

Comments on the article:

Unfortunately the only conclusion which I was able to draw from this article pertained to the small-mindedness of the author.

One of the most beautiful concepts in physics is Universality: the fact that similar fundamental laws describe a wide range of systems with hugely-varying size and energy scales.

Thanks to Universality, mathematical ideas originating from theoretical particle physics (which the author so unjustly derides) are directly applicable to the topology and dynamics of electron spins and charges in many quantum materials already under development in laboratories around the world. For example, materials hosting skyrmions, magnons and axion fields are excellent candidates for critical real-world applications including high-efficiency data storage, energy harvesting, topological quantum computing, non-reciprocal thermal emission and more.

These particles are not the stuff of fiction: they already exist in a university or institute near you and are being harnessed to develop next-generation electronic devices. Beyond these clear practical uses, MalachiConstant's superb comment below has explained the incompleteness of the Standard Model: we cannot wilfully ignore the existence of 95% of our universe!

I am disappointed that the Guardian saw fit to publish such an article.

Ignorance is already far too prevalent in modern society – we don't need Dr. Hossenfelder fanning the flames.

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A long-overdue article that pinpoints a fundamental problem with research, particularly around universities (that I have been profoundly aware of for some time).

Academia is absolutely stuffed with people who are forced by their institutions to produce a minimum number of scientific papers and to bring in the maximum available funding because these are taken into account when unis are 'ranked', including by the Guardian. If this is to the detriment of the students, then according to the private companies (the universities) so be it. So, the 'best' universities are largely ranked according to the amount of research they do plus their financial status (divided by the number of students apparently equals how much is spent on each student - which is patent nonsense). The fact that universities that consistently get the highest student satisfaction (from teaching, feedback, support from staff, etc) get nowhere near the top spots in any of the rankings is exasperating.

Academics are supposed to spilt their time between their research and time spent on their students - teaching, feedback and other support. When unis force their academics to focus primarily on research paper writing and funding applications, they often have little time to spend with their students, and give the teaching tasks to 'lesser mortals', AKA postgrads.

Some universities have bypassed this by appointing 'Teaching fellows' who do

no research and whose sole job is to teach and support students. The result is that Imperial College (for example) has the highest student satisfaction of all UK universities (and has done for years) and yet it comes no-where near the 'top' spots which are always taken by those unis that are financially more secure - because they have more 'research' attached to them and who don't 'waste money' employing specific academics just focusing on the students. Employers look at the rankings and think that the better-educated students are coming out of Oxbridge, whereas in reality, students from lower-ranking universities that put the students at the centre of everything produce better educated, more well-rounded and better-prepared students than those who are left to their own devices with too little to no feedback or discussions about their essays, making schoolboy errors and never being told where those errors are, never being walked through the process of critical thinking and critical reassessment of the work they have done. They submit work that is not marked properly (or even at all) rubber stamped through, and the student gets a 1st class degree in PPE. Just look at Kwasi Kwarteng and Liz Truss (and nearly all the other front-bench) for the reality of what these (apparently) top-class universities produce. Even Coffey - who has got a Chemistry PhD - has no more ability in critical thinking and analysis of complex systems, than a garden snail. (Apologies to garden snails.)

Thank goodness, I have never had an A Level student who has been taken in by the Oxbridge bandwagon (I have always directed them to look at the student satisfaction data first before they make their choices) and they have all done fine via other institutions.

Forgive me (as a lifelong educator) for being naive here, but I thought that Universities were originally supposed to be primarily educational institutions. Not anymore they aren't. They are money and kudos-making machines with the academics used as the cogs and students an irritating necessity.

It is about time the method of ranking universities was given a good shaking up. Oxbridge have long outgrown their usefulness as beacons of good practice when it comes to actual education. They are there to make money and they do this through research (some useful, some not). Students simply don't pay.