

THE CONVERSATION

Academic rigour, journalistic flair

Editor's note

Human rights violations in Africa are inextricably linked to the drive to find a new Albert Einstein on the continent. The reason for this, explains [Shehu AbdusSalam](#), is that there's no point in finding these new Einsteins if they cannot do their work safely or actively contribute to socio-economic development and building democracy on the continent.

Natasha Joseph
Africa education editor



Top story



Science and innovation can improve the world –but scientists have to help ensure strong democracies too. Reuters/Kumerra Gemechu

Why African scientists must be champions for democracy

Shehu AbdusSalam, Shahid Beheshti University

African mathematicians and scientists have an important role to play in establishing and protecting a democratic continent.

Arts + Culture

New practices reinvent traditions in bow music

Cara Stacey, University of Cape Town

Many musical bow instruments, especially in southern Africa, are disappearing due to the decreasing numbers of players and variations of instruments.

Education

South African 'born free' students see the world through the prism of race

Joleen Steyn Kotze, Nelson Mandela Metropolitan University

University students in South Africa tend to fall into a "single story" trap, ignoring other individuals' experiences to construct an understanding of the country's political realities.

Science + Technology

Pi and its part of the most beautiful formula in mathematics

Jonathan Borwein (Jon), University of Newcastle

On international Pi Day it's time to look at Pi's position in unique formula that's praised much for its beauty in uniting several mathematical constants.

Business + Economy

The search for Ubuntu in Africa's corporate landscape

Terence Jackson, Middlesex University

The essence of Ubuntu can best be found in Africa's informal economies. They are not dependent on western shareholders or donations, and certainly not subject to western management education.

[Follow us on Twitter](#) and [join us on Facebook](#)

3 million unique visitors a month

You're receiving this newsletter from [The Conversation](#).
Not interested anymore? [Unsubscribe instantly](#). We'll miss you.

18th Floor, University
Corner,
Cnr Bertha and Jorissen
Streets,
Braamfontein, 2000
South Africa

Why African scientists must be champions for democracy

March 14, 2016 6.23am SAST

Shehu AbdusSalam

Assistant professor, high energy physics, Shahid Beheshti University



Science and innovation can improve the world –but scientists have to help ensure strong democracies too. Reuters/Kumerra Gemechu

Hundreds of people were murdered in my home town during three bloody days in December 2015. They were victims of what's come to be called the **Zaria massacre**, killed by soldiers who were supposed to protect them. A baby girl, scores of children, university students and journalists were among those killed in the Nigerian town where I grew up. If I had been home in December, I could have been among the victims.

This incident – one of many stories of **human rights violations** in Africa – may not sound like it has anything to do with science or maths. But it's actually inextricably linked with an ongoing drive to find the **next Albert Einstein** right here on the continent. For what is the point of finding this new Einstein, or many Einsteins, if they cannot do their work safely or actively contribute to building democracy on the continent?

Scientists and humanity

There is no doubt that scientists and mathematicians have an enormous amount to contribute to Africa's future. They can develop vaccines and cures for disease, find ways to purify

drinking water, create mathematical and statistical models, and engineer infrastructure.

That is only one side of the coin, though. African mathematicians and scientists must play an equally active role in establishing and protecting a democratic continent where basic human rights are respected in principle and practice. This notion of a science-humanity connection isn't unprecedented. Benjamin Franklin **invented** bifocals, the lightning rod and swim fins, among other things. But he was also a leader of the American revolution and one of the founders of the United States.

There are more recent examples: German Chancellor **Angela Merkel** has a doctorate in physical chemistry. In Asia, it's **common** for politicians to be trained scientists.

So how can scientists be equipped with the tools to become activists for democracy?

Learning beyond science

In 2003 I was honoured to be among the first cohort of students at the African Institute for Mathematical Sciences' (AIMS) South African centre. Such a space wouldn't have been possible before the country became a democracy in 1994 under the leadership of Nelson Mandela – young scientists of different races wouldn't have been able to mix, share ideas and learn from each other during apartheid. Other centres have opened in Senegal, Ghana, Cameroon and Tanzania; a sixth will be opened in Rwanda soon. The organisation's purpose is to develop young scientists and mathematicians. But it goes further.

One of the most exciting aspects of my curriculum back in 2003 was the sessions set aside for exploring contemporary social and political issues. We were taught how to be creative and critical not just in our own scientific research but in all matters. This offers a valuable model: where young scientists gather, there must be discussions about democracy and human rights alongside those about physics, maths, chemistry, biotechnology, innovation and so on.


For instance, the 2018 Next Einstein Forum (the second of its kind after 2016's March **meeting** in Dakar, Senegal), should organise spaces for such discussions. This platform is a chance for questions and problems to be raised and possible solutions to be analysed. Politicians, NGOs and other non-scientists should be welcome, too – their input and influence are crucial for implementation. But such work can't only happen at special, occasional gatherings. It needs to be carried out on a smaller scale, too.

Developing activist scientists

Mathematicians and scientists are not members of some secret cult with hidden ideas or agendas. Young people must be taught from school that there's more to these disciplines than remaining cloistered in a laboratory or absorbed in theoretical work. They need to understand that their work can be applied to real change, and that they have a role to play in African democracies.

There are a number of politically active scientists around the world who could drive this process. I met several at AIMS, among them applied scientist and engineer **Sanjoy Mahajan** and **David MacKay**, the former chief scientific advisor to the UK Government's Department of Energy and Climate Change. Many others exist who could play a valuable role in educating scientists about their social obligations. Activists, journalists and humanitarians can also get involved in teaching scientists about the world beyond their laboratories.



Angela Merkel
scientists
African democracy
Next Einstein Fellow
African science
science board
 Tweet46
 Share
 Get newsletter