

# THIS WEEK

## EDITORIALS

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## Science and satire

*The terrorist attacks in Paris were an assault on the fundamental values of free and democratic societies. Researchers, and humorists, must combat obscurantism everywhere.*

In 1766, Jean-François Lefebvre became the last person in France to be executed for blasphemy; his list of ‘crimes’ included a refusal to remove his hat as a religious procession passed by. Eighteenth-century France was one of the first nations to push back against the tyranny of religious authority that stifled free thought across Europe at the time — and continues to do so in other places. That proud legacy — and the part that both science and satire played in promoting the contrasting values of the Enlightenment — is worth reflecting on as millions across the world struggle to make sense of the horrific events in Paris last week.

The terrorists who murdered 17 people, including 8 staff members of the French weekly satirical magazine *Charlie Hebdo*, falsely claimed to act in the name of Islam. On the contrary, the perpetrators represent a fanaticism that would stifle freedoms and science in the Arab and Islamic world, and beyond. The means used in the eighteenth century remain among the best options to combat this warped world view today. Free scientific thinking and satire — both religious and political — are crucial in challenging and undermining dogma and authoritarianism.

It is no coincidence that the eighteenth-century French writer, intellectual and activist Voltaire, a leading Enlightenment figure, was both an outspoken and irreverent satirist of religion and a leading proponent of the natural sciences as the successor to religion and philosophical reasoning as the main route to knowledge. The Enlightenment culminated in the French Revolution, and the resulting 1789 Declaration of the Rights of Man and of the Citizen, which explicitly protected free speech, including the right to freely criticize religious views.

Philippe Val, a former editor of *Charlie Hebdo*, has compared satire to science, saying that both are methods of pursuing ‘truth’ in the face of dogma. *Charlie Hebdo* is no Voltaire, but Val has a point. Satire, wit and mockery remain surprisingly effective ways to voice dissent, and to highlight the absurdities, hypocrisy, injustice and oppression of authoritarian regimes and religious obscurantism.

### FREEDOM OF THOUGHT

Satire is widely credited with helping to undermine the authority of regimes during the revolutions of the Arab Spring, starting in 2011. It continues to be a powerful means to air grievances and call for further freedoms not only in Tunisia, where the revolution has prompted a relatively successful transition to democracy, but also in other Arab countries where uprisings have so far ended in chaos.

Although satire may survive, in the Arab world the development of science has long been hampered. The landmark *Arab Human Development Report 2003*, written by Arab scholars and sponsored by the United Nations Development Programme, identified authoritarianism, and the resulting lack of open democratic societies that uphold freedom of speech, as the main obstacle. Greater freedoms, and science itself, it argued, work together to build free and creative societies.

The Arab spring raised hope among scientists in the region that

greater freedoms and democracy would usher in societies based on science and other forms of knowledge. The same fanaticism that brought bloodshed to the streets of Paris jeopardizes those hopes, and must be resisted.

The Paris killings are also a reminder that the hard-won freedoms that most readers of *Nature* enjoy must not be taken for granted, but must be continually defended. In many countries, it is taken as given that one is free to express opinions, criticize government policy and research any subject without worrying about intimidation, retaliation or imprisonment, much less being shot in the head.

**“Freedoms must not be taken for granted, but must be continually defended.”**

Those rights are increasingly being eroded, however — ironically, often in political over-reactions to terrorism — including through anti-terrorism laws that roll back civil liberties, increasingly invasive surveillance states and government oppression of legitimate dissent such as the Occupy movement. Politics and

other forces can sometimes lead to censorship of lines of enquiry — such as gun research in the United States — as well as more insidious forms of influence on areas of research.

Scientists and satirists everywhere must remain vigilant to protect liberties, and to fight obscurantism in any form. Social science and other research is needed to better understand the origins of violent fanaticism, conflict and intercommunal strife. Tackling terrorism is about much more than repressive measures. It demands long-term political and social initiatives, and policies to help to address the root causes.

The heritage of Voltaire and the Enlightenment explains why the French people have reacted much more strongly to the latest attacks than to the many acts of terrorism they have endured in the past. The terrorists attacked a symbol of the right to free expression. Free speech does have its limits, and many countries rightly impose laws that, for example, outlaw the incitement of religious or racial hatred. But the right to criticize, and even to mock, religion, fanaticism, superstition and indeed science is not only rightly protected by law in France, but is enshrined there, as in many countries, as a fundamental human right.

The killing also attacked other symbols of the Republic, including a kosher supermarket — one symbol of a multicultural society — and the police. One of the officers killed, Ahmed Merabet, was Muslim, and his brother aptly remarked that the killers were “false Muslims” and that Merabet had been “proud to represent the French police and to defend the values of the Republic — liberty, equality, fraternity”.

Marches for national unity on Sunday brought some 4 million people onto the country’s streets, the largest turnout in French history; the crowds in Paris surpassed those that welcomed allied troops’ liberation of the city during the Second World War. Fundamentalists throughout history have sought to subjugate freedoms, including freedom of expression and thought. More than 200 years ago, France rejected them with a “Non!” that echoed across the world. It has done so again. ■