**Science Because of Meritocracy**

To imagine the perfect science education and even science development, one can construct a set of conditions where each student is challenged to fully learn to the best of their capabilities. To strive to achieve what they can, breaking down barriers to learning, and coming up with advances that are as good as they get in any era. The enablers are simple in concept: critical thinking, excellence in all activities, striving to achieve while in a positive environment. When have we seen these conditions, and are they present at any institution currently for a few or all?

First a little comparative journey into the past.

As I study the impact of critical theory, CRT specifically in K-21 and CSJ in higher ed, there are some striking realizations. Comparing what conditions existed when I seized my path in science in the 70’s and gained a Ph.D., the lessons are many and very profound. I was largely on my own, being driven by my advisors to ask questions and to strive for new truth.

In this current woke era, hiring of teachers and student admissions are too often race and gender-based, even in a State (Calif) that twice affirmed that affirmative action was not and will not be acceptable. CRT is being met with resistance, while CSJ in higher ed is much less so. Both include an attack on meritocracy in overt and hidden ways. Both propose that we need to judge a fellow human by the color of their skin, which as an action should be unlawful. We fought for Civil rights in our country decades ago to do away with the idea, and now we are back again with much the same question.

Also, to propose that striving and achieving is racist but only if one is white, is the opposite of an intelligent statement or anything approaching a scientific one. The resistance to such a statement is meager and a disappointment. It cuts deep into our society. Science is of course central to our social progress, so proclamations that tear down achievement cannot be acceptable. Or can they? The concept of cancel culture is being unmasked and becoming quite unpopular. [72% Say ‘Cancel Culture’ Is Out of Control - Rasmussen Reports®](https://www.rasmussenreports.com/public_content/lifestyle/general_lifestyle/october_2021/72_say_cancel_culture_is_out_of_control?utm_campaign=RR11032021DN&utm_source=criticalimpact&utm_medium=email) It can be assumed that if these same people would be asked are you in favor of canceling science and rigor, they would answer in the negative. But that does not stop the woke militia from trying: [Don't Cancel Rigor — The James G. Martin Center for Academic Renewal (jamesgmartin.center)](https://www.jamesgmartin.center/2021/11/dont-cancel-rigor/)

We live in an age where unless there is an event of obvious moral degradation, people keep walking forward. Being in a free country that is quite assured it will remain free, do not put much effort into defending freedom. An Irishmen sitting in a pub in Dublin Ireland can have more interest and knowledge of American politics than we do, as I found out.

Woke culture, and the theories of CRT and Critical Social Justice (CSJ), is an afront to freedom. It vows to take merit away from science as a key enabler and attribute. If we want to understand how science is so tightly coupled to meritocracy, we must dive into the scientific methods and enablers that have served science so well. To have that nirvana set of conditions as well, we need to examine the constraints that politics and institutions place on science. All can combine at times to free science from constraints, or to shackle it. Some scientists can work around some of these constraints, but if they object to the narratives, then they can be cancelled, and in the process lose funding and stature. Reproducibility of results is less certain in various scientific disciplines, and debate on many areas is not allowed. The scientific method has been defended admirably for some time but is now under attack.

Science at times can appear as a great leap forward but in fact it is most of the time some development built on top of a set of ideas, and some that were tested and found wrong. Some that were the result of a great many man-years of creative work in creative environments with teams where the pieces were built through individual achievement. It is for any given advance of say a cell phone or a nuclear reactor, the result to succeed is a combination of many innovations that each need to succeed in both theory and in practice.

A path can be taken or sped up or supplemented in some fashion with an innovation that can result in a vaccine or a new product that has enabled companies now worth over a trillion dollars. All this needs to be admired, understood, not just for its gains but what enables humans to achieve even greater things. And as important is the question as to what thwarts achievements. Both forces are at work at any point in time.

So, let’s take a journey into the cascade of steps of great science. The flow is through great role models, teachers, access to great thinkers, encouragement from society and those that have influence, a great educational system, the desire to learn and achieve, success and its celebration, access to tools, labs, computers, as well as the financial means to do science and survive, and so on. It all works in unison.

From another perspective, there is a long list needed in the development of a scientific mind: a well-ordered learning process, and the incentives to achieve great things, and so on. Upon examination we see that merit, views of meritocracy, and of succeeding were central to each step. Upon examination, meritocracy and science are inseparable. The spirit of innovation lives and thrives on the initiative of merit being sought at each step. And to achieve equal outcomes or equity, would have a serious impact on the development of good science and scientists.

Woke culture in higher ed requires equity to play a strong role. Equity is not about equal access in a free environment, it is about forced results. Equity makes no bones about it, it is about striving for equal outcomes across all races, genders. How one determines this seems a bit arbitrary if not capricious. It is never asked how much of something we should give up achieving this fictional justice. Would anyone want to have half of everything we own in technology taken away to provide a fantasy justice that someone else had defined? This is not something anyone would agree to, for the sacrifice is on the part of the individual to achieve what someone else determines is fair or just. The mere philosophical statement that someone needs to accept force to achieve this false justice should be sufficient for most to see the fallacy, but it is not.

Equity is also the enemy of competition. One example not commonly thought of, but quite commonly experienced the benefits of is the competition in the development of electronic chips. If one cannot execute with great purpose and the scientific method, then one would go out of business. The modern convenience of items like cell phones is based on long-standing competition and belief in meritocracy.

There are many who comment on these compromises and the impact:

*The second reason for concern is that the nationwide effort to reduce racial disparities, however well-intentioned, has had the unfortunate effect of weakening the connection between merit and scholastic admission. It also has served (sometimes indirectly) to discriminate against certain groups—mainly Asian Americans. The social-justice rhetoric used to justify this diversity, equity, and inclusion (DEI) programs is often completely at odds with the reality one observes on campuses.* [*As US Schools Prioritize Diversity Over Merit, China Is Becoming the World’s STEM Leader (quillette.com)*](https://quillette.com/2021/08/19/as-us-schools-prioritize-diversity-over-merit-china-is-becoming-the-worlds-stem-leader/)

To understand how to improve diversity and outcomes, one cannot declare quotas in higher ed admissions or in hiring or using race instead of merit. Merit needs to always be at the top of the list with other factors added to the list as need be. The political and cultural threads that impact the quality and achievement of minorities and women need to be examined, and projects defined to enhance the educational performance, but it should not require the subservience of the system to enhance that performance for that takes a challenge and turns it into a real problem.

In our current politically charged era, we need to carefully examine all factors that impact the efficacy of science. Diversity is not conceptually bad, but if coupled with a process of holding down excellence to have different outcomes that meritocracy would promote, then there is also a problem for science. If equal outcomes take precedence over excellence, then there is a problem for science.

Science is not the result of a power structure or culture but is a result of free minds well developed. As well, higher ed is impacted greatly by the efficacy of K-12 education. It is not the result of a political process but is typically hurt by it. Bringing politics into science comes at a great cost. See the Covid actions and outcomes, and the emphasis on the narrative and not on saving lives, one of the best examples in modern times.

In most cases, DEI has now established a track record of pushing down meritocracy. It sounds so good when presented initially, but what is usually below the covers of vague words is an array of programs that promotes not learning but suppression of meritocracy and therefore science.

*Higher education, those institutions played an important role in the rise of meritocracy and, sadly, are now playing a role in its decline.* [*Universities and Meritocracy — The James G. Martin Center for Academic Renewal (jamesgmartin.center)*](https://www.jamesgmartin.center/2021/10/universities-and-meritocracy/)

*… high road in expressing dismay at the recent overt (instead of centuries-old covert) introduction of bias into scientific leadership (“*[*The New Scientific Method: Identity Politics*](https://www.wsj.com/articles/the-new-scientific-method-identity-politics-11620581262?mod=article_inline)*,” op-ed, May 10). “We must continue to insist . . . [they] . . . represent the best and brightest among us,” he says.*

We have seen a steady attack on truth, with the full DEI ideology, which comes with an abundance of proclamations that cut short logic and common sense, as well as often taking the meaning of words as relative. Truth is real. Science and the scientific method are real. Proclaiming it otherwise does not make it so.

DEI administrators, according to the vast published statement of their job description are there to ensure compliance. We see how the DEI Director of Engineering at USD stated that she was there to unravel the myth of meritocracy.

Science is essential and cannot function without the idea that each of us needs to pursue truth and encourage success. As we take note of the attack of each step in the process from K-12 to graduate school and beyond, with the overriding political process of DEI, we must realize how science is impacted along with individual freedom and a positive spirit. Merit matters and although some students can travel the woke maze and generally be less impacted, it does not mean that the right company comes along, or the best projects are paired with the best people. Woke invariably makes each step in the process less capable of the best result. Becoming more competitive must be the goal of science and innovations, so is woke serviceable while chasing that competitive edge? We need to face this question carefully and with purpose. [As US Schools Prioritize Diversity Over Merit, China Is Becoming the World’s STEM Leader (quillette.com)](https://quillette.com/2021/08/19/as-us-schools-prioritize-diversity-over-merit-china-is-becoming-the-worlds-stem-leader/)

When combing the methods of woke one can see at each step of the scientific process, the suppression of the argument for striving for achievement. And replacing it with claims of racist people and systemic process, if done by whites. We had a problem in society several generations ago that was racism. We, as a society, have been focusing more and more on helping solve those and other conditions. The people of America are so generous in donating to the betterment of the disadvantaged in the world. The country elected a black President twice. There are many reasons to be proud while striving for more improvement, just as we should strive to bolster meritocracy in all populations in our country. However, this is not the path we are currently on. The increase in promoted racial division has led to a political process and divide that has hurt us all with no good outcome in sight.

The proper strategy for dealing with science and meritocracy is best to assume that they are tightly coupled. There is no way to determine the impact of saying to a young person in K-12 that math is inherently racist, or if it is repeated along with other racist claims in a steady stream during the entire educational flow. Are kids assumed to be so strong to process these messages and continue towards being a great scientists? And what is the purpose of such claims, and do they solve anything? It appears more and more to be divided.

Institutions that demonstrate to Shutdown STEM doing harm to meritocracy in higher ed? Will the emphasis on CSJ cause a steady decline in the quality and quantity of the highest achieving graduates? Perhaps one college where that has been displayed is HMC where the graduating students going to a prestigious grad school have fallen in number. HMC was at one time the college that had the percentage of students heading into Ph.D. programs. But not anymore.

Will we realize the importance of meritocracy and encourage it, insist upon it, even in our own lifetimes?

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