begun to believe privately: that to survive and continue to prosper, Western nations need to consider the people of China and the Islamic countries as adversaries. The terrorist attacks of 11 September 2001 strengthened this view, and won Huntington many more converts.

To others, however, Huntington was simply giving academic respectability to the views of ultra-nationalists and religious extremists. The Nobel-prizewinning economist Amartya Sen of Harvard University spoke for many when he argued that classifying humans using a single metric — whether religion or civilization — was not just factually wrong, but also an untested predictor of future conflict. Looking at the historical data, moreover, Malcolm Chalmers of the Royal United Services Institute, a London-based defence think-tank, has found that the proportion of people dying in wars and conflicts has actually declined since the end of the Second World War. And looking at archaeological records of even older conflicts, the economist Samuel Bowles of the Santa Fe Institute in New Mexico suggests that the public-spiritedness and generosity of people today may have come about in part because of a bloodier history of hostility towards outsiders (see *Nature* **456,** 326–327; 2008).

Elsewhere, anthropologist Arjun Appadurai of the New School in New York says that today's tensions and conflicts are characterized less by a 'clash of civilizations', than by larger groups feeling threatened by smaller ones. This is certainly the case with China's fears on Tibet; India's worries over Pakistan; Israel's dispute with the Palestinians; and the fears among host societies of much smaller immigrant communities. At King's College London, Christoph Meyer and his colleagues in the Department of War Studies have just begun a three-year project that will use this idea to search for ways to provide advanced warning that hostility or antipathy will boil over into violence.

"Few, if any, of Huntington's critics could match the simplicity and scope of his original concept."

Still, Huntington's clash-of-civilizations idea has had staying power, if only because few, if any, of his critics could match the simplicity and scope of his original concept. Scientists these days often work in highly specialized fields, and tend to be reluctant to propose over-arching theories. Yet policymakers are more likely to respond to people who seem to give the bigger picture, and are able to synthesize it and communicate it clearly.

This is a skill that Huntington had in spades and it poses both a lesson and a dilemma for scientists. Huntington wasn't always right, but his ability to occupy and exploit the space between researchers and its end-users meant that his ideas carried more influence than might otherwise have been the case. ■

Cuba's biotech boom

The United States would do well to end restrictions on collaborations with the island nation's scientists.

For a week after Cuba marked the 50th anniversary of its revolution on 1 January, a celebratory 'Caravan of Liberty' carried 50 people, including many university students and scientists, along the triumphal route that Fidel Castro had taken half a century earlier. These people represented the health-care and educational systems of which Cubans are proud, however much they bemoan their other privations behind closed doors. And in no small measure the scientists in the caravan symbolize the foundation of that health-care system in the developing world's most established biotechnology industry, which has grown rapidly even though it eschewed the venture-capital funding model that rich countries consider a prerequisite.

This growth in biotech has been a top-down affair, like most of the changes in Castro's Cuba. At the president's personal instigation, the island nation's half-dozen university centres from before the revolution expanded to at least 35 in the decades that followed. But the growth also owes a great deal to individual researchers' desire to make a contribution. Ask a Cuban scientist why he or she works long hours to earn little more than the US$20-per-month average wage, and the answer is often that they want to make sick people better, with the kudos of having done so. The venture-capital model's promise of riches is nice, it seems, but not essential.

But despite many constraints on interaction between Cuban and US scientists, biotech has prospered in the nation. In 1980, with a scientifically literate workforce at hand and the biotech boom ready to take off, Castro's interest in the fledgling industry was sparked by a meeting with Randolph Lee Clark, the former president of the M. D. Anderson Cancer Center in Houston, Texas. Castro accordingly sent six scientists to a lab in Finland to learn how to make interferon from white blood cells. The knowledge gleaned from this project has been ploughed into an industry that developed the first vaccine against meningitis B in 1985, and subsequently a vaccine against *Haemophilus influenzae* type B — the world's first human vaccine to contain a synthetic antigen.

Unfortunately, Cuba's biotech industry has also begun to feel the limitations of the top-down model. Since the early 1990s, when the Soviet Union fell apart and had to cease its generous funding of Castro's ambitions, Cuba's research institutes have become more bureaucratic and politically expedient, which has slowly pushed many of the country's best minds abroad. Meanwhile, Raúl Castro, Cuba's leader for the past two years, has allowed the country's citizens to buy previously prohibited electronic devices — but has not allowed them unfettered access to the Internet.

Still, Raúl Castro is 77 years old; the regime will not last much longer in its current form. And America's cold-war perspective on Cuba does seem to be thawing. In August, the state of Florida overturned a 2004 law that stopped researchers at its universities from using private funds to travel to the island. And President-elect Barack Obama has stated his willingness to talk to his country's enemies.

Obama's administration would be wise to start that conversation with Cuba as soon after his 20 January inauguration as possible. The reasons go well beyond biotech, of course, and the advantages could be substantial for both sides. As the global centre of biotech, and with some of its marine ecosystems contiguous with Cuba's, the United States is surely the country with which cross-fertilization of ideas makes the most sense. ■