behind research headlines

Chris and Rhona Knight *ask if we can believe them*

'Medical breakthrough': yet another one - and experts promise a revolution in treatment within five years.

'New psychiatric research unit puts local residents at risk!'

So many headlines; so many points of view. Whom do we believe and why? Can we trust the viewpoint espoused by our favourite newspaper, medical journal, TV channel or even the Christian media? How do we apply it to the patient in the consulting room who wants the amazing new drug in the newspaper article or the internet printout?

We need to step back, draw a deep breath and delve into the detail in order to keep ourselves properly informed so that we can address the issues with honesty and integrity. Sometimes we need to treat the media interpretation with a proverbial pinch of salt, looking past the spin to see the reality.

whose point of view?

We all see the world through our own perspective of right and wrong, the purpose of life, and the nature of ultimate reality. Worldviews can be religious or secular. God may be the focus of the worldview; he may not feature at all. Even those who don't realise what a worldview is still have one. Our worldview largely determines how we respond to and interpret certain 'facts' about the world.

Christians and Muslims can both read the same Bible. The Christian views it as the Word of God. The Muslim will generally consider it untrustworthy, corrupted since being given by God. The naturalist will see it as the product of human minds, therefore no different in kind to Jane Austen's *Pride and Prejudice*.

The media will present a specific 'take' on a story - be it that of the owner, editor or individual journalist. All media stories interpret 'facts' in line with a particular worldview and its implications. A soldier's death in Iraq: a brave sacrifice given to make the world a safer place or yet another pointless loss of life in a war that should never have been entered? *Harry Potter*: another example of subtle occult influence upon the world or an admirable example of friendship and sacrifice? This can depend on the wording, tone and content.

values everywhere in medicine

The medical media is no different; it is simply a subset of other media outlets. Individuals carry out the research, write it up and interpret it for the reader. As such, personal or professional beliefs and values (whether secular or religious) can be involved in medical research and clinical practice; in this case, medicine moves from being evidence-based to being values-based. Both are indispensable elements of patient care.

For example, new evidence-based drug treatments offer possibilities for alleviating a wide variety of conditions. But what if the research and development was conducted in the developing world, on 'volunteers' whose consent has been compromised, in communities that are unlikely to gain from the findings? Ethical dimensions of medicine that are often neglected include: informed consent, confidentiality, autonomy and human rights (illustrated powerfully in the films *The Constant Gardener* and *Extreme Measures*).

Medics are well trained in evidence-based medicine, to identify the most appropriate treatment for the condition. Most doctors are competent in critically appraising research - determining whether it addresses the reader's concern, if its methodology was appropriate and reliable, what its results mean, and whether the conclusions actually follow from the research. The art of medicine is in applying this evidence base to the needs of individual patients. But medics also need to consider values-based approaches in evaluating the headlines.

hype or reality?

'Reeve hopes for stem cell cure', says the title.[1] 'Paralysed actor Christopher Reeve believes he will walk again, *if stem cell research in the UK is allowed to continue*.' The media can get carried away when proclaiming potential cures for illnesses; everyone hopes for the relief of pain and suffering. Who can object to research that might lead to a cure for strokes, burns, spinal cord injuries, dementia, diabetes, or rheumatoid arthritis? But do we take these promises at face value or do we look behind the spin?

The article mentioned above, on embryonic stem cell research (ESCR) and therapeutic cloning, is a case in point. Superficially it seems that Reeve, who died in 2004, was supporting ESCR. Yet if one looks at what he is quoted as saying

the picture is more ambiguous: 'I really wish the public and those who will be making policy would understand that scientists do not need to use fertilised embryos for their research'. Here we see a blurring of boundaries between the hopes of ESCR, and the facts of current adult stem cell treatment. In these cases where boundaries are blurred, the scientific community's more realistic appraisal of the aspirations of ESCR is usually absent. Lord Winston's statement is such an example:

In order to persuade the public that we must do this work, we often go rather too far in promising what we might achieve... I am not entirely convinced that embryonic stem cells will, in my lifetime, and possibly anybody's lifetime for that matter, be holding quite the promise that we desperately hope they will.[2]

It is hard to dismiss the conclusion that one value driving ESCR is a belief in the 'technological imperative'. Science says we can, therefore we should. Scientists love to experiment; I know - I (Chris) am one myself. When questions arise in our specialist area, we love to explore, develop explanatory theories, and try to confirm or refute those theories by more investigation.

Geraldine Peacock (former chair of the Charity Commission), who has had Parkinson's for 18 years, is quoted as saying, 'I would not want to stop any process unless I knew it was categorically not going to work for those who are suffering'.[3] But is this sanction of the technological imperative appropriate? Should scientists be able to justify ever more intrusive experiments, push the boundaries and ultimately, perhaps, remove them altogether? There may be more ethical alternatives, with greater chances of success.[4,5]

the plank in our own eye

As Christians, we must handle research and bioethical arguments with integrity, as in all other areas of our lives.[6] We need to know the facts and draw appropriate conclusions from them. We should outline possible future scenarios without scaremongering but not pull punches either. Truth is what we ought to be seeking.

We do not need to proclaim explicitly our arguments as being 'Christian'; we can argue the issue on 'human' or 'secular' terms. This is not weakness or accommodation to the world. For if our facts are right and our arguments are valid, then we are simply calling attention to the truth. All truth is God's truth; his laws and values are designed to promote human life and human well-being. We should not deny our Christian roots and beliefs either, because they provide the foundation for our values and arguments. Let us consider an illustration that Christians sometimes use to argue against abortion:

A woman has tuberculosis, and the father has syphilis. Together they had four children. Their first child was born blind... The second child was stillborn... The third child was deaf and dumb...and their fourth was born with tuberculosis. They're now pregnant with their fifth child. Would you recommend that they abort this child?[7]

If respondents answer 'yes', they are told that they 'just killed Beethoven'. The point is well taken that we cannot predict the outcome from even the most apparently terrible circumstances, but the problem is that, on further investigation, the details given in this brief scenario appear to be false.[8] This often leads to a dismissive reaction to any other good arguments based on good evidence and sound reasoning.

interpret research wisely

How do we apply our Christian minds to the latest developments mentioned in the *BMJ*, *BMA News*, or daily newspapers? We suggest a number of questions that we can ask ourselves (and other people), to ensure that our reaction displays a love of God as well as a love of our neighbour.

the values behind enhancement[10]

Research into human treatment is aimed at assisting the injured, the disabled, those afflicted with genetic disease (eg gene therapy for cystic fibrosis). But will human desire for such technological advances in treatment stop at this or will it lead on to calls for 'enhancement' (eg gene therapy to enhance intelligence or prevent ageing)?

The rush to an enhanced 'transhuman' state, in which certain human beings have capabilities that the rest lack, will inevitably create a two-tier society, as in *Brave New World*. The technology may initially be used for (and justified by) medical purposes. But just like plastic surgery, it will undoubtedly come to be a consumer product, demanded and paid for to suit people's desires and whims - as long as they can afford it. Despite the advocacy of Dr Kevin Warwick (Professor of Cybernetics at Reading University and the self-styled first 'cyborg'[11]), most people, especially from the developing world, will not have a choice in the matter.

identify the key issues
We need to be clear what the specific problem or dilemma is. What disease is being investigated and what is being proposed? What would the proposal add to the current treatment? How does this research add to medical knowledge?

establish the facts
Next, we need to be clear about the exact facts of the matter. What is being claimed and on what basis are those claims made? This is similar to applying our critical faculties to any evidence-based medicine issue. Is the claim well-founded? Was the research rigorous in its method and do the results appear likely on the basis of current scientific achievements elsewhere? What is the bottom line claim and how does that relate to the evidence? Is this the only interpretation of the evidence or the most likely one? Is there causation or simply a correlation of effects (possibly due to an unconsidered factor)?

identify the relevant values
By this time, something of the researchers' worldview, or at least their values, will have come across. These need to be sought explicitly and compared to your own. Ethical values are

usually imposed on a study, as they cannot be derived by the scientific method. Useful questions to ask about values include:

- Who funded the research and why?
- What are the authors' competing interests?
- What (does the research suggest) were the values driving the scientists to do this work?
- What value does the research place on the subjects?
- What value does the research place on those who might benefit from the results?
- What are the implications of the procedure for relevant parties? (Consider especially the poor and the disadvantaged who may be vulnerable to exploitation.)
- Are there resource implications (eg How are human oocytes obtained and what are the risks to donors?)
- Could the procedures have unintended side effects for the subject?
- Are there any reasons (eg lax legislation or less stringent ethical regulation) why the research was carried out in a particular location (eg China - where the implementation of the guidelines that exist can be difficult[9])?

develop the arguments

Having established the facts and the relevant values, the next step is perhaps the hardest. We need to analyse the evidence base provided and integrate this with other available evidence, remembering that many negative studies are not reported, and that much research is constrained due to lack of funding.

Where we have identified differences between our own values and those of the researchers, we need to ask how the two sets of values differ, and what the practical out-workings are. Are there preferable alternatives - either because they are more effective (evidence-based medicine) and/or because they are more acceptable (values-based medicine)?

By identifying the evidence-based arguments the issues can be explored effectively without a mention of 'thou shalt not' and other Christian jargon. Well evidenced arguments can demonstrate the reasonableness of the Christian worldview. Through determining the relevant value systems, we will be able to see why and how they come into conflict. By identifying and pointing out these differences, we can point out to others how the relevant evidence relates to the differing values. This will stimulate exploration of the links between values and evidence; useful for verifying the foundation behind our values.

conclusion

We are instructed to be as innocent as doves, but as shrewd as snakes.[12] Integrity and wisdom are powerful allies. We cannot allow the world's agenda to go unchallenged. Ultimately our battle is spiritual and we are called to defend God's truth, not purely for his sake alone, but because God's values and commands bless all human life.

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