ITALIAN SCIENTIST PROTEST AGAINST BUDGET CUTS, CROCODILE TEARS INCLUDED



In the successful Italian comedy, *Smetto quando voglio* (I can quit whenever I want), a group of young and talented scholars with no career perspective turns into a successful drug-dealing mob. The story is imaginary—a surreal rendition of *Breaking Bad*—but it is also the portrait of Italian academia. There, the shortage of funds, baronies, and scant meritocracy hamper the careers of many endowed scientists. This fiction is not that far from reality. Now, as an attempt to change their working conditions, Italian researchers are planning a protest movement in October, to take a stand against budget cuts and political apathy. There is no doubt that such movement is justified, but there is also a need for academics to run their universities better.

October protest

Compared with its GDP, Italy has the lowest public R&D investment of all EU15 Countries. The public expenditure for higher education is below the OECD average—in the EU, only Slovakia, Hungary and Greece are investing less, as per the 2013 OECD scoreboard. In addition, the budget for universities has decreased by 19% since 2008. The recruitment of new professors is virtually inexistent. And, in 2008, a controversial reform, dubbed the Gelmini law, failed to revitalise the university sector. To

make things worse, a lingering economic recession brought unprecedented cuts to the government's spending in R&D.

As a result, academics have now decided to fight back. On the 18th and 19th of October 2014, Italian researchers will join the protests of French and Spanish colleagues asking for more support to universities and basic science. While the French are planning to bike *en masse* towards Paris, Italians opted for a more traditional approach. At the time of writing, there were plans to organising a demonstration in Rome on the 18th October 2014. Many details have yet to be ironed out.

But protestors are also planning to organising a series of gatherings of scientists at key academic centres to discuss the state of research in the country and the EU, using a slide presentation as a starting point—which will also be made available to all professors in Italy, invited to use it as the start of their classes. "The goal is to debunk many false myths surrounding Italian research," says Francesco Sylos Labini, a physicist at the Italian Research Council (CNR) and the secretary of the association ROARS that promotes the initiative.

A larger ecosystem

Some believe that part of the myths on research stem from the disconnect between the political class and the science community. "Many politicians are nurturing the belief that the Italian academia is not productive and it's not worth investing more money," Sylos Labini adds, "but data indicates otherwise." Indeed, according to the EC 2011 competitiveness report, Italy ranks 4th in the EU for the number of highly cited research papers, after the UK, Germany, and France.

Crucially, for each Euro spent on research, Italian universities receive as many citations as their US counterparts, according to a 2011 study commissioned by the UK's Department of Business, Innovation and Skills. For Sylos Labini, this shows that the "Italian academia is basically healthy and productive." But he warns that the budget cuts are creating a point of non-return where productivity will inevitably decline. Similar complaints about funding have also been heard in Spain.

Although Italian laboratories measure well in terms of publication ranking, some believe, excellent publications scores are not enough to make a successful research system. Papers are important, but today they are not the only measure of scientific quality, according to the Italian neurobiologist Stefano Bertuzzi, who is executive director of the American Society for Cell Biology (ASCB), based in Bethesda, Maryland, USA. "I am the biggest advocate of basic research, and our policy at the ASCB is unambiguous about it," comments Bertuzzi who is also a former policy expert at the US National Institutes of Health (NIH). "But we need to see fundamental studies as a part of a bigger ecosystem that includes clinical and translational research, patent protection, and venture capital among other things," he notes.

Tackling basic research alone is not sufficient. "There is no silver bullet," Bertuzzi adds, "Basic science

is what keeps the ball rolling, but you can't turn scientific papers into real applications without all the other catalysts." He concludes: "unfortunately, I don't see this view taking place in Italy."

The villain in academia

In addition to creating a suitable ecosystem, further changes need to happen before other problems plaguing Italian academia are resolved. One is the feudal system ruling across Italian universities, which has been encouraged by the behaviour of many professors. For decades, universities have recruited researchers with local competitions that were often rigged, favouring underhand deals among professors and nepotism instead of merit.

Meanwhile, the difficulties in pursuing independent research and a non-transparent recruitment are often named by expats as the major problems keeping them abroad. Italy appears to remain unattractive for independent scientists regardless of how much money is available. For example, in 2013, of all the Italians with an ERC consolidator grant , which supports independent research with up to €2 million, more than a half chose to work abroad. This compares with only a third of German and a tenth of UK grantees who left their countries.

To keep or not to keep

The 2008 reform has introduced temporary positions and has put the recruitment in charge of a national research evaluation agency, ANVUR. But the murky criteria used for evaluation have been widely criticised.

In addition, the rigidity of the system, where professors can only be hired with a permanent contract, makes the turnover virtually inexistent. "The research system is stuck also because there is no turnover, "says Ilaria Capua, a virologist and one of the few scientists sitting in the Italian parliament. She adds: "Some universities are below reasonable standards but the state needs to finance them anyway, because professors are hired for life and cannot move elsewhere."

As a result, young talents are not able to land an academic job. A mere 32.5% of Italian professors are younger than 45. And only one full professor out of ten is younger than 51. Many scientists, including Sylos Sabini, would like to see more researchers with a permanent job. "Stability is key to scientific productivity," he says.

This is a double-edged sword, however, as permanent positions are what currently paralyse the system. Capua believes that a tenure-track-based career system, similar to what happens in the US and the UK, would give more opportunities to promising researchers. "But it's very difficult to implement that in Italy," she admits.

Science vs. shoemakers

Another issue is the lack of political support for research. In 2010, Silvio Berlusconi infamously asked

why the government should pay scientists "when Italy makes the best shoes in the world". Although other leaders have offered less stupid arguments, science policy has never been high on the Italian political agenda.

Is anything changing with a new government in place since February 2014? Not much, says Capua. "The priority that research gets in the parliament is zero. I am vice-president of the cultural committee and yet I couldn't have it examine one of my projects on independent research. I see proposals on many other things being prioritised over science," she deplores.

The current Italian minister for education, university and research, Stefania Giannini, is busy with a painstaking school reform, at the moment. And she has not yet appointed an undersecretary with a clear mandate for research. "As far as I know, research is not in the government's agenda," says Capua, who was elected in 2013 with Mario Monti's Scelta Civica party, the same to which minister Giannini belongs.

First things, first

In such gloomy political climate, demands to invest more money in science are justified and rightful. Yet, researchers have other urgent battles to fight. While pleading for more funds, they should, according to some, lobby for a better evaluation system. "It's striking that in Italy there is no independent research agency to evaluate projects with a stringent peer-review system," says Bertuzzi, "this should be seen as a top priority by everyone."

The creation of such an agency alone —which has been the object of discussion for years, to no avail—would be a game-changer in Italy. Indeed, many funding proposals are still reviewed by commissions that include a few influential professors. And the heads of research agencies are appointed by the government. A more credible and transparent academia will give no excuses to lazy politicians.

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