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Private prescription:

A thought-provoking tonic on the lighter side

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Rumour has it – a tale of idioms

An idiom is a type of phrase that is peculiar to a particular language and is approved by usage of that language, but is an anomaly because it is used in a fixed way without reference to the literal meaning of the words. In other words, an idiom does not mean what one would expect it to mean in a literal sense and, in many cases, it cannot be easily translated into another language. The word idiom is derived from the Greek word ἴδιος meaning peculiar to oneself, and the English language is a rich source of these expressions. They are often colourful, linguistic curiosities with special connotations originating from, for example, the military, sport, music, the Bible and Shakespeare. Several allude to science, medicine and pharmacy, and these are the ones that I intend to address here.

Idioms alluding to science

Probably one of the earliest idioms alluding to chemistry is the expression 'the acid test', which denotes a situation or event that finally proves something is true, a foolproof way of assessing the value of something or an absolute or definitive test. This idiom refers to the use of nitric acid (known to alchemists as *aqua fortis*) to test if a sample of metal was pure gold [1]. As every good chemist knows, nitric acid attacks or dissolves metals, including silver, but has no effect on pure gold. Gold can only be dissolved in *aqua regia* – a mixture of concentrated nitric and hydrochloric acids in the ratio of one part to three parts (by volume), respectively.

'adding colour to the often dull language of science'

The well-known expression 'in the limelight', which means in the public eye or the centre of public attention, has its origins in the reaction of calcium oxide (also known as lime) to heat [2]. The intense white light produced on heating this compound was developed into a usable lighting system by Thomas Drummond (1797–1840), a Scottish engineer, and Goldsworthy Gurney (1793–1875), an English inventor. It was not long before others took up the invention and adapted it to produce spotlights in the theatre. Hence, someone standing in the limelight was the focus of public attention.

An idiom with origins in the military, but which is based on physics, is the expression for extremely cold weather – 'cold enough to freeze the balls off a brass monkey'. This alludes to the use of brass trays (called monkeys) on which cannon balls were stacked on-board warships in past centuries [3]. As all good physicists know, brass and iron (which was used to make cannon balls) have different coefficients of thermal expansion and in intensely cold weather the brass trays contract by as much as double that of the iron cannon balls, thus causing the stack to topple over.

An idiom with origins going back to the first century AD is the expression 'to pour oil on troubled water', which denotes settling a disagreement or dispute with words intended to placate those involved. This idiom alludes to the quelling of stormy waters by pouring oil on them [2]. Plutarch, the Greek philosopher, mused over this fact in his book *Morali Quaestiones Naturales* written in AD 95:

> 'Why does pouring oil on the sea make it still and calm? Is it because the winds slipping over the oil have no force nor cause any waves?'

Benjamin Franklin (1706–1790) had a special interest in this effect and had a favourite trick of waving his walking cane over a turbulent stream. The surface immediately became smooth because the upper joint of the cane was hollow and, when shaken, released a few drops of oil [4]. He also carried out experiments on calming the surface of the water in the Round Pond on Clapham Common (London, UK).

Idioms alluding to pharmacy and medicine

The bitter taste of medicine is alluded to in several idioms [5]. To give someone 'a taste (or a dose) of their own medicine' is to give that person

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the same bad treatment that they have given to others, whereas 'taking one's medicine' means submitting to a punishment. Medicines, particularly those prepared from herbal origins, were often bitter and did not contain the taste-masking ingredients that are commonly added today. It was generally accepted that the more bitter the medicine the more efficacious it was. Taking one's medicine was therefore an unpleasant necessity. Similar ideas are implied in the idiom 'a bitter pill to swallow' meaning an unpleasant or painful necessity. Disguising the taste of a pill by coating it with sugar (a process used extensively during the past century) leads to the expression 'to sugar (or sweeten) the pill' meaning to make an unpleasant or painful necessity more acceptable.

Ointments also feature in idioms. Probably the most well known of these is 'a fly in the ointment', which denotes a minor irritation that spoils or mars the enjoyment of the whole. This idiom has its origins in the Old Testament of the Bible [2], in the Book of Ecclesiastes, Chapter 10, verse 1:

> 'Dead flies cause the ointment of the apothecary to send forth a stinking savour'

My favourite idiom in this area is 'like a dose of salts' meaning fast and efficiently. This idiom has its origins in the taking of magnesium sulfate heptahydrate, which is commonly known as Epsom salts, for purgation [5]. In dilute solution, Epsom salts is a powerful laxative that rapidly induces reflex peristalsis with the production of copious watery stools. Not surprisingly, the prefix most associated with this expression is 'go through'.

'Rubbing salt into the (or someone's) wound', which means to make a painful experience even more painful for someone, has origins in Greek, Roman and medieval medicine when battle wounds were re-opened and salt was rubbed in them to promote healing – a rather painful experience [2].

Modern idioms

Almost all the idioms mentioned have origins in earlier centuries. However, idioms continue to appear and disappear from the English language. A couple of modern idioms from the 20th century relating to illicit drug taking are 'chasing the dragon', which refers to inhaling heroin vapour after heating it over a flame, and 'going cold turkey', which means to stop taking any habit-forming drug. 'Chasing the dragon' alludes to the undulating fumes that resemble the tail of a Chinese dragon. 'Going cold turkey' pertains to the skin reaction known as 'goose flesh' that is associated with bouts of shivering and sweating during drug withdrawal [5].

Comment

Although idioms are often associated with conversation and informal language, they are common in magazine articles where journalists use them to add interest and to make their articles more appealing to the readers. Idioms are generally not found in scientific papers, where their use is frowned upon by reviewers. However, this does not mean that their use in scientific communication should be condemned out of hand. Idioms are an effective way of conveying attitude and opinion and giving emphasis to some point or other, and it is in this context that one often sees them in scientific journalism. To me, they add colour to the often dull and lack-lustre language of science. Long may they continue to be used.

References

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