

# Antisocial and violent behaviour

**Mairi Levitt** urges early engagement

Public engagement undertaken from the start of research brings potential benefits. This is not necessarily obvious when it is difficult to predict any applications.

We can see the advantages of early engagement by looking at research into the genetics of antisocial and violent behaviour. A study published in *Science* in 2002 was concerned with the enzyme MAOA (monoamine oxidase A). Deficiencies in MAOA expression have been associated with increased aggression. The study looked at the interaction between MAOA expression, on the one hand, and childhood maltreatment and antisocial behaviour, on the other.<sup>1</sup>

## Broad constituency

In considering whether this research will help us to understand and reduce crime, one obvious group to engage are those who work with 'problem' young people and families: social workers, probation officers and the legal profession. Their views on the causes of crime, their reactions to genetic research in the area and their ideas about how (if at all) genetic research might impact on their professional practice are surely relevant.

In the Criminal Genes and Public Policy project we interviewed geneticists, clinical psychologists and criminologists involved in the criminal justice system, as well as people with an interest in genes and criminality. They raised topics that concerned them, which we then used as the basis for the next stage of the research. Here we consulted the key practitioners: solicitors, barristers, probation officers, social workers, university law students and judges.<sup>2</sup>

In all there were 58 participants and no claims are made about representativeness. The data gathered was qualitative and the aim was to gain insight into a new area.

## Concerns raised

The practitioners queried aspects of the research itself, wondering whether the maltreatment could affect MAOA expression, how the complexity of environment was measured and commenting on the fact that females were not included as too few met the criteria. This limited the usefulness of the findings because, in their experience, girls were increasingly likely to engage in violent and antisocial behaviour.

They regarded 'antisocial behaviour' as a term used to criminalise normal behaviour that, in the past, would have been tolerated or dealt with without police intervention. They commented on the fact that behaviour typically carried out by young people in lower social groups was the focus of research, rather than white-collar crime that also incurred huge social costs.

All the groups could see genetic information being used in practice, however tentative the findings. For example, a genetic predisposition might be used to remove a child from the parental home in order to optimise their environment; or to restrict a parent's access to a child. In the context of the current fear of crime and increased surveillance, professionals considered the threat to individuals labelled 'risky' because of a genetic factor. Might someone be detained before any offence was committed? They drew parallels with the detention of the mentally ill.

## Listen to the public

This brief summary of some of our findings is intended to show that those with different expertise can contribute both to forward thinking about potential applications and to consideration of research priorities. The diversity of interested parties who might use the research shows the need to consider regulation even at an early stage. The complexity of the causes of crime shows the importance of analysing environmental factors as precisely as genetic factors.

Those involved in developing new technologies that are potentially controversial recognise the power of the public to determine the success of their technology. We must find out what publics are really concerned about and take those issues seriously, with the aim of establishing trust in the technology and its governance.

The next problem is to make sure the publics' views are heard.

1 A Caspi, J McClay, TE Moffitt, J Mill, J Martin, IW Craig, A Taylor, R Poulton (2002) "Role of genotype in the cycle of violence in maltreated children". *Science* 2:297 (5582):851-4.

2 The data was collected by focus groups with professional groups and interviews. The project 'Criminal Genes' and Public Policy was part of the programme of the ESRC Centre for Economic and social Aspects of Genomics (Cesagen). The support of the ESRC and the contribution of Elisa Pieri, Research Associate, is gratefully acknowledged.



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# The 'world's first carbon budget'

**Brigitte Nerlich** laments a missed opportunity

This year saw the Chancellor of the Exchequer, Alistair Darling, announcing investment in carbon capture and storage (CCS) as part of what came to be known as 'the world's first carbon budget'. A day later Ed Miliband, Secretary of State for Energy and Climate Change, revealed that up to four new coal-fired power stations would be built on condition that they included CCS.

The media coverage of these pronouncements provided me with an opportunity to carry out a small pilot study. I wanted to gauge whether policy makers and the media seized this occasion to initiate what has come to be known as 'upstream engagement' with science and technology.

## Politicians, the media and CCS

Using the key phrase 'carbon capture', I searched the news database Lexis Nexis for articles published in the UK national press between 20 and 28 April 2009.

Almost half of the articles (13) were published in the *Times* and another half (14) in *The Guardian*. The popular press took almost no notice of this issue. The analysis therefore focused on the two broadsheets. The number of articles surveyed is small so one cannot generalize the results, but they are indicative perhaps of certain trends.

The overall image presented of CCS by the Chancellor, politicians, industry representatives and some scientists was positive. Critical discussion was only apparent in a tiny minority of articles, quoting voices from NGOs and opposition parties, and some letters to the editor(s); almost no information was provided about what CCS actually was.

## Metaphors

A variety of metaphors was used to frame the issue: journeys and vehicles (racing to find a solution to climate change), speed ('boost' especially in terms of boosting the economy) or what could be expected at the end of the journey (creating a job 'bonanza'). Such journey metaphors were mainly used to present CCS as a way to move closer to a low-carbon society or to welcome a U-turn in policy which puts the UK in a position to win the global race for CCS.

However, while most commentators applauded the 'bold' steps taken by Darling and Miliband, some criticized them with reference to Star Trek imagery (as 'to boldly go where no one has any idea of how to go there'). Some commentators worried about the technological viability and scalability of CCS, whereas most others saw CCS and clean coal as 'future-proofing'. These findings agree with research showing that media coverage of CCS has become more positive compared to the 1990s.<sup>1</sup>

<sup>1</sup> S Mander, C Gough (2006), [www.geos.ed.ac.uk/ccs/Publications/Mander.doc](http://www.geos.ed.ac.uk/ccs/Publications/Mander.doc)

<sup>2</sup> K Van Alphen et al. (2007), *Energy Policy* 35; D Reiner (2008), <http://www.eprg.group.cam.ac.uk/working-paper-eprg0801/>; S Shackley et al. (2009), *International Journal of Greenhouse Gas Control*, 3.

## Gap needs filling

Overall, CCS was promoted relatively uncritically as a possible solution to climate change and predominantly framed by one of the overarching metaphors used in policy discourse. Environmental, social and ethical issues were sidelined. The prominence given to CCS in the budget was neither used to generate public awareness of this complex technology nor to fill existing knowledge gaps.<sup>2</sup>

To promote CCS as a solution to climate change in a context of general public ignorance might be dangerous. Once people become aware of the issue, especially at sites of plants, pipelines, and burial grounds, they might want to ask why this particular 'solution' is championed over others.

Once people are aware, they quickly manage to fill their knowledge deficits, and start to bring wider knowledge of social, ethical, and political issues to bear on the problem. It is therefore important that policy makers and the media offer information and facts, and, most importantly, engage the wider public before the technology comes on stream.

Engagement must mean more than fostering public acceptance of a (still very hypothetical) 'solution' to climate change in a context of widespread public ignorance.

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