

Correspondence

Scientists reflect on a year of civil unrest. Writing from Syria, Bolivia, Sudan, Iran, Chile, Ecuador, Lebanon, Venezuela, Hong Kong and Catalonia, correspondents tell of altered priorities, day-to-day challenges and hope in the dark times.



LUIS ROBAYO/AFP/GETTY

Venezuelan opposition leader Juan Guaidó (second from left) marching with students in January.

MONA FAWAZ LEBANON: CLASSES IN THE STREETS

Lebanon's ongoing financial meltdown and the political dysfunction behind it have fuelled large protests across the country. Since October, everyday life has been disrupted and classes suspended. The challenges are acute because of the country's location in a region of recurrent wars and refugee crises. One flashpoint has been the loss of public spaces in cities, sacrificed to rampant privatization that is turning Beirut into a playground for the rich.

As a researcher into progressive city planning, I consider that my work should be driven by immediate realities.

Despite the daily difficulties, I have discovered a new creativity in the occupation of abandoned theatres, car parks, city streets and public squares,

which serve as forums for open debates about timely topics. We discuss, for example, the significance of public spaces for political transformation and financial schemes that render land and housing unaffordable for urban majorities. I reframe questions, articulate methods and reconsider what is taken for granted. Inspired also by the soup kitchens, free psychiatric clinics and artistic performances that are reclaiming central Beirut, I assigned my students to devising institutional planning mechanisms to support the restoration of the city's historic core as a shared space. My research will continue to document transgressive practices and seek to inform city planners' conception of common good, urban citizenship and collective property ownership.

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BENJAMIN R. SCHARIFKER VENEZUELA: SAFETY, THEN SCIENCE

Scientists need freedom and personal safety to work and pursue the truth – not propaganda, ideologies, post-truth politics and alternative facts. As Venezuela enters its third decade of socio-economic and political upheaval, this year's waves of unrest have further obstructed the serious pursuit of science in my country. This will change only when the complex humanitarian emergency afflicting us today is resolved.

Scientific activity in Venezuela expanded during the second half of the twentieth century, when the country enjoyed relative political and economic stability. Migratory inflows, mostly from Europe and Latin America, favoured the emergence and consolidation

of academic institutions. As the authoritarian pretensions of Hugo Chávez's regime took hold, I became involved in the management of two important universities – the Simón Bolívar University and the Metropolitan University, both in the capital, Caracas – in an attempt to build on this research base. The regime of Nicolás Maduro is now close to achieving its goal of disbanding academic research. The Venezuelan economy has shrunk by two-thirds in the past four years. Shortages of electricity, water, food and medicines have driven around 13% of the population out of the country – the largest refugee crisis in the history of the Americas. My electrochemistry laboratory limps on with just a handful of students.

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MÓNICA MORAES R. BOLIVIA: CREATIVITY FELL TO ZERO

After 14 years of increasingly authoritarian government, a disputed election plunged Bolivia into crisis this autumn. Amid protests, strikes, violence, vandalism, and shortages of fuel and food, research was suspended for more than a month.

With such uncertainty, concentration and abstraction stand no chance. Between silent days and those punctuated by explosions, we put the planning of classes and field trips on hold to keep students and support staff safe. Opportunities were lost for gathering data on our biodiversity, and still need to be rescheduled. Distraction was total, creativity fell to zero and research papers lay unwritten.

My greatest hope is that normality will soon return, particularly to everyday science, so that we can rebuild our confidence and country with a new vision.

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MUNTASER E. IBRAHIM SUDAN: THE LABS LIE EMPTY

Sudan's political crisis, triggered by government austerity measures imposed a year ago to fend off economic collapse, has sunk the country's mechanisms for learning and research into recession. University gates are shut and laboratories lie empty. The country's young professionals – including doctors, teachers, lawyers, university staff and students – consider this a fair price to pay as they call for a fresh beginning that they demand

should be based on the triad of revolutionary concepts: freedom, peace and justice.

Last summer, this peaceful pro-democracy group brought president Omar al-Bashir's repressive 30-year regime to its knees. The ousted government had inaugurated its reign by launching an anti-science campaign (see *Nature* 348, 5; 1990). One example was

“The ousted government had inaugurated its reign by launching an anti-science campaign.”

the notorious persecution of Farouk Ibrahim, a professor at the University of Khartoum, for teaching evolutionary theory. The latest protests have helped to redeem Ibrahim and end the system of corruption.

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SHARIF MORADI IRAN: WE CAN RISE ABOVE SANCTIONS

In November, Iran experienced nationwide protests against a government decision to ration petrol and raise its price. Sanctions are among the factors blamed for fuelling the nation's economic and other woes (see, for example, *Nature* 574, 13–14; 2019). Although sanctions since 1979 have been punishing, they have helped to promote homegrown scientific enterprises. For example, Iranian researchers are now producing pharmaceuticals (such as stem-cell treatments for blood diseases, and recombinant chemotherapy drugs), biological research materials and diagnostic kits.

Instead of pinning its hopes on international negotiations, I believe that the government should be focusing on the immense potential of its highly educated people and its plentiful natural resources for making products that are in short supply.

Successive governments in Iran have expressed strong interest in research and development, but they need to spend much more on research to realize its potential – currently this amounts to roughly 0.6% of gross domestic product.

To move forward, Iranian researchers must cultivate their social capital. They should design joint projects with their peers, exchange students with other countries and strengthen connections between academia and industry. When a nation is subject to economic pressure, projects should address crucial local needs. And people should be encouraged to donate money to fund science.

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ERNESTO MEDINA ECUADOR: FOOD DRIVE KEPT CAMPUS OPEN

Academia in Ecuador, already under stress in our struggling economy, was dealt another blow by the civil unrest in October 2019 over more austerity measures. It reportedly caused the country losses of tens of millions of US dollars. Most universities were hit by the protests, which paralysed travel and resulted in shortages of food, fuel and medical supplies for almost two weeks. Barricades allowed no access to labs, so experimental research ground to a halt.

My own institution, Yachay

Tech – one of Ecuador's first research-intensive universities – was protected, however, because most students and many staff members live on campus. The authorities, faculty and administrative employees set up a food drive through temporary barricade openings.

Better still, it has been announced that our budget will be increased for 2020, so there will be new job opportunities for researchers. Orders for research equipment have finally come through.

In spite of all the difficulties, we are now in a good position to consolidate the university's standing in research: Yachay Tech is currently at the top of the Nature Index for Ecuador and among the top 20 institutions in the production of Scopus-indexed articles in the country.

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WASIM MAZIAK SYRIA: ADVERSITY SOWS RESILIENCE

As the director of the Syrian Center for Tobacco Studies, the civil unrest in Lebanon this autumn reminded me of the upheaval that rocked my home country in 2011, which forced me to move all my research from Aleppo to Beirut. The growing instability in the region amplified my doubts about investing more time in collaborative research, and highlighted the irony of planning research in countries where all aspects of life are hijacked by corrupt and authoritarian regimes. But I pressed on, branching out in my research from a focus on tobacco control to topics related to humanitarian needs.

To do that amid the extreme cruelty of war is not easy.

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It demanded that I dig out all the resilience strategies that I have learnt working in unstable circumstances. Relying on local scientists and distant mentorship, building contingency plans and choosing efficient study designs are some of the tips I can offer here. I am also reminded that humanitarian research is critical to bring the suffering of ordinary people, trapped in these painful twists of history, to the attention of the outside world. The hope is that once representative political systems are in place, these seeds will jump-start the collaborations needed to steer effective health solutions.

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MAI HAR SHAM HONG KONG: KEEP COLLABORATING

The unprecedented social unrest in Hong Kong that was sparked by this year's anti-extradition bill has been going on since June. Last month, it found its way into universities: protesters occupied campuses, staff and students were forced to evacuate, and classes were suspended.

Many students fled. Research laboratories were abruptly shut down, experiments came to a halt, and animal and other facilities were closed. I feared that this situation would drag on, but for my university the disruption was fortunately short-lived.

Hong Kong's scientific research has always been conducted by a complement of local and international researchers. The disturbances have affected our recruitment of talent, especially of postgraduate students. Applications from students on the mainland are expected to plummet. Some newly appointed professors are thinking twice about coming to



A journalist works amid items left by protesters at Hong Kong Polytechnic University in November.

ADNAN ABIDI/REUTERS

join us in Hong Kong.

Universities should be sites of innovation, where we find solutions for problems – including those of socio-political systems. My university identified the SARS coronavirus in 2003, and our research remained strong despite the global financial crisis in 2008 and the Umbrella Movement protests in 2014. I remain optimistic that our extensive scientific research collaborations with academic institutions in China will continue in spite of the current upheavals.

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CECILIA HIDALGO CHILE: SCHOLARSHIP IS KEY TO EQUITY

It is hard to argue for stronger support for science in Chile's current situation of civil unrest, sparked by this year's legitimate protests for social justice that have led to shocking human-rights violations and deplorable violence (see *Nature* 575, 265–266; 2019). Yet critical situations can present an opportunity for improvement. As president of Chile's Academy of Sciences, I contend that more investment in research will

help in the understanding and correction of social injustices and will accelerate the country's long-term development.

To achieve an equitable society, Chile needs to advance the generation of knowledge in all areas – including the natural and social sciences, the arts and the humanities. It must urgently address water scarcity arising from the climate-change-driven desertification of much of the country; the childhood obesity epidemic; the challenges of dealing with a population that is ageing at developed-world rates but with developing-world health care; and the factors fuelling the current social unrest.

These problems require science-based solutions. That means markedly increasing Chile's funding of science, technology and innovation from its present meagre level of 0.36% of gross domestic product.

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JOAN MARTÍNEZ ALIER CATALONIA: SCIENCE RISES ABOVE RIOTS

October saw riots in Catalonia – the latest of several waves of demonstrations that have taken place over the past

two years demanding complete autonomy from Spain. Many university students were on strike, but like other researchers, I could still access my offices.

In my view, Catalonia's history of unresolved political tensions has not damaged its recent progress in science. The foundations seem strong: for example, the Catalan Institution for Research and Advanced Studies has contributed substantially to the quality of new research institutes and some university departments since 2001. Moreover, Catalonia holds fourth place – ahead of Spain – among members of the European Research Area for the number of European Research Council grants per million inhabitants. (see go.nature.com/2pgfbed).

I believe that investment in Catalonia's science could increase considerably should independence be obtained from Spain after an agreed referendum. One reason is that fiscal transfers to Spain, which amount to about €2,000 (US\$2,226) per capita each year, would stop. Another is that pro-independence parties explicitly believe in the potential competitive advantage of science in Catalonia.

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Correction**Dispatches from a world in turmoil**

This Correspondence incorrectly referred to Catalonia as a country.

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