What does 'science' mean in the title *South African Journal of Science*?

What can be said about the meaning of the word 'science' in the names of the *South African Journal of Science* and its publisher, the Academy of Science of South Africa (ASSAf)?

Perhaps what can be said, as a start, is that we need to have a clearer understanding of the etymology of the word and the implications that those meanings have had for the ways in which science has been practised and understood, at least in the Western world.

'Science' is one of hundreds of thousands of words in English that has an extraordinarily long etymological history and whose popular meaning has changed, century by century, and sometimes even more rapidly than that. Yet even amongst those words there are core meanings that have remained consistent.

In English, we have 'science' from Old French (meaning 'knowledge, learning, application; a corpus of human knowledge'), where it originally entered from the Latin word 'scientia' meaning 'knowledge, a knowing, expertness, or experience'. By the late 14th century, 'science' meant, in English, 'collective knowledge'. But it has consistently carried the meaning of being a socially embedded activity: people seeking, systematising and sharing knowledge. Nonetheless, in the English speaking world at least, there are fierce debates about what constitutes the proper ways of defining and constituting the proper ways of undertaking research and designating 'real knowledge'. These debates have their origins in the earliest Western universities whose intellectual context was that of the values and belief systems of the Catholic Church – and in the impact that the secularisation of universities had in later centuries.

Disciplines as we know them today only arose in the 18th and 19th centuries; and although they have changed, with new disciplines being added and some shrinking or disappearing, the debates continue about which disciplines are 'superior' to others, and which are undertaking 'real' research. This periodic 'taunting' of some disciplines by others is, then, hardly new.

Muller[1] captures the essence of this kind of 'debate' as it played out in the 1960s, in the furore generated by papers given by politician Lord CP Snow (a Cambridge trained chemist and published novelist) and Professor FR Leavis, a Cambridge literary scholar. Here is the story that Muller sets out:

> *Snow…presented a Rede Lecture at Cambridge, called provocatively 'The Two Cultures and the Scientific Revolution'. It was at the secularised guardians of elite 'traditional' culture that Snow aimed his provocation. Snow characterised scientific culture as optimistic and forward looking, though regarded as shallow and philistine by the cultivated literary culture of the literary elite, who Snow considered ignorant snobs. He derided the mutual incomprehension of the two cultures: 'The degree of incomprehension on both sides is the kind of joke which has gone sour' and lamented the 'sheer loss to us all'. The fault he laid squarely at the door of the literary intellectuals, calling them 'natural Luddites' who lacked the culture to grasp the second law of thermodynamics, a piece of general cultural knowledge he likened to knowing something about Shakespeare. …*[And] *then went on to say that industrialisation was the only hope for the poor and the Third World, and that the best the developed world could do was to produce as many engineers as it could and export them to where they were needed in the developing world.*
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> *Despite his oversimplifications, Snow had hit a nerve. The most extreme response came from FR Leavis, doyen of the literary elite. In a lecture first given also at Cambridge,…and re-published by Leavis, Leavis heaped derision on Snow's 'embarrassing vulgarity of style', on his ignorance, and on his ineptness as a novelist; he is, said Leavis, as 'intellectually undistinguished as it is possible to be'. Leavis' attack drew an avalanche of responses, which called it inter alia 'bemused drivelling' of 'unexampled ferocity'.*

The debates may no longer be quite that ferocious, but their sounds still echo faintly through academia – more so in some countries than in others.

Yet a core of commonality is to be found: whether working within a paradigm (and remember that these too shift as research progresses) or 'pre-paradigmatically', three basic foundations are explicitly present. In fields as different as Genomics or Human Geography, the *raisons d'être* of 'hard' and 'soft' sciences and, of course, many of their 'applied' allies (Engineering, Accountancy…), are the development of new knowledge through research; advancing that knowledge; and sharing it through publication and teaching.

It is as complicated – and yet as simple – as that: the *South African Journal of Science* publishes work based on, or leading to, those foundations.[2] The Journal is about quality knowledge-producing research, not about disciplines. After all, the National Research Foundation has just made top 'rating' awards to scholars in widely diverse disciplines such as Epidemiology (to Quarraisha Abdool Karim); Policy Studies (Nuraan Davids); Medicine (Ntobeko Ntusi); History (Charles van Onselen) and Computational and Applied Mathematics (Daya Reddy, the President of ASSAf). That is precisely what the 'science' in the *South African Journal of Science* is all about, just as it is what ASSAf is about.

In fact, it is the diversity of different disciplines that enshrines the strength of the contemporary university (and the Journal) – a strength sometimes obscured by rankings which favour the 'natural' sciences.

In the 21st century scientific world of inter-, multi- and trans-disciplinary research, all of which are increasingly valuable approaches to discovery and innovation, what remains fundamental are the inescapable disciplinary foundations and their contributions to universities. Yet, while protecting the value of the essential, it is clear that there is an equally inescapable need for greater (and growing) mutual respect of the different ways in which knowledge is produced, and research findings reported, so that cooperation becomes more, rather than less, possible. To make the most of science, it is now more important than ever to celebrate the contributions that it makes, across the spectrum of disciplines, whether individually or collectively. It is in this way that science contributes significantly to the well-being of ourselves, the environment on which we depend, and the richness of our world: genetics, agriculture, meteorology, music, literature, and so on. How might we possibly live without the benefits that they, and their fellow disciplines, all offer?

References

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2. The *South African Journal of Science* adopts online publishing (Leader). S Afr J Sci. 2010;106(1/2), Art. #151, 1 page. http://dx.doi.org/10.4102/sajs.v106i1/2.15

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