly a nuisance — a constant daily nagging nuisance. It also costs a lot. People outside the USA need to stop every time they read *meter* to see what it means in the context that it appears — is it a device for measuring or a unit of measure? For all people outside the USA it is hard to conclude that the spelling, *meter*, serves any useful purpose now, or to conclude that it ever did.

Frustrations arise each day as people all around the world fight to distinguish whether there is a difference between the words *meter* and *metre*. Although this disambiguation may only take a second or two on each occasion when you are (say) using a word processor spell checker that was written in the USA, these seconds soon build to become a major annoyance. However, I don't suppose that the promoters of *meter* rather than *metre* as a unit of length have any idea of the unreasonable, irrational, and truly bitter resentment that is aimed at the good citizens of the USA, by many world citizens who have to live with this annoyance.

Could it possibly be true that by changing the spelling of *metre* to *meter*, Noah Webster has (by a simple switching of two letters in a five letter word) succeeded in producing a nation that — in measurement terms — is effectively linguistically (and therefore socially) isolated from the rest of the English-speaking world?

It would be sensible to have only one spelling for legal and commercial contracts in all English speaking nations of the world. It would also be sensible if this spelling were to match the spelling of not only other English-speaking nations, but also many of the non-English speaking nations.

It sounds too far fetched, but it is just possible that the *meter* spelling has made the international system of measurement non-viable, because one great and powerful nation has decided to go it alone in devising their own distinctive measuring methods that are sufficiently different to the International System of Units (SI) that is used in all other nations.

My considered opinion is that spelling the *universal measure* of length unit as *meter* does not serve any useful purpose either inside or outside the USA. To go further, I believe that the spelling of *meter* instead of *metre* does not, and never has provided the citizens of the USA with any useful advantage. Noah Webster was probably right in that he did produce a major commercial benefit for publishers in the USA especially the Webster Dictionary Company (Merriam-Webster since 1843).

Appendix A — decimal point or decimal comma

This issue is not directly related to the metre vs meter spelling issue but it is very relevant to the idea of a truly International System of Units (SI) if we believe that the best system is the — *one* — that we all agree to use when dealing with each other. When John Wilkins devised the idea of a *universal measure* in 1668, as a bishop and as a linguist and Bible scholar, he was fully aware of the danger of having different measuring methods perpetrated on the public. I imagine that lines like: *Divers weights, and divers measures, both of them are alike abomination to the LORD*, might have often resonated from his pulpit.

As an example of a drive toward differentiation, the National Institute for Standards and Technology in the USA (NIST) is working to continue the division between comma users and full stop or period users to differentiate the decimal part of a number.

NIST is actively working to continue the practice of having two different decimal markers to indicate where a whole number ends and a decimal component begins. NIST is not promoting the decimal point over the decimal comma; rather NIST seems to be aiming to produce an either/or situation by not saying which method (point or comma) is preferred. It seems to me that if we are seeking to have an international standard that is common to all of us — *For all time; for all people* — then we should be aiming to have only one method for marking where the whole numbers ends and the decimal fractions begin. Personally, I prefer the decimal comma as it is less likely to get lost. If you go to: http://www.nist.gov/public_affairs/techbeat/tb2006_1122.htm#decimal you will find the following — written in 2006:

Decimals Score a Point on International Standards

We're in the end game. It soon may be possible to write international standards documents with decimal points in them. The issue is more than academic—it can affect sales of U.S. exports. The breakthrough comes as a result of dogged determination on the part of the National Institute of Standards and Technology (NIST) and ANSI, the official U.S. representative body in major international standards organizations.

Until recently, the rule at the International Organization for Standardization (ISO—the world's largest developer of standards) and the International Electrotechnical Commission (IEC—the leading global electrical and electronic standards organization) was that all numbers with a decimal part must be written in formal documents with a comma decimal separator, the prevailing fashion in Europe. The constant pi, for example, starts 3,141 592 653.

This had been something of an irritant for the English-speaking world (plus such notable countries as China, India and Japan) where the decimal point is used. Moreover, it could be expensive. Countries that adopted labeling or import documentation regulations based on ISO or IEC standards could block imports from the U.S. on the strength of decimal points in their specifications.

That sort of change doesn't happen overnight. The first step was to secure a resolution by the General Conference on Weights and Measures (CGPM—the reigning international treaty organization dealing with measurement) endorsing the use of the point on the line as a decimal sign. That was in 2003. Then NIST, working through ANSI, went to work to get revisions to the formal ISO and IEC documentation standards and procedures eliminating language that forbade the use of the decimal point. In June, ISO agree to make such revisions subject to IEC agreement and an effective implementation plan. In September, IEC agreed with ISO.

The last remaining hurdle is to develop the implementation plan that makes sure that ISO and IEC staff change their publication style policies to reflect the now-legitimate use of decimal points in English-language documents. We'll make a point of it.

This is not a lightweight issue. If the amount — 123,456 metres — is written in an international order for electrical wiring, does this mean that the buyer wants:

- one hundred and twenty-three thousand four hundred and fifty-six metres, or
- one hundred and twenty-three metres and four hundred and fifty-six millimetres exactly.

This question revolves around the use of the decimal comma (,) or the decimal point (.) and, as mentioned earlier, each nation has laws written to resolve this issue for their own people — about half of the world's people use the decimal comma and about half use the decimal point. Whether the purchase order in this case is legal or whether it is *null and void* might depend entirely on the shape of the decimal marker between the numbers. More lollies for lawyers!

Acknowledgements

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Metric system consultant, writer, and speaker, Pat Naughtin, has helped thousands of people and hundreds of companies upgrade to the modern metric system smoothly, quickly, and so economically that they now save thousands each year when buying, processing, or selling for their businesses. Pat provides services and resources for many different trades, crafts, and professions for commercial, industrial and government metrication leaders in Asia, Europe, and in the USA. Pat's clients include the Australian Government, Google, NASA, NIST, and the metric associations of Canada, the UK, and the USA.

Pat specialises in the modern metric system based on the International System of Units (SI), but he is mostly concerned with the processes that people use for themselves, their groups, their businesses, their industries, and their nations as they go about their inevitable metrication process. See <http://www.metricationmatters.com/> for more metrication information, contact Pat at pat.naughtin@metricationmatters.com or subscribe to the free 'Metrication matters' newsletter at <http://www.metricationmatters.com/newsletter/>

