

COMPOSE ME NO COMPRISES

If language is not correct, Confucius said¹, then what is said is not what is meant. If language be not in accordance with the truth of things, then affairs cannot be carried onto success.

Geoscientists must be able to communicate clearly and effectively, both in speech and writing; otherwise their ideas will be ignored or misapplied.

Sir James Hutton, honoured at his grave by the plaque 'The Founder of Modern Geology' is a good illustration of this. His revolutionary new concepts of geological time and processes were brilliant, but he buried them in such turgid prose they might never have been seen again. In his 1969 *Earth in Decay*, a history of British geomorphology, Gordon Davies commented:

All told, Hutton's presentations of his own theory could hardly have been worse. Mistitled, lacking in form, deficient in field evidence and shrouded in obscurity, the theory's chances of finding general acceptance were seriously prejudiced.

Hutton's ideas were influential only after they were recast by his disciple John Playfair, a professor of mathematics at Edinburgh University, in 1802 in the very readable 'Illustrations of the Huttonian Theory of the Earth'.

For all Playfair's luminous prose, however, one aspect of Hutton's thinking was lost: attention to the 'actual causes' of geological events. Hutton had insisted that, in explaining geological phenomena, 'no powers be employed that are not natural to the globe'.

In espousing the principle of uniformitarianism in his 1830 *Principles of Geology* Charles Lyell took this to mean only powers then observable in nature. The earth's history was cast in terms of present-day processes at present-day rates, and more of the same and nothing new under the sun.

Uniformitarianism helped discard bible-based catastrophism, but it threw out the catastrophe with the biblical waters. It proved almost as stifling as religious fundamentalism to the understanding of the evolution of the earth, specifically to the hypothesis of continental drift, as it emerged early this century.

Had Hutton sought better expression of his concepts, it might have generated clearer thinking in his own mind, and better guided those who developed further his principles.

The essence of communication, in speech or writing, is words. To paraphrase I forget who, people are just an idea's way of getting from one place to another. For this service, we have been given words. So, this column will be about words.

The first word is *comprise*.

Fowler — that authority above all others on matters of properness and precision with the English language — considered its misuse 'a wanton and indefensible weakening of our vocabulary'. Quite so.

The use of *comprise* as a synonym for *compose* and *constitute* was 'lamentably common', Fowler said of the 1920s. Were he confronted by a² of geologists today, he would bypass lament and go straight to full mourning.

The word is part of Middle English vocabulary (AD 1150-1500) and is derived from the French *compris*, the passive or past participle of *comprendre*, comprehend. Its earliest use seems to have been in that mental context, but use in a physical sense quickly evolved: to comprehend, to take in, to include or embrace all, to consist of.

Hence the golden rule which all who would venture a *comprise*, must comprehend: the whole comprises (consists of) the parts of which it is composed (or constituted). The parts do not comprise the

whole; nor is the whole comprised of the parts.

While there are other usages (e.g. *to comprise much in a few words*), the main area of difficulty for geologists is with regard to the description of rock units and formations. *The Grant Group comprises the Betty, Winifred and Carolyn formations* is grammatically correct. The following sentences are not: *The Grant Group is comprised of the Betty, Winifred and Carolyn formations. The Betty, Winifred and Carolyn formations comprise the Grant Group.*

Both forms of misuse are very common. In the first sentence, the correct word is composed; in the second, constitute — or even compose, though its use this way in the active voice is not common.

There is also an editorial question mark over use of *comprise* in describing the facies or lithology of a sedimentary body. It is arguable — if a little purist — that *comprise* is properly used only in relation to distinct or specific parts of the whole. Hence *the unit comprises sandstone, mudstone and coal* would be better with *consists of*. However, *the unit comprises three shale units, two massive sandstone beds, and a thin reefal limestone* seems specific enough to carry the word.

The Penguin *Complete Plain Words* says that the Oxford English Dictionary (OED) now recognises use of *comprise* as *compose*. Were this true, it would be cause for gnashing of teeth and rending of dictionaries. My OED merely notes that such 18th Century usage was rare. Regardless, it was incorrect — and it remains so.

Do not speak back to me of evolution in these matters. Do not mutter among yourselves about dynamic language. Do not think to think that schoolboy's plea: they knows what I mean.

We are dealing with words, my friends.

Men's daughters, the Irish poet Samuel Madden called them. They're always wanting to grow and change so fast, always pushing and trying for new directions. That's why fathers and editors were invented. It helps in the growing if someone pushes back.

¹ Confucius really did say that: in *Analects*, Book 13.

² A column of journalists, a delight of lovers, a surplus of lawyers, a of geologists. Suggestions, all?

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