

Be more active in reports

Rupert Sheldrake calls for a direct approach to writing

"The test tube was carefully smelled." I was astonished to read this sentence in my 11-year-old son's science notebook. At primary school his science reports had been lively and vivid. But when he moved to secondary school they became stilted and artificial. This was no accident. His teachers told him to write this way. As a parent and as a scientist, I was shocked.

Why are many schoolchildren still told to write up their science reports in the passive, as though experiments happened of their own accord? Many scientists abandoned this convention years ago. Watson and Crick's famous paper on the structure of DNA in *Nature* was in the active voice in 1953.

Nowadays, most scientific journals accept papers in the active voice. Some, including *Nature*, positively encourage it. I recently surveyed the current issues of 55 journals in the physical and biological sciences and found that contributions in the passive were required by only two.

Many eminent scientists, including Lord May, the President of the Royal Society, feel that the use of the passive voice in scientific reports is inappropriate. May says, "I would put my own view so strongly as to say that, these days, the use of the passive voice in a research paper is the hallmark of second-rate work. In the long run, more authority is conferred by the direct approach than by the pedantic pretence that some impersonal force is performing the research."

To find out what is happening in schools, I asked the heads of science in a total of 262 secondary schools. Of these, 212 were state-maintained schools in Devon, Nottinghamshire, Greater London (Camden, Ealing and neighbouring boroughs) and Greater Manchester (Rochdale and Bury), and 50 were a random sample of independent schools. I received 172 replies altogether, a 66 per cent response rate.

The results showed an overall average of 45 per cent of schools encouraging the use of the active voice, and 42 per cent promoting the passive. The remaining 13 per cent had no preference. There was a statistically significant difference between state-maintained and independent schools: 58 per cent of the independent schools were pro-passive, compared with 37 per cent of state schools (*New Scientist* July 21, 2001). Geographically, the proportion of passive-promoting state schools ranged from 30 per cent in Devon to 41 per cent in London

Some teachers enthusiastically advocate the active voice, commenting that it is "more natural", "gives pupils ownership of their work" and "makes science more personal and pupils more involved". Some commented that it was also easier for everyone,

both pupils and teachers.

Most of those promoting the passive voice say they are simply following convention. They think that scientific authorities and journals still require this usage. This is an outdated view.

Some teachers also believe that examination authorities require reports to be written in the passive. Is this the case?

To find out, I recently surveyed all the examination authorities for England, Wales and Northern Ireland. As I describe in detail in the current issue of the *School Science Review*, the results are unambiguous. No authorities require reports to be written in the passive voice, and some explicitly prefer the active.

If some teachers feel they need permission to stop enforcing the passive voice, the good news is that they already have that permission - from examination authorities, from journals like *Nature* and *Science*, from many eminent scientists, and from the President of the Royal Society.

Lord May's message could not be clearer: "Primary and secondary teachers should, without any reservation, be encouraging all their students to be writing in the active voice."

Dr Rupert Sheldrake is a biologist and author of more than 75 scientific papers and several books. He was a Research Fellow of the Royal Society and Director of Studies in Cell Biology at Clare College, Cambridge. He lives in London. His web site is www.sheldrake.org