Safe European home

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Back in the days when there were still enough faculty positions for postdocs to go to, I had a romantic (never realized) dream to take a detour via Africa or Central America or some remote island paradise, before returning to Europe to set up my laboratory.

Then as now, the science being done in developing countries was mainly tied to the specific problems of those countries, whether in regard to health, the environment or economic development. As a basic scientist, this seemed to me an echo of the old imperialist system. In a nutshell, only rich Western countries could afford the luxury of supporting basic research, much like the Renaissance princes in their day had sponsored the voyages of discovery or served as patrons of the arts.

Consistent with their “lesser” status as suppliers of raw materials and providers of a compliant market, the developing countries were not expected to do fundamental research about the universe. Instead, they were enjoined to devote their national brainpower to developing their resources in the service of the above economic model. Even countries that sought to rise above this post-imperialist system took a similar approach to science: a self-sustaining economy needed technical expertise relevant to the industries it wanted to develop, not in RNA processing or mitochondrial biogenesis. But since fundamental science embodies the global aspirations of humanity, it seemed to me that all people should have an equal right to participate in it.

Several decades later, fundamental science remains largely the preserve of affluent Western nations, although the BRICS countries, each driven (but also constrained) by its own traditions and ideology, are making inroads. A few other emerging states

are making efforts to develop a science base, some by importing expertise from other countries, others by the opposite strategy of sending their own trainees abroad and then offering them generous incentives to return. But a majority of the UN’s 192 member states are still stuck in the same old groove: pressure from government to focus on low-cost, applications-oriented research, minimal investment in basic science despite the need for well-trained experts, and a host of structural problems, including corruption, lack of basic freedoms, social hierarchy, insecurity and above all endemic poverty. This precludes investment on a scale needed to establish and maintain a modern research infrastructure.

Doing science in countries riven by violence and ethnic strife or ruled by a vicious dictator is of course near impossible. But there are many places in the world where conditions should be more promising. Except that in the main they aren’t. Former postdocs of mine who returned home in the hope of continuing their projects are mostly bogged down in excessive teaching duties, pathetically inadequate research funding, lack of promised infrastructure, stifling bureaucracy and an organizational structure that favours mediocrity and obsequiousness over creativity. Most of them seem happy enough to be in secure jobs and amongst family and friends, but their dreams of contributing to their home country’s development by practising top-level science is largely gone after 2 or 3 years of vainly trying to swim upstream.

Whinging about this state of affairs doesn’t help resolve it. In fact, things are not totally bleak. A few promising initiatives have come from the governments of former colonial powers, even if mainly oriented towards development issues such as tropical

diseases, malnutrition and renewable energy. But high-profile science can of itself act as a powerful stimulus to development, projecting a positive image of what a country can achieve by its own efforts.

I don’t have a magic formula, but I do have a suggestion. If I were in charge of the science funding arm of a major foundation dedicated to promoting world development and solutions to global issues, I would be looking around for a, preferably small, developing country with a solid history of good governance, plus an established and efficient service sector and public infrastructure. In cooperation with its government, I would seek to establish a prestige molecular biology institute, paying special attention to negating local constraints. I would recruit PIs from all over the world, based purely on excellence, offer salaries, research funding and facilities superior to those offered anywhere in the world and create a financial structure to guarantee its autonomy and long-term viability. It could be strengthened by creating parallel institutes, such as in cosmology, geosciences, theoretical physics or human sciences, and perhaps, eventually, an elite undergraduate school to provide maximum benefit to the country for hosting the Global Hub of Science.

The fact that many Western countries seem to be moving in just the opposite direction creates a potential opportunity. As they downgrade and bureaucratize their own support for basic science, or dress up the switch to more banal applied research under disingenuous banners such as “strategic programmes” or “frontier research”, there is a growing gap in the market. Will anyone be bold enough to take up my suggestion?

Yes, I know: it’s just another of my silly dreams.