



Private prescription:

A thought-provoking tonic on the lighter side

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Science with a smile – cartoon capers

A cartoon originally was, and still is, a drawing. Historically, it was a full-size pattern for execution in a painting but since the middle of the 19th century, it has acquired a new meaning – that of a comic or satirical drawing commenting on current events within a specified subject area. Originally, cartoonists tended to concentrate on politics and society, but recently they have branched out into science and technology.

Science and technology cartoonists

Probably the most well known of science cartoonists is Sidney Harris. Born in New York, Harris graduated from Brooklyn College and attended the Art Students League in New York before beginning his career as a science cartoonist in 1955. Since then, he has drawn thousands of cartoons that have been published in numerous journals and periodicals, including *American Scientist*, *Science*, *Physics Today*, *Today's Chemist at Work*, *Clinical Chemistry News*, *The New Yorker*, *The Wall Street Journal*, *Punch* and even *Playboy*. In addition, more than 20 collections of his cartoons have been published, including *Einstein Simplified: Cartoons on*

Science, *Freudian Slips* and *Stress Test* – a book of cartoons about the field of medicine. In 1985, Sigma Xi (a scientific research society based in North Carolina, USA) and The New York Hall of Science collaborated to present a travelling exhibit of Harris's cartoons that was available to local museums and institutions in the USA.

'Cartoons invariably find acceptance and support from those involved [scientists].'

Unlike many cartoonists, Harris rarely produces a 'comic strip', preferring to use the single picture to express his point. He does not have a cast of recognisable characters, except perhaps, Dr Quark – a rotund, balding scientist with a small moustache and papers protruding from his pocket. Dr Quark has appeared in several guises; as a chemist involved in cleaning up reactions, a physicist researching 'superfluid water' and as a robot scientist developing cyborgs; invariably, the experiments result in problems.

A contemporary of Harris and a cartoonist to whom Harris has openly

given praise is Nick Downes. Born in New England and now resident in Brooklyn, New York, Downes has published in *American Scientist*, *Science*, *The New Yorker* and numerous other magazines and periodicals. His first collection of cartoons, *Big Science*, was originally published in 1992 by the American Association for the Advancement of Science, followed two years later by his second collection of science cartoons, *Whatever Happened to Eureka?* His work is very similar to that of Harris, consisting of individual pictures with a quotation.

One cartoonist with a totally different background is Scott Adams. Adams originally studied economics and has a BA from Hartwick College in Oneonta, New York and an MBA from the University of California at Berkeley; it was due to his doodling during meetings while working primarily in the engineering department of the American communications giant, Pacific Bell, that he became a cartoonist. His main character, a bespectacled computer scientist named Dilbert, appeared in 1988 and was launched in about fifty newspapers the following year. Since that time, Dilbert has become the subject of numerous collections and several books – notably, *The Dilbert Principle*, *The Dilbert Future* and *The Joy of Work*.

Most of the themes in Adams's cartoon strip involve the world of work, and are inevitably based on his own and others' experiences in a large company. Dilbert is a put-upon employee who knows all about technology but little about office politics or people. He will never climb high on the corporate ladder but is indispensable in his job. Dilbert's boss is recognisable by his distinctive twin-peaked hairstyle and instant adoption of all the latest management fads. He might be technologically challenged and a bit of an imbecile but his survival is never in doubt because he knows

how to delegate and shift the blame. It is no wonder that Dilbert has become a favourite amongst employees in general and not just those of pharmaceutical companies.

Animated Cartoons

An animated cartoon, with a cast of instantly recognisable characters, enables the creator to expand the plot by introducing cameo appearances of real people. One cartoonist who has achieved the inclusion of eminent scientists is Matt Groening. Groening originally intended to write but instead began to record his reactions to his home city at the time, Los Angeles, in what became a successful comic strip. In 1987, he was asked to supply animated segments to appear between skits in a television show, for which he created a dysfunctional family called *The Simpsons*, headed by Homer Simpson, the safety inspector of a nuclear power plant in a town called Springfield. Despite the fact that the series includes a resident bespectacled scientist, Dr John Frink, with several crazy devices to his name and not much of an idea about science, Groening has seen fit to add cameo appearances of both the physicist Stephen Hawking

and the palaeontologist Stephen Jay Gould. Hawking is introduced as 'the world's smartest man'. However, the character spouts clichés and even steals the idea from Homer that the universe is torroidal. In another episode, Gould is asked to debunk a purported fossilised skeleton of an angel that was found on the site where a new shopping mall is to be erected. Homer's religious neighbours are outraged and subsequently demolish Springfield's scientific institutions. Other episodes involve Bart Simpson (Homer's son) discovering a new comet and Homer using a new anti-baldness treatment (Rogaine); overall, presenting a clever parody on astronomy, nuclear safety and science in general.

Endorsement by scientists

It is interesting to note that despite the parody and satire, cartoons invariably find acceptance and support from those involved. Hawking has praised *The Simpsons*, declaring it 'one of the cleverest shows on television'. Nobel Laureate, Linus Pauling, has praised Harris for his humour and Isaac Asimov, biochemist and science fiction writer, has declared Harris to be 'America's premier science cartoonist'.

What is behind this popularity? It has been argued that there is a sound philosophical reason, particularly with regard to *The Simpsons*, related to the fact that improbable events and human bungling, although plaguing us, also help us to 'muddle through', however comic the process appears to others [1]. But surely the reason is more basic than this? It is because of the ability of a simple picture or series of pictures to communicate rapidly and concisely a concept or idea, in such a way that is immediately understood. If humour, wit and satire are included, then the cartoon becomes memorable. If this is the case, then why are cartoons not used much in the teaching of science? In fact, they have been used and to great effect; this will be the subject of a future article.

Reference

- 1 Crease, R.P. (2001) Science and The Simpsons. *Physics World* 14, 19

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