A case of genetic counselling for Dr Watson

SIR — Your recent publication of James Watson's sequenced genome (D. A. Wheeler *et al.* *Nature* **452**, 872–876; 2008) makes for fascinating reading — that is, for anyone who has enough knowledge of genetics and biology to interpret it. Peel away the single nucleotide polymorphisms (SNPs), the copy-number variations and the indels, and the core message seems, well, empty. As Maynard Olson

admits in the accompanying News & Views (*Nature* **452**, 819–820; 2008): "If Watson took his sequence to a genetic counsellor, there would be little to discuss."

As a genetic counsellor, I wonder how a session with Watson would stack up against one with a non-scientific member of the general population? The table offers some insight.

Where's the challenge in providing genetic counselling to 'Dr W'?

Myra I. Roche Medical School Wing E, CB # 7487, University of North Carolina, Chapel Hill, North Carolina 27599-7487, USA

Dr Watson	Lay patient
Discovered the structure of the gene	Not exactly sure what a gene is
Thinks the \$1 million cost is a good deal	Worried about the cost of a consultation
Sequence ready in 2 months	Standard test result ready in 2 months
Brings in sequence data on a hard drive	Brings in records about sinus infection
Can give fully informed consent	Can sign a consent form
Released his sequence to the public	Doesn't want mother to know
Chose to have Apo-E sequence redacted	Expects to learn blood type
Understands the limited clinical relevance	Hopes we can fix any broken genes
Shares 1.68 million SNPs with Craig Venter	Googles SNPs to find out who they are
Concerned about not being cloned	Concerned about being cloned

The public needs to know social benefits of vaccination

SIR — You may have been inadvertently off message about vaccination policy in your Editorial 'On message, off target' (*Nature* **452**, 128; 2008) — for what you did not say. Centuries of experience have proved the importance of societies (not doctors, parents or vaccine recipients) in making decisions on whether to vaccinate or not. Having drafted the US national vaccine programme legislation that was passed in 1986, and directed the national vaccine programme in 1993–94, I can say that recent UK experience impressively illustrates the strategic distinction.

After an unexpected rise of pertussis (whooping cough) cases in the 1990s, Britain revamped its system to reward general practitioners for fully immunizing all children on their lists, paying a bonus to those who reached 90% then, a few years later, 95%. This system did not exclude from the denominator the small number of patients with good medical reasons against receiving vaccine.

Why the societal strategy? No vaccine is fully effective in everyone who receives it. Only 'herd immunity' can protect those in whom a vaccine does not stimulate protective immunity. Population health therefore improves where policies support full coverage of the population. Such policies create a culture in which health authorities educate doctors, parents and patients about the societal goals as well as individual contraindications.

Good immunization policies balance the risks of vaccines against the benefits. All vaccines, usually given to healthy people, pose some small risk. Good medical reasons do occasionally exist for some people to avoid some vaccines. Britain understood this, and designed its policy to avoid incentives for doctors to vaccinate in such situations.

"Those years were the darkest of my professional career."

Tony Fauci on HIV — see page 289

Although vaccination remains voluntary, no programme is based on individual preference. Public education about vaccination is important, particularly to heighten understanding of the basis for all aspects of public policy to maximize protection of human health.

Anthony Robbins *Journal of Public Health Policy*, 213 West Canton Street, Boston, Massachusetts 02116, USA

Public support never has guaranteed good work

SIR — Sadly, the implication in your Editorial 'Broken promises' (*Nature* **452**, 503; 2008), that good science depends on good ideas and not good intentions, is unlikely to make much difference to politicians anxious for public favour or to scientists anxious for money.

As you declared more than 15 years ago (*Nature* **360**, 13; 1992), "the increasingly crass politicization of biomedical research looms as something of a menace, for it presupposes first that more money for more scientists is a way to medical salvation, and second that well-meaning groups of citizen-activists and professional lobbyists have a scientifically useful role in deciding where research money should be directed. There is, alas, inadequate evidence to support either proposition." Technology can be bought, but science depends first on ideas and luck, to which the link is more imprecise.

In that News & Views article, you give four examples where politics threatened to derail science. One of them — five years before the Clinton promise mentioned in the Editorial (it is fascinating just how many breakthroughs are promised "within a decade") — was of the US National Institutes of Health and Food and Drug Administration trying to stop lobbyist-driven testing of an unproven AIDS vaccine.

Neville W. Goodman Bristol, UK