Scientists should stop deceiving us*

http://www.guardian.co.uk/commentisfree/2010/mar/12/philosopy-of-science-climate-change

In holding that the aim of science is truth alone, they misrepresent its real aims

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    - Nicholas Maxwell
    - The Guardian, Friday 12 March 2010, p. 35
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George Monbiot is surely right to bemoan the profoundly unsatisfactory state of affairs that exists between science and the public (With complex science, we must take much on trust. The trouble is we can't, 9 March).

Many members of the public instinctively and irrationally distrust, even fear, science. Thus, for climate sceptics, "No level of evidence can shake the growing belief that climate science is a giant conspiracy codded up by boffins and governments to tax and control us". And scientists don't help by producing specialised "gobbledegook" so incomprehensible that even scientists "studying neighbouring subjects within the same discipline can no longer understand each other".

The situation might be helped if scientists stopped deceiving us, and themselves, about the nature of science itself, and adopted a more truthful view. At present most of them take for granted the view that the intellectual aim of science is to acquire knowledge of truth, the basic method being to assess, impartially, claims to knowledge with respect to evidence – nothing being accepted permanently as a part of scientific knowledge independently of evidence. But this is nonsense. Physics only ever accepts theories that are unified – that attribute the same laws to all the phenomena to which the theory in question applies – even though many empirically more successful disunified rivals can always be concocted.

This means that physics persistently accepts a substantial thesis about the universe independent of evidence: there is some kind of underlying unity in nature, to the extent at least that all seriously disunified theories are false. This substantial, influential and highly problematic assumption needs to be acknowledged within science, so that it can be

criticised and, we may hope, improved. The aim of science is not truth per se, but rather truth presupposed to be unified, or explanatory.

And it goes further. The aim of seeking explanatory truth is a special case of the more general aim of seeking truth that is, in some way or other, important or of value. Values, of one kind or another, are inherent in the aims of science. But values are, if anything, even more problematic than untestable assumptions concerning an underlying unity in nature. Values implicit in the aims of science need to be acknowledged, so that they can be criticised and, we may hope, improved.

Finally, knowledge of valuable truth is sought so that it may be used by people, ideally to enhance the quality of human life. There is a humanitarian or political dimension. But this, again, needs to be critically assessed and, we may hope, improved.

In short, in holding that the intellectual aim of science is truth alone, scientists seriously misrepresent its real, problematic aims, and thus prevent urgently needed critical assessment by scientists and non-scientists alike. More honesty about the nature of science might improve science, and public attitudes towards it – and might even encourage scientists to produce less gobbledegook.

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* **Comment on "Scientists should stop deceiving us" on The Guardian Website**

I am the author of "Scientists should stop deceiving us". I am not the author of the title, which a Guardian editor chose without consulting me. My title was "We Need a New Kind of Science". I do not think scientists are actively trying to deceive the public. My criticism is, rather, that scientists take for granted a view about the aims and methods of science that is untenable and damaging. The view is that the basic intellectual aim of science is truth, the basic method being assessment of claims to knowledge by evidence, nothing being accepted as a part of scientific knowledge independently of evidence. This is untenable for the reasons I sketch in the article. The attempt to put this view into scientific practice damages science, because it has the effect of preventing problematic assumptions concerning metaphysics, values and the use of science being discussed as an integral part of science itself.

This is an argument that I have developed in at least five books and over 40 papers published in scientific and academic journals. My work has received high praise from some, but has been ignored by most scientists and philosophers. Most of the criticisms of my short article here criticize what I have not said, not what I have said. Anyone interested in finding out what my thesis and argument really are, in a little more detail, might consult two recent papers of mine:

(1) N. Maxwell, Do We Need a Scientific Revolution? (2008), *Journal of Biological Physics and Chemistry*, vol. 8, no. 3, September 2008, pp. 95-105.
(www.nick-maxwell.demon.co.uk/Essays.htm#the)

(2) N. Maxwell, From Knowledge to Wisdom: The Need for an Academic Revolution., *London Review of Education*, 5, 2007, pp. 97-115, reprinted in R. Barnett and N. Maxwell, eds., *Wisdom in the University*, Routledge 2008.
(www.nick-maxwell.demon.co.uk/Essays.htm#abstract)
There is much more detail in the following two books:-
(3) N. Maxwell, From Knowledge to Wisdom: A Revolution in the Aims and Methods of Science, (Blackwell, 1984; 2nd ed., Pentire Press, 2007).
(4) N. Maxwell, The Comprehensibility of the Universe: A New Conception of Science (Oxford University Press, 1998; paperback edition, 2003).
When the first of these books was published in 1984, a review in Nature commented: "Maxwell is advocating nothing less than a revolution (based on reason, not on religious or Marxist doctrine) in our intellectual goals and methods of inquiry ... There are altogether too many symptoms of malaise in our science-based society for Nicholas Maxwell's diagnosis to be ignored."
Professor Christopher Longuet-Higgins, *Nature*
Unfortunately, my diagnosis has, by and large, been ignored.

Nicholas Maxwell