

Mediawatch

Negative equity

Bernard Dixon

As in science itself, negative findings tend to be under-reported by the media. In the case of multiple sclerosis, for example, several different researchers have made a splash over the past 30 years by identifying several different viruses as the cause of the condition. Yet withdrawals or invalidations of those claims have hardly caused a ripple.

Another example is so-called ‘environmental oestrogens’. Newspapers, television and radio have produced many reports on, for example, organochlorines as the agents responsible for increasing rates of breast cancer. Yet a recent paper by David Hunter and colleagues (*N Engl J Med* 1997, **337**:1253–1258), which largely discredited these allegations, received virtually no media coverage.

Earlier this year, there was an exception to prove the rule, when two negative stories from the UK’s Natural Environment Research Council (NERC) did attract media attention on the same day. The occasion was a ‘Grande Finale’, reviewing results from the Ancient Biomolecules Initiatives (ABI), a £1.9 million study of human and animal bones, fossilized plants and insects up to 75 million years old.

The topics ranged from the spread of early agriculture to the biological origins of the world’s oil supplies, from the wool of Peruvian llamas to dormant bacteria entombed for an eternity in salt mines. Yet it was two essentially negative developments that tweaked the antennae of many of the journalists present. “Dinosaurs are dead and that is final” was the headline given to one of them by *The Times*. Nick Nuttall went on to explain that the *Jurassic Park* scenario, seemingly

supported by Raul Cano’s claim to have extracted genetic fragments from 25 million-year-old insects caught in amber, should now be seen as nothing more than science fiction.

This judgement was inevitable following the meticulous work of Natural History Museum researchers to recover and characterize DNA from bees captured in Dominican amber 15–20 million years old. Most of their polymerase chain reaction attempts failed to yield any DNA, and the few apparent successes gave sequences which proved to be modern contaminants. The team concluded that, although no negative results could disprove the existence of ancient DNA in amber-preserved fossils, the isolation of geologically ancient DNA could not be effectively reproduced.

Even negative findings can be made appealing to the media

“DNA shows how Thor Heyerdahl got it wrong” was the title of *The Independent’s* article on the same day, in which Charles Arthur reported that Heyerdahl may have been erroneous in believing that early humans sailed westwards from Peru to colonize Easter Island. Heyerdahl’s 4,300-mile voyage over the same route by balsa raft in 1947 remains a remarkable achievement but the theory upon which it was based is now plainly much less convincing.

That conclusion is one of several insights into the migration patterns of past peoples coming from another ABI project. Analysis of mitochondrial DNA from ancient bones and present-day peoples show that the original settlers of Easter Island were probably Polynesians from the west, rather than South Americans.

Despite the fact that each invalidated a cherished belief, the articles in *The Times* and *The Independent*, together with other reports on radio and elsewhere, were notable in explaining both the power

and precision of the techniques employed. Readers will have learned more of the key points about DNA sequencing from this type of coverage than many did previously from over-excited splashes about the re-creation of the mammoth and *Tyrannosaurus rex*.

Substantial credit for making the ABI Grande Finale so appealing to the media must go to the NERC’s communications staff. The day was organized mainly for the investigators to review outcomes from the five-year project, yet quite exceptional efforts were made to present those findings in a style that would enthuse the invited journalists. In particular, the information package was thoughtfully designed and written. Colourful sheets described each of the 17 projects, with the purpose, methods and key findings of the work outlined lucidly on one side and more technical detail on the other. Striking images complemented the texts.

These had not been written in five minutes and were obviously the results of a conscious decision to bring accessibility, panache and metaphor to the presentation of sophisticated science. “Plants and animals decay rather quickly when they die — just think of your compost heap,” said one sheet. “Bacteria, fungi, maggots and scavengers make short work of most biological material. But some of it can survive for hundreds or even millions of years, for instance as fossil fuels. How is this possible?”

Those three sentences could hardly be bettered as an imaginative yet rigorous way of putting across two crucial concepts about the biosphere. They typify the clarity and style with which the entire package was produced. Other organizations please note — especially those with little grasp of the expertise which the highly competitive business of attracting press interest now requires.

Bernard Dixon is a freelance science writer based in Middlesex, UK.