

# Selling Science

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*'Science seems to be either all good or all bad... For some, science gives us agricultural self-sufficiency, cures for the crippled, and a global network for communication; for others it gives us weapons of war, a school teacher's fiery death as the space shuttle falls from grace, and the silent, deceiving, bone-poisoning Chernobyl.'* Collins & Pinch (1998)

Science has an image problem. For years now it seems to have created as many problems as it's solved. Look in the media and you hear about GM foods, BSE, gender-bending chemicals, greenhouse gases, biochemical weapons... Scientists seem to be portrayed as nerdy boffins who can only communicate in equations, or mad scientists 'playing God' by tampering with nature. Indeed, LaFollette, in his book *'Making Science our own'* (1990), recognises four characters: wizard, expert, creator/destroyer and hero.

## Scientists are people too...

In real life, most scientists are ordinary people investigating a small aspect of the world around them. In some cases, it's just to find out how things work. In others, it's with the aim of developing new technologies or medicines, which they hope will improve people's lives. Because scientists receive funding for their research from the taxpayer or business, they increasingly have to justify what they are doing. They are being asked to communicate what they're doing to the public, and they usually do this through the media. But how successful are they at getting their message across? Do we see beyond the controversial headlines that make up about a quarter of science news stories?

## Postmodernity: style over substance

These ideas of representation are particularly interesting in what has been described as a postmodern world – one dominated by images, where style has more importance than substance. The mass media – television, radio and newspapers – has been described as a mirror reflecting society. Much of the information we glean is through the media, and an extreme postmodernist may argue that the media is, on occasion, the only reality we have. For example, I've never been to Zimbabwe, but I think I know a little bit about the country and its people. But how do I know? I know because I believe what I read. Yet it's only a minority of people – the big TV execs and the newspaper owners – that have real control over the way this information is presented.

Furthermore, over the decades we have been bombarded with more and more channels of information, which we can receive differently. In (very, very) crude terms, you could argue that some people receive information 'passively' – they absorb what appears on their screens and, generally, believe it – or 'actively' – they make more informed choices and seek further information themselves. These are clearly two extremes, and most people will fall somewhere in-between.

## The perception of science and scientists

So, to bring us back to the original point of the portrayal of scientists... Different people will form different opinions depending



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on the way they receive their information. Therefore, people will form different perceptions of science and scientists.

During this assignment you will carry out some research discovering how different groups of people perceive science. Are there patterns and/or similarities in different groups? Are some opinions seemingly more informed than others? How much of the opinions are formed through media portrayal versus actual contact with scientist? The questions are endless...

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## What you need to do:

- Pick a science-based news story. See if you can find the same story in a range of newspapers and look at the ways in which they deal with the issue.

In each case, think about the following:

What type of article is it? Editorial or news? Factual or opinion? A mixture of both?

What is the writer trying to achieve? Is there a specific agenda? Can you tell by the language used?

Does the article contain any images of science or scientists? If yes, are they positive, negative or neutral?

- Look at an article in *New Scientist* or *Scientific American* – these are both magazines aimed at the interested public. If possible, find one that links to the stories you read in the newspapers. How does it compare with the newspaper articles?
- Scientists use a lot of technical jargon when they talk about their work. Sometimes this involves obscure acronyms or long words, while sometimes it means using everyday words in very specific ways. This jargon is very useful when scientists are talking with others in their field. However it also means that they have to interpret what they are saying when they're talking to people who don't know the jargon. Some people find this easier than others...

You can see examples of this jargon if you look at a scientific journal. See if you can get hold of a scientific journal, and read through one of the articles. (You're looking at the language used rather than the content!) What are the main features of journal writing? How accessible is it to a non-scientist? Are there ways that the article could be re-written so that it's easier to understand?

- Having gained an idea of the different representations and jargon used in various newspapers and magazines, you should design a questionnaire to help you come to some conclusions about how these representations effect different people. The questionnaire should have at least two sections—one asking what images people have of science and scientists, and the other asking what papers they read, whether they watch the news and whether they use the internet, for example. This way you can argue whether or not the type of paper, for example, effects people perceptions. The types of questions and different types of people you could ask are endless.

## Resources that might help you:

*New Scientist*: see the print version, or look online at [www.newscientist.com](http://www.newscientist.com)

(You need to subscribe for full access to the archives, but there are collections of articles on 'Hot topics' like BSE, global warming and bioterrorism at [www.newscientist.com/hottopics](http://www.newscientist.com/hottopics))

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*Scientific American*: print version, or online at [www.sciam.com](http://www.sciam.com)

Understanding the science bit – The Why? Files is a useful website for this: [www.whyfiles.org](http://www.whyfiles.org)

## **If you want to take things further:**

- Carry out your own opinion poll.
- What do people think when they hear the word 'Scientist'?
- What news stories do people associate with science?
- Discuss: Do you agree that science has an image problem? If yes, how would you go about improving it?
- You might want to look at the website [www.scienceyear.com](http://www.scienceyear.com) for an example of marketing science to people of your age. Does it work?