

Unwise branding

Equating animal-rights activism with terrorism increases the penalties for offenders and will please many of their victims. But it is not in the interests of science.

Terrorist is not a word you throw around lightly. And it is certainly not a word you apply to anyone with whom you would like to have a civil conversation. A US tendency to apply the label to militant activists who are against animal research or genetic engineering slams shut a door that might be difficult to reopen — to researchers' cost.

In a courtroom in Eugene, Oregon, last week, federal prosecutors asked for a 'terrorism enhancement' on the sentencing of ten environmental activists. The activists have admitted to a string of arson attacks in the western United States in the late 1990s and the start of this decade. They torched places where things were done of which they disapproved, including a lab that they believed was growing genetically engineered poplar trees. If the judge applies the requested enhancement, their sentences could be longer and the conditions of their imprisonment more severe.

They are criminals, to be sure. Their arson cost millions of dollars and destroyed scientific work in progress. But although some of their more knuckleheaded actions could easily have accidentally hurt someone, their ethos was to damage property, never to hurt or kill.

Other extreme activists are also being labelled terrorists. Last November, the Animal Enterprise Terrorism Act was signed into law in the United States. It creates tough penalties for damaging property, making threats and conspiring against zoos, animal labs and the like. Leaving aside the merits of this act, its very name enshrines into law the idea that destructive activists are terrorists.

As one of the communities targeted by these activists, scientists may be tempted to embrace this rhetoric. Indeed, many people have personally felt terrified by the actions of the most extreme. But 'terrorist' is a word so debased and loaded by political use that, if it has any meaning at all, it is counterproductive. There is no such objective thing as a terrorist. A criminal is a person who has been convicted of a

crime. We can examine a person's records and make an unemotional determination of whether or not they are a criminal. But a terrorist is, in practice, a person who fights for a cause we do not believe in using methods that we do not approve of. Calling someone a terrorist is a value judgement.

It is a value judgement that seems to be increasingly used in the United States since the attacks of 11 September 2001. Indeed, the nation is waging, in official parlance, a "global war on terror". The term is useful politically exactly because it expresses an absolute rejection of a person and their aims. The terrorist label definitively ends any possibility of dialogue. But if there is any hope of bringing closer together those at the extremes of scientific controversies such as animal research and genetic engineering, the various parties must be able to speak to one another.

Although most activists feel that the actions of the criminal few are unproductive and embarrassing, for every activist saboteur with a lighted match there are hundreds of people who are sympathetic to his or her cause. Label that saboteur a terrorist, and you risk alienating all of them. Efforts to bring together defenders and attackers of animal research, such as those by the UK-based Boyd Group, often do not admit those who espouse criminal acts, and that is appropriate. And it leaves open the possibility that an activist who has renounced criminal actions can come to the table. But who will be willing to publicly break bread with a terrorist, reformed or otherwise?

We should avoid building an unbreachable wall between criminal activists and their victims. The judge in this case should reject the call for 'terrorism enhancement'. We must all speak more objectively and calmly. ■

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An unwieldy hybrid

A draft law will unnecessarily hinder embryo research.

The past few months have seen Britain's politicians tying themselves in knots over the question of whether to allow the creation of 'hybrid' embryos, those made from both human and animal material, for research purposes. Meanwhile, the embryologists who have applied for permission to carry out this research have waited patiently (or perhaps not so patiently) for the verdict.

The outlook initially looked bleak. In December, the government published a policy outline proposing a ban on virtually all forms of hybrid embryos. Medical research organizations reacted angrily,

and the House of Commons Select Committee on Science and Technology began working on a report, unveiled in April, criticizing the proposed ban as unnecessary and unfairly restrictive.

Last week, the verdict arrived in the form of the government's draft bill, which seems to be a turnaround on the issue. If it becomes law, the new legislation looks set to allow the creation of 'cybrid embryos' — a particular form of hybrid in which human DNA is placed in an empty animal egg — by the two British research groups that have applied to do it. Assuming that the groups ultimately receive licences to create these embryos, they should give rise to valuable stem cells that could be used to study conditions such as Parkinson's disease.

A range of other techniques also look set to be approved, including the creation of human embryos with animal genes inserted in their DNA, human embryos containing animal cells, and genetically engineered animals with human genes (although the latter will now

fall under the purview of the government's animal-research guidelines). Researchers applying to create these specific entities look set to have their requests granted, within the existing rules that no *in vitro* human embryo should be allowed to develop beyond 14 days, and no embryo derived from animal material should be implanted in a human uterus.

In the main, research advocates are satisfied with the proposal, and the government is to be applauded for not persisting with its plan for an outright ban. But a closer reading of the draft bill reveals that the proposed legislation is prescriptive, in mind-boggling detail, rather than truly permissive — and this is an approach that looks set to harm the field of embryology in the longer term.

The bill states that the creation of hybrid embryos “should not be permitted but that there should be a regulation-making power allowing exceptions to the prohibition”. That power will be the Human Fertilisation and Embryology Authority (HFEA, which is to be rebranded as the Regulatory Authority for Tissue and Embryos), and those exceptions will be the various strictly defined techniques prescribed in the draft act.

But politicians are not embryology experts, and in attempting to compose a definitive list of acceptable techniques, they risk saddling researchers with a piece of legislation that does not allow the freedom to pursue new and promising possibilities not covered by the draft bill.

And no matter how thoroughly you consult stakeholders now, someone will come along in five or ten years' time and ask for permission to do something you hadn't thought of.

It was just such a situation that caused the recent ill-feeling over the government's handling of hybrid-embryo proposals. When separate research groups at Newcastle University and King's College London asked the HFEA last year for permission to create cybrid embryos, the agency panicked and referred the issue to the government, which proposed its infamous ban before later admitting that such research is necessary and useful. The proposed legislation will prompt a repeat performance every time researchers propose something that the regulatory body does not feel comfortable dealing with — and by inviting politicians into the fray with greater regularity, it encourages repeated attacks by those who want to see all work on human embryos outlawed.

Much better would be to preserve the spirit of Britain's 1990 Human Fertilisation and Embryology Act, which the draft bill is intended to replace. That act contained several general rules of thumb that have provided a useful ethical framework while not stifling research. Even 17 years down the line, those rules still stand up to scrutiny. Embryologists could look forward to a more fruitful future if they were given a regulatory body with the ethical muscle to approve novel techniques while adhering to tried and trusted principles. ■

Nobels in dubious causes

Top scientists should campaign only where they can truly make a difference.

With great power comes great responsibility, said the wise uncle of Peter Parker, a.k.a. Spiderman. The same might be true of Nobel laureates.

Every October, a new class of formerly obscure scientists is hurled into the limelight, their lives changing literally overnight with that phone call from Stockholm. Their daily routine changes from one of quiet hours in the lab to one encompassing many new demands on their time, from speaking engagements to invitations to sign the latest petition for peace and justice on the planet (see page 374).

In theory, this is a good thing. Most Nobel prizewinners are thoughtful people with insightful things to say about the world. And there is a rich history of prominent scientists playing crucial roles in major world decisions — Albert Einstein warning US President Franklin Roosevelt that the Germans might be thinking of building an atomic bomb, or the Federation of American Scientists drawing attention to the dangers of nuclear proliferation early in the atomic age.

But scientists need to take care not to overstep their expertise. It is reasonable to expect a Manhattan Project physicist to weigh in on the dangers of nuclear weapons, with which he or she is entirely familiar. It is less clear-cut to, say, support the candidacy of a politician.

In the United States, a group called Scientists and Engineers for America formed last year with the benevolent-sounding goals of good

government, open debate, competent leadership and political participation. It sprang mainly, however, from years of frustration with the administration of President George W. Bush and its many instances of reportedly twisting science to its own ends. There is little doubt that US federal science has suffered under Bush, but it is unclear how this group will accomplish concrete goals to counter this.

Political advocacy can, in fact, be the trickiest road for a scientist-activist to navigate. Nobel-prizewinning economists, for instance, are routinely recruited to either side of US presidential campaigns, with their names trotted out like endorsements. In Scotland earlier this month, a group of 62 scientists (including Ian Wilmut, creator of Dolly the cloned sheep) wrote to *The Herald* newspaper, days before the country's elections, claiming that funding for science in Scotland would suffer in the event of “separation” from the United Kingdom. But the election wasn't about separation, it was about who was best equipped to run the Scottish parliament. The Scottish National Party won the election. In aligning themselves so clearly with the Labour Party's cack-handed attempts to scare its own former supporters back into the fold, the signatories at least ran the danger of seeming to be self-interested, grant-obsessed, and out of touch with people's desire for change.

Scientists who want to promote change in the world would be better off selecting their areas of activism carefully. Nobel laureates have a special responsibility, as they are regarded by the public with a level of awe. Many of them do use their names wisely to advance education or underappreciated areas of science. Last week, for instance, 40 of them helped launch a US\$10-million fund to support scientific research in the Middle East. Such efforts are targeted, specific and worthy of the Nobel name. ■