

A short view of the long history of British metrication.



Introduction

- We have had many interesting presentations at CECIP on highly detailed elements of scientific metrology.
- We have had many fascinating discussions on Directives, WELMEC and OIML Documents.
- This is an attempt to look at why we have the legal metrology framework we see today in Europe and why it took the UK so long to catch up and even today is only partly there.



Measurement and Society

- Measurement came out of the need for people to describe the quantities they needed in their world.
- Penninkulma is an obsolete Finnish unit based on the furthest distance at which a barking dog could be heard.
- Collop is old Irish unit that defined the land necessary to graze a cow.
- What is important is that they are embedded in the lives and environment of their users and become part of their local and national identity.



Measurement and Identity

- Localised units create an identity with the local environment and other users that use the same measures.
- These units also create a contrast with others that use different measures- both nationally and internationally.
 - In the 1850's the British Government noted that bushel to measure potatoes was 90lbs (40kg) in Lancashire and only 56lbs (25kg) in Surrey.
 - On the eve of the French Revolution there were more than 1000 recognised units and up to 250,000 local units.
 - A clear example is the border between The Republic of Ireland and Northern-Ireland, it is only the change between miles and km that distinguish the difference between different nations, histories and cultures.

Measurement and Identity



Measurement and Identity- The effect of “globalisation”

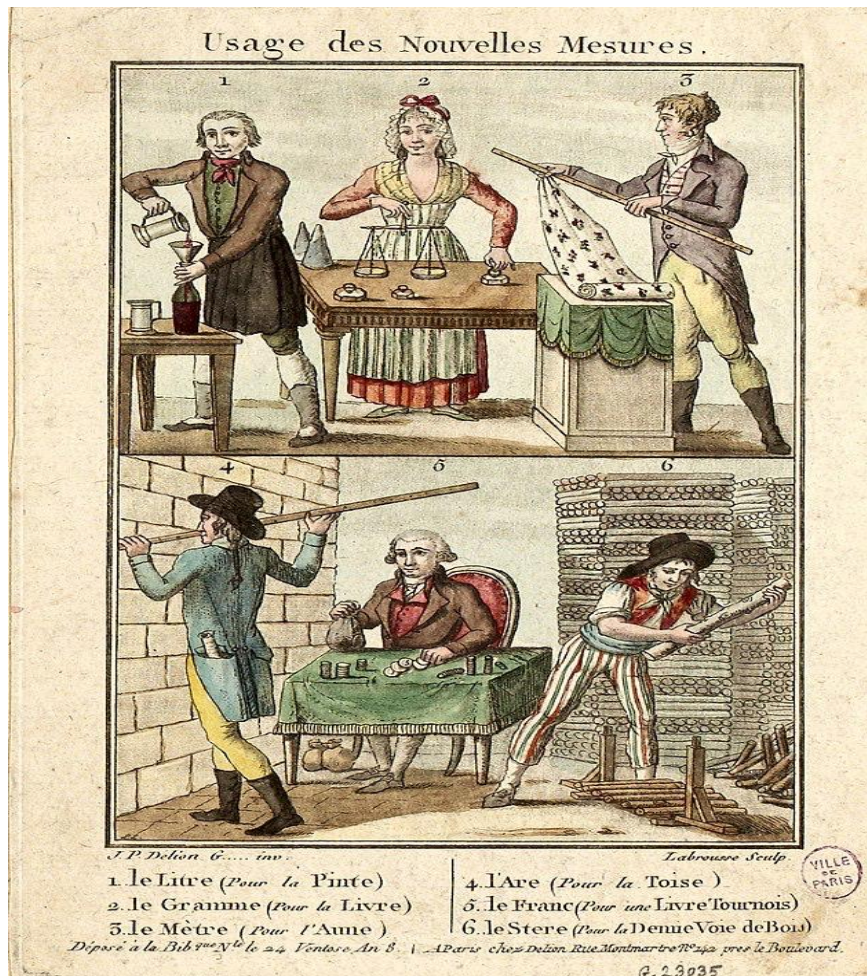
- As people began to trade across nations and internationally the demand for harmonised and decontextualised units increased.
- No longer could a difference in measure between the north and south of France or the UK be the basis for trade.
- This would lead to an inevitable conflict with cultural identities.
- Must also remember the effects of what is known as The Enlightenment.
- A focus on metrological standardisation in the hope of enabling scientific thinking between nations.
 - Royal Society in London in 1662
 - Academy of Sciences in Paris 1666



The French Revolution- The birth of the metric system

- All the various pressures converged in the French Revolution.
- The Enlightenment ideals of the revolutionaries.
- The desires of the 3rd Estate (everyone in France that was not in the nobility or the clergy)
 - Cahiers de Doléance made many references to the needs of consistent weights and measures.
- Law of 18 Germinal An III marked the beginning of the metric system (7th April 1795)
- Condorcet's famous phrase "the metric system is for all people for all times"
- Article 1 of the Law 18 of Germinal conflates the use of the new weights and measures with "devotion to the unity and indivisibility of the Republic"- harsh but a useful marketing tool for scale makers.
- In a reflection of the problems in Britain- the people did not immediately accept the enthusiasm of metric measures.
- Napoleonic decrees rolled back some of the measures and it was not until 1840 that France became fully metric

The French Revolution- The birth of the metric system



What happened in Britain?

- French Revolution was mostly seen with horror in Britain.
- The toppling of the monarchy was seen as brutal and uncontrolled – odd since the English had executed their own king 140 years earlier.
- Metrication spread throughout Europe.
 - Netherlands 1817
 - Italy 1861
 - Portugal 1814
 - Spain 1849
 - Brazil, Uruguay Peru and Argentina 1862
- Britain stuck completely with Imperial Measures.-Weights and Measures Acts enforced Imperial Measures.
- Metre Convention of 1875- Britain did not sign for another 9 years.
- This can be explained by a British resistance to globalisation and the belief in the Empire as the basis of their trade- notion of British Exceptionalism.
- They were known as Imperial Measures for a reason.



What happened to Britain- Why did this change ?

- The British Empire (like all European Empires) collapsed.
 - India became a metric country long before Britain.
- Globalisation continued and metric units became the interconnector for this.
- In the 1960's it was decided that Britain would become a metric country!
- In 1961 it was announced that Britain would join the EEC
- Three attempts and the pacification of de Gaulle lead to Britain joining the EEC in 1973.
- This placed Britain on an inevitable path to metrication.
- It is possible to "plot a line" with the implementation of various Directives and the rise of British Euroscepticism.
- Directive 80/181 initially decreed the end of the pint of beer- this was the clash between British identity and the EU.
- It eventually came to a head over the sale of lbs. of bananas

BREXIT and Bananas

- 1st January 2000 saw the end of the use of lbs.- The full implementation of the Units of Measurement Directive.
- A market trader in the North of England continued to sell bananas in lbs.
- The scale was seized and the trader prosecuted- went all the way to the highest courts in the UK.
- The case was defeated, and imperial measures became illegal in the UK for trade (except for pints and the ounce Troyes)
- This was one of the signals that started the anti-EU stance in the UK that finally resulted 16 years later in Brexit.
- Imperial measures became the embodiment of Britishness- metric measures the symbol of foreign attack on British sovereignty.



British Measures Today

- The debate continued after BREXIT.
- Should be framed in the context of British exceptionalism.
- Last attempt came with the Johnson Government and a consultation to use Imperial Measures.
- 101,108 response – only 403 wanted a complete return to imperial measures.
- Today we have a very British compromise.
- Metric for trade a science.
- Imperial for other cultural reasons.
- Not sure if this would be cultural or pragmatic – lots of road signs and car odometers to change !

