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It is a Crisis of Quality

Margaret Hodge has recognised that there is a crisis in British universities. She is right. Much as it hurts to face it, we have, when measured at the highest level, a crisis of quality.

If we look at the world's top 100 people in each field of university research, how many do you think are now in Britain?

To find the answer in science, go to a new website called isihighlycited.com. This gives information from the Institute of Scientific Information. It demonstrates that in lots of fields Great Britain is now badly short of world-ranking university scientists. That shortage hurts everyone. It means we lack genius. It holds back the quality of university science teaching and means lower all-round competence inside our institutions of higher education. It also suggests that science degrees in British universities are likely to be of less reliable quality than is desirable.

I could start with horror facts. But, to avoid charges of pessimism, let us first look on the bright side.

Great Britain is pretty good at biology and biochemistry. In this area, Britain has a moderately respectable 10 of the world's leading one hundred scientists. Admittedly the USA has 64, despite having only five times our population, so we have nothing to be sanguine about. But our country is way ahead of Germany at 5, France at 3, and Japan at 6.

Plant and animal science is also reasonable. British universities have 8 of the world's top one hundred people.

Chemistry is another British strength. We have 11 of the world's best one hundred people. Sussex University alone, for instance, has three of these, including a Nobel prize winner.

But then we get to the bad news. Unfortunately, it comes in key areas.

Unpleasant fact #1: Of the 100 top physicists across the globe, just 2 now work in Great Britain.

I hope someone tells Tony Blair; in my judgement, it should keep him awake at night. Princeton University alone, after all, a tiny university in New Jersey USA, has 8.

Unpleasant fact #2: In Molecular Biology and Genetics, only 3 out of the top 100 people in the world are British.

Unpleasant fact #3: In agricultural science, just 4 out of the world's best 100 researchers are in this country. Immunology is similarly unimpressive. The United States walks away with it at 78 of the globe's top one hundred researchers. The British Isles can manage a mere 4. In engineering, again we have only 4 out of the best one hundred people world-wide.

Research is not like cricket. Intellectual influence is not like most activities. Middle-order batsmen contribute much, much less than the very best. Almost all the important contributions in science come from a tiny group of outstandingly creative people. And this fact is almost entirely missed by the so-called Research Assessment Exercise, which is the government's way of assessing the quality of research in our university sector. The RAE is obsessed with the average person in each department in each British university. That, however, is misleading. We have to put weight on the cream of the ideas, which means concentrating, even if it hurts our pride, on star researchers and what they write.

Where is our nation's strength? London University dominates: Imperial and University College between them have 18 top world scientists and thereby comfortably outstrip Cambridge and Oxford who when combined have 13. In Great Britain as a whole, we have 80 out of the world's best 1200 scientists. In my view, that is not a satisfactory number. We are not contributing enough to global scientific discovery.

The ISI company studies the bibliographies (that is, the reference lists) of published articles. It counts which research is most commonly cited by others. Patterns of citations tell us about the twisting thread of ideas through the generations.

Does this matter? Perhaps science is relatively unimportant in the modern world. Maybe having outstandingly creative people in our universities is less crucial than it once was and students can teach themselves. Or perhaps one might be philosophical about our lack of scientific power in 2002, and simply say that as long as good research is being done somewhere in the world, it does not matter where.

But that rings hollow. Faraday and Newton would turn in their graves. If our university scientists become much worse than those in the US, word of that will spread. And we need brilliant researchers somewhere if we are to have brilliant teachers anywhere.

At bottom, this problem has arisen because universities continue to pay joke salaries. Radical change is needed.