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## Academic free speech or right-wing grievance?

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A vociferous group of scientists is presently articulating the idea that academic freedom is under attack from within academia. Examples of supposed suppression of free expression often involve diversity, equity, and inclusivity efforts by universities, especially diversity considerations in faculty hiring, but also include examples where academics have been censured or disciplined for racist, sexist, or transphobic speech. Free-speech libertarians advocate for a definition of academic freedom in which no remark is inflammatory enough to warrant consequences, even when such remarks are unsupported by (or unconnected to) academic scholarship. The present work offers an evidence-driven analysis to support the contention that this misconstrues the role of academic freedom, which is not imperiled by the notion that there should be social or professional consequences for some antisocial or abusive speech. Troublingly, the rhetoric employed by self-proclaimed defenders of free speech often bears striking similarities to the language of resentment that is used in contemporary political discourse to express right-wing grievance that is centered around White heterosexual male identity. Phrases such as “cancel culture” and “woke ideology”, used as pejoratives, are favored not only by free-speech hardliners but also by politicians who are working to dismantle the academic tenure system in the U.S. Misappropriated terms such as “critical race theory” are used to defend new laws that restrict classroom and workplace discussion of race and gender identity. The present work argues that those who wish to have an honest debate about the limits around freedom of speech need to engage that conversation in a manner that avoids resonance with the language of White (heterosexual, cisgender male) supremacy, lest their arguments provide intellectual cover to those who would attack historically marginalized communities. Suggestions for countering regressive academic culture are provided, along with a data-driven discussion of diversity considerations in faculty hiring. An emergent theme is that the academic status quo supports White male supremacy, therefore complacency by tenured academics will perpetuate that situation.

[T]he Negro's great stumbling block in his stride toward freedom is not the White Citizen's Councilor or the Ku Klux Klanner, but the white moderate, who is more devoted to “order” than to justice; who prefers a negative peace which is the absence of tension to a positive peace which is the presence of justice.

Martin Luther King Jr,  
Letter from Birmingham Jail,<sup>1</sup> 1963.

## 1 Preface: equity versus free speech

In 1964, a decade after the U.S. Supreme Court declared that racially segregated schools are inherently unequal, Derrick Bell was a young attorney litigating desegregation cases in Mississippi. In ten years, the needle had barely moved on racial integration in the American South, with only 2% of Black children attending majority-White schools.<sup>2</sup> Racial integration of public schools in America would reach its high-water mark by

1990,<sup>2,3</sup> and shortly thereafter Bell (who had since become the first tenured African-American Professor of Law at Harvard<sup>4</sup>) would put forward the following thesis.<sup>5</sup>

*Black people will never gain full equality in this country. Even those herculean efforts we hail as successful will produce no more than temporary “peaks of progress,” short-lived victories that slide into irrelevance as racial patterns adapt in ways that maintain white dominance. This is a hard-to-accept fact that all history verifies. We must acknowledge it and move on to adopt policies based on what I call: “Racial Realism”. This mind-set or philosophy requires us to acknowledge the permanence of our subordinate status.*

Such was the abject frustration out of which *critical race theory* (CRT) was born, with Bell as one of its founders.<sup>4,6</sup> The framework of CRT was constructed in an effort to understand the implications of structural racism that is hard-wired into institutions, and a fundamental premise is that racism is ordinary, not exceptional.<sup>7</sup> Some might prefer to call it “implicit bias”, if only because they are uncomfortable with the idea that racism can manifest as anything short of a racial slur or a racially-driven denial of employment, *i.e.*, that it can be institutionalized.<sup>8</sup> Others prefer to call normative racism by a simpler name:

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White supremacy.<sup>9–11</sup> A central tenet of CRT is that individuals can perpetuate the power structures of White supremacy even while expressing a genuine desire to eradicate racism.<sup>12</sup>

We live in a moment when the term CRT is being grossly manipulated for political ends.<sup>13–15</sup> Likewise, Martin Luther King Jr's admonition to "remain awake through a great revolution",<sup>16</sup> which has origins in the Black vernacular of "staying woke",<sup>17–20</sup> has also been twisted beyond recognition, emerging as the pejorative term "woke ideology". This phrase is used in contemporary discourse as a blanket attack on progressive policies.<sup>19–23</sup> It is disappointing, although not entirely surprising, that some in the academic and scientific communities are willing to engage in this type of rhetoric,<sup>24–49</sup> with seemingly little regard for the attacks on marginalized communities that this language empowers. I find it unsurprising, because my experience suggests that despite academia's liberal reputation, many tenured academic scientists exemplify a form of centrism in which privilege manifests as freedom from concern over the consequences of one's language. Tenured academics (myself included) are individuals for whom the status quo has worked out very well, with unparalleled job security and limited scrutiny of our activities. Those freedoms are beginning to erode, not because of "woke ideology" but as a result of a mobilized right-wing political movement that has set sights on what it perceives as bias against conservative ideologies within academia.<sup>50–55</sup> Nevertheless, some in the academic science community would echo the language that is used by "anti-woke" populists, in order to criticize what they perceive as eroding freedom of speech.<sup>24–49</sup> In doing so, these defenders of free speech risk giving aid and comfort to the genuine enemies of academic freedom, in a misguided effort to defend an interpretation of free speech in which words have no consequences.

The genesis of my thoughts on these matters lies in several recent essays published in scientific journals,<sup>24–27</sup> whose authors implore the scientific community to "resist cancel culture"<sup>27</sup> in favor of a freedom of speech that is never precisely defined but in whose defense the authors invoke a politicized catchphrase. (Just like "woke ideology", the phrase "cancel culture" has been co-opted from its origins in progressive activism.<sup>56</sup>) In numerous other examples,<sup>28–49</sup> members of the scientific community have attacked what they perceive as "woke ideology", "political activism", or "critical race theory" within the scientific enterprise. They have adopted the talking points of right-wing grievance politics with uncanny precision, in order to mount a defense of "free speech" that is simultaneously an assault on diversity, equity, and inclusivity (DEI) efforts by universities. In what follows, I will examine the nature of the speech that these authors wish to defend, the biases that they choose to ignore, and the bedfellows that they make by framing their arguments in the language of White resentment. I will argue that the semantics of these arguments matter, in terms of who they empower and who is disenfranchised, and that today's free-speech movement within academia is an implicit defense of an academic culture dominated by White, heterosexual, gender-conforming men. This movement deserves to be taken seriously, if only to prevent backsliding that may erase what modest gains have been made towards diversifying the scientific community.

## 2 Free speech should not mean freedom from consequences

What does "free speech" mean? To certain people, it connotes the freedom to say whatever one wants, in any forum that one wants, and without consequences, as if this is somehow their birthright. I will call this the "birthright" definition of free speech,<sup>57</sup> and it seems to be the one favored by those academics who frame their arguments in the language of conservative grievance politics.<sup>24–49</sup> These essays define the concept of free speech largely by means of examples where the authors believe it has been curtailed. These include efforts to rename buildings, lectures, and awards whose namesakes have expressed views that are now widely regarded as racist, ableist, or misogynist.<sup>25,27–29</sup> Language guidelines adopted by scholarly journals, in an effort to avoid bigotry in scientific literature, are also offered as examples of suppression.<sup>26,28</sup> Lists are assembled of academics who have supposedly been "cancelled",<sup>24,34</sup> and the climate of contemporary academia is compared to the atmosphere that existed under totalitarian governments in the Soviet Union, Nazi Germany, and North Korea;<sup>25,27–29,35</sup> to China's Cultural Revolution;<sup>46</sup> to the anti-Communist "Red Scare" of 1950s America;<sup>29,39,49</sup> and to the self-censure practiced by Copernicus and Galileo, under threat of death.<sup>24</sup> Rebuttals to some of these arguments can be found elsewhere,<sup>58–61</sup> but a brief recapitulation will keep my arguments self-contained.

- It is one thing to name a phenomenon after an individual of dubious morality, *e.g.*, the Haber–Bosch process in chemistry bears the name of Fritz Haber, who was awarded a Nobel Prize in 1918 for its discovery but who is also considered to be the father of chemical warfare.<sup>61–64</sup> (Haber developed chemical weapons in defiance of the Hague conventions of 1899 and 1907.<sup>62</sup>) It is something else entirely to bestow an eponymous honorific upon such an individual, such as the Fritz Haber Institute in Berlin. Naming the phenomena is a matter of historical accuracy but the honorific implicitly and undeservedly celebrates its namesake's humanity.<sup>60</sup>
- Individuals are entitled to their opinions but they are not entitled to a platform for those opinions in a scholarly scientific journal. The retraction of a now-infamous opinion essay written by Prof. Thomáš Hudlický,<sup>65</sup> originally published in the journal *Angewandte Chemie*,<sup>66–69</sup> generated considerable gnashing of teeth by defenders of birthright speech.<sup>27–29,36,69,70</sup> The journal was accused of engaging in viewpoint discrimination,<sup>36</sup> for withdrawing a polemic that encouraged a culture of blind obedience by graduate students, singled out Chinese scientists as perpetrators of fraud, and decried efforts to diversify academia. However, every journal editor acts as a gatekeeper and it is no more outrageous for a publisher to decline content that fails to meet community standards than it is for *Science* or *Nature* to decide that a particular submission lacks sufficient impact to grace its pages.



Is the Hudlický incident, or the wave of renamed buildings across college campuses,<sup>71–75</sup> a sign of some climate shift amongst academics, away from free speech? Hardly. Renaming buildings is an exercise in re-evaluating institutional values, and Prof. Hudlický continued to enjoy free speech as a tenured academic until his death in 2022.

To substantiate the idea that a polar shift in intellectual freedom is underway, however, some have cited surveys suggesting that Americans' self-censorship presently exceeds levels reported during the McCarthy era of anti-Communist inquisitions.<sup>29,39</sup> This claim warrants some clarification. Data from the U.S. suggest that conservatives self-censor more than liberals,<sup>76</sup> but also indicate that self-censorship is driven by “micro-environments” consisting of friends, family, and neighbors.<sup>76</sup> Data from Germany indicate that identification with the far-right *Alternativ für Deutschland* party is the best predictor of self-censorship.<sup>77</sup> In the U.S., tolerance for offensive speech regarding race, gender, and religion is on the decline,<sup>78</sup> perhaps suggesting that support for the birthright definition of free speech is also waning. In view of this, increasing self-censorship might be a signal that mainstream society has increasingly little tolerance for bigoted views, and that the bigots understand this.

In my own experience, a few friends and colleagues have articulated a feeling that they are no longer able to say certain things in the workplace, lest they be persecuted by some imagined “diversity police”. My response is to ask for real examples. What is it that you wanted to say but did not, for fear of retaliation or condemnation? Perhaps it is something that might previously have gone unchallenged but that we *should* have been policing long ago. Maybe strong reactions to “cancellation” represent nothing more than persons who have traditionally wielded authority being told for the first time that a younger and more inclusive generation doesn't like their ideas.<sup>79</sup> Perhaps some of the same people who have long created unwelcoming environments are now triggered by the slightest pressure to consider how their words are received.

Absolutists who favor the birthright definition of free speech cite various examples where academics have been sanctioned, suspended, reassigned, or terminated, allegedly for espousing unpopular views.<sup>24,34–36,44</sup> As with the Hudlický case, however, the circumstances surrounding these examples are rarely as banal as those who reflexively defend their fellow academics would contend.<sup>80–91</sup> Typically, there is some offensive or inflammatory remark that is euphemized by free-speech hardliners, in order to minimize the culpability of the provocateur in question. Thus, for example, Prof. Amy Wax at the University of Pennsylvania is described as a “rhetorical grenade thrower”<sup>92</sup> for suggesting that the U.S. “will be better off with more whites and fewer non-whites”.<sup>93</sup> Her defenders question whether those remarks are sufficient evidence of a White supremacist attitude,<sup>94</sup> and they attempt to mollify her racism *via* paraphrase, suggesting that she is merely advocating for “immigration preferences that would advantage those already most culturally similar to the U.S.”.<sup>34</sup> In a separate example, a decision by the European Organization for Nuclear Research (CERN) to sever its relationship with physicist Alessandro Strumia<sup>95–97</sup> was suggested to be retaliation for a bibliometrics analysis in which he

questioned whether women truly face discrimination in physics.<sup>24,34,49</sup> That description substantially sanitizes the tone of a presentation in which Strumia questioned the value of having women in the discipline at all,<sup>84–86,95</sup> and also overlooks issues with his analysis itself.<sup>98,99</sup> As a final example, when the University of Victoria declined to renew an adjunct affiliation with Dr Susan Crockford,<sup>100</sup> a narrative emerged that she had run afoul of the climate-change orthodoxy.<sup>24,100,101</sup> In reality, Crockford has a long history of climate-change denial that is unsupported by scholarly publications.<sup>80,81</sup>

Surveying this landscape, I am left to wonder precisely what lost freedom is being mourned. Tenured academics who have become embroiled in controversy have generally retained that status, with a few exceptions.<sup>90</sup> For the most part, consequences have been limited to social humiliation, forfeiture of some academic kudos or titles (as with Prof. Strumia),<sup>102–104</sup> temporary suspension or reassignment of teaching duties (Prof. Wax),<sup>88,105</sup> or retractions along the lines of the Hudlický incident.<sup>106</sup> These consequences do not strike me as overly severe, and in my view the concept of academic freedom should not protect one's right to espouse bigotry, especially if it creates a hostile workplace or learning environment. In a few instances, positions have been rescinded when it came to light that individuals had expressed extremist views unsupported by scholarship, as with Dr Crawford.<sup>80,81</sup> In another example, postdoctoral scholar (and self-described Islamophobe<sup>107</sup>) Noah Carl saw his fellowship at Cambridge revoked when it came to light that he had authored pseudoscience papers on topics such as “race science” and “genetic intelligence”.<sup>82,107–110</sup> These were presented at a notorious eugenics conference held in secret,<sup>111–113</sup> and a subsequent investigation by Cambridge concluded that the scholarship in question was of such poor quality that it “fell outside any protection that might otherwise be claimed for academic freedom of speech”.<sup>114</sup>

The case of Dr Carl illustrates the crucial distinction between *academic freedom*,<sup>115,116</sup> which is based on scholarship and enjoys strong protections within the tenure system,<sup>90,91</sup> and a perceived right (by some) to make inflammatory remarks at will, about any topic whatsoever. Free-speech libertarians seek to defend the latter, often by conflating it with the former,<sup>90,91</sup> but academic freedom is not the same as absolution or immunity from the consequences of extramural speech.<sup>89,90,117</sup> To suggest that White supremacist language should be sheltered from consequences simply because the speaker holds the title of tenured professor is an absurdity on par with suggesting that academic freedom should protect a research program constructed around a flat-Earth hypothesis, young-Earth creationism, or phrenology. Although the U.S. Constitution protects free expression from government intervention, even where phrenologists are concerned, those protections generally do not extend to employer–employee relationships. The particulars of which extramural speech should threaten a faculty member's employment is not a debate that I am willing to have in the abstract, as it requires careful consideration of individual circumstances and (ideally) structures within universities whereby such cases can be adjudicated by other faculty, who are more insulated from political influence as compared to



administrators.<sup>90,117,118</sup> In any case, the distinction between speech and academic freedom is one that is too seldom recognized by academics.

My own assessment of these incidents is that a modern climate of *consequences culture*<sup>60,119</sup> is beginning to manifest in the form of long-overdue pushback against noxious viewpoints. There *should* be consequences for antisocial speech, and no one's academic freedom is legitimately imperiled by a social-media version of Newton's third law. It is worth noting that there exists a generational divide regarding the limits of permissible speech, with older Americans often defending an expansive view that disregards who might be harmed, while younger generations are less tolerant of speech that denigrates or demonizes others.<sup>120–125</sup> (Younger liberals also tend to avoid interpersonal relationships with conservatives.<sup>126–128</sup>) These data are sometimes construed as evidence that Gen Z is less open-minded and more intolerant than previous generations,<sup>129–131</sup> but perhaps what the data mean is that Gen Z (as a cohort) is simply unwilling to tolerate a racist system any longer.<sup>132</sup> It is perhaps not a coincidence that younger Americans are less likely to be White and more likely to be LGBT+ as compared to older generations,<sup>133–136</sup> although support for offensive speech is even lower outside of the U.S.<sup>137,138</sup> In America, the definition of free speech as it applies to racist, defamatory, or non-inclusive language has become a “contested norm”.<sup>123</sup>

To an older generation that thinks we can all be friends despite our political differences, I would say that this sentiment sounds like an expression of privilege by a dominant elite that seldom finds itself at the pointed end of an attack. High-minded opinion essays bemoan the “illiberal left”,<sup>139–142</sup> which is accused of “wokeness”<sup>141</sup> (as if that were inherently bad), but this attitude fundamentally misconstrues what liberalism is: a school of thought that vigorously defends the right of every person to live a safe and healthy life that is free of fear and intimidation. Given how White (cisgender male heterosexual) elites hold so many of the levers of power, there is an inherent asymmetry in public discourse whenever that group's views clash with those of marginalized communities,<sup>143</sup> who risk being railroaded out of the conversation. Some universities have begun to adopt free-speech policies that recognize how a dominant group can take advantage of unrestricted speech to overpower and suppress minoritized voices,<sup>144,145</sup> especially in a political environment where permissive campus speech policies are increasingly weaponized by the right.<sup>146–148</sup> Unfortunately, “weaponized” is hardly a metaphor in the U.S., where tactics of fear and intimidation are increasingly inseparable from right-wing political activism, with protestors exploiting open-carry laws to bring guns to political demonstrations.<sup>149–151</sup>

As others have noted,<sup>152</sup> free-speech debates are often not about speech at all but rather about a perceived right to air that speech in specific venues without social backlash, *i.e.*, birth-right speech. Those who argue that a repressive climate exists within academia have a tendency to apply the birthright principle specifically to tenured academics, whose speech they defend vigorously without regard to its content, yet the same proponents will deride lesser mortals (who have access to social

media but not to academic journals) as “vigilantes” or “mobs”.<sup>24,26–34,36–38</sup> This kind of *tone policing*,<sup>153,154</sup> in which a critique of the emotionality of an argument is used to deflect discussion of its substance, has long been used to silence marginalized voices.

Many of the flash points in the academic free-speech debate center on issues of race or gender that arise in the context of DEI efforts by universities. Defenders of speech-without-consequences focus on perceived “rights” that they believe are being stripped away, but it is important to contextualize who is making that argument. The freedom to engage in detached, emotionless, and supposedly scholarly debate on these topics, while ignoring unequivocal evidence of systemic racism and sexism within the scientific enterprise,<sup>155–159</sup> is a form of privilege and therefore an assertion of dominance.<sup>160</sup> I call it *ambient White supremacy*,<sup>161</sup> by which I mean behavior that serves to maintain the social hierarchy yet requires little more than inaction.<sup>162</sup> Too often, ostensibly race- and gender-neutral activities that perpetuate the status quo are hardly given a second thought by those with privilege, even while (or perhaps because) the effect is to bolster hegemonic power structures. Much of the current free-speech debate falls into this category because it fails to recognize the stakes for minoritized individuals and ignores the impact of the associated rhetoric on people of color. Public discourse is not a level playing field for all speakers, and especially with regard to issues of race and equality it does not make “symmetric asks” of all parties.<sup>143</sup> Those in positions of power can afford the luxury of polite discussion because they do not endure bias on a daily basis, but those who are targeted by systemic discrimination should not be required to explain why they feel disenfranchised. To minoritized communities, these “debates” are not academic and they are not debates. Instead they are attacks, and they are a tacit rejection of the lived experience (and trauma) of individuals from marginalized groups.<sup>157,163</sup> Voices of minoritized parties are too often drowned out when a principle of faux objectivity demands a White response to any viewpoint from a person of color. Others have argued that this is the most pernicious form of White supremacy: “the taken-for-granted routine privileging of white interests that goes unremarked in the political mainstream”.<sup>164</sup> Within academia, debates over diversity considerations in faculty hiring often invoke this type of “conferred dominance”,<sup>160</sup> or in other words, the privilege to ignore context.

### 3 Faculty hiring: the meritocracy myth

Free-speech hardliners are taking aim at DEI efforts within academia, specifically when it comes to faculty hiring. In the U.S., DEI or “commitment to diversity” statements are now a commonplace component of faculty job applications but that practice is decryd by some as an affront to academic freedom.<sup>33,48,165–168</sup> A frontline organization in these attacks is the Foundation for Individual Rights and Expression,<sup>168</sup> which has a long history of right-wing funding.<sup>169</sup> Other conservative





organizations have joined in these attacks,<sup>170–172</sup> often characterizing DEI initiatives as exercises in CRT,<sup>172–176</sup> and in the U.S. there is a growing push by conservative lawmakers to make DEI activities illegal.<sup>177–179</sup> Rather than assuming that diversity statements are intrusive, however, why not consider that they present an opportunity for candidates to enunciate professional activities (or plans for future activities) that do not naturally find a home in other parts of an application? To do so recognizes that there are many dimensions to what makes a good scholar, and that a research proposal and publication list may not cover all facets of leadership, mentorship, and pedagogy.

At the nexus of DEI efforts and the free-speech debate sits the case of Prof. Dorian Abbot, whose invitation to deliver a named lecture at M.I.T. was rescinded in the wake of controversy regarding his views on diversity considerations.<sup>104,180</sup> Perhaps most notably, Abbot has written that DEI initiatives will sap talent from American universities in a manner analogous to when Jews were expelled from German universities under the Nuremberg Laws,<sup>181</sup> and he has compared DEI efforts and “woke ideology” to Soviet totalitarianism.<sup>43,180</sup> (Professor Abbot’s lecture was later rescheduled at Princeton,<sup>180,182</sup> and he received a “Hero of Intellectual Freedom” award for his trouble.<sup>182</sup> Nevertheless, he subsequently made an appearance on Tucker Carlson’s Fox News program to bemoan his “cancellation”.<sup>183,184</sup>) Some have attempted to reverse victim and offender,<sup>29,34</sup> offering a sanitized version of events in which the courageous Prof. Abbot is merely an advocate for “equal opportunity, fairness, merit-based evaluation, and academic freedom”.<sup>29</sup>

The phrase “merit-based evaluation” is a canard used to justify the status quo, shorthand for refusal to acknowledge implicit bias or the fact that ostensibly objective metrics may encode bias.<sup>185–205</sup> Standardized test scores,<sup>198,199</sup> publication rates,<sup>192–195</sup> citation statistics,<sup>200–205</sup> grant funding,<sup>186–192</sup> patents,<sup>196</sup> and speaking invitations<sup>197</sup> have all been shown to exhibit bias against minoritized scientists. Women in science win fewer awards<sup>206–211</sup> and are less likely to be journal editors<sup>211–213</sup> as compared to men. Inequity begins much earlier, however, especially for people of color. Access to resources is a critical component of achievement, yet the availability of high-quality schools too often depends on income.<sup>214–217</sup> Access to institutions builds peer networks, thus poverty of opportunity is strongly influenced by race<sup>157,218–223</sup> as a consequence of the racial wealth gap.<sup>224–229</sup> This legacy affects the preparation of junior scholars, which warrants consideration as we address how merit should be evaluated.

The case for “merit-based evaluation” is best examined against the stark White backdrop of academia. In the U.S., only 6% of college and university faculty are Black as compared to 13% of undergraduates, and 5% of faculty are Hispanic *versus* 22% of students.<sup>230–232</sup> (Representation by both women and faculty of color drops when only tenure-track positions are considered.<sup>233,234</sup>) Increasingly, the undergraduate student body in America does not look like its teachers, as the former has grown from 16% to 46% non-White between 1976 and 2020,<sup>235</sup> consistent with a public grade school population that has been majority non-White since 2014.<sup>236,237</sup> Faculty hiring from

underrepresented groups is not keeping pace.<sup>238</sup> For example, between 1985 and 2020 the fraction of Black faculty grew from 4.1% to just 5.7%,<sup>235</sup> and the increase in *tenured* faculty of color has been even slower,<sup>239</sup> while rates of attrition are much higher for faculty in underrepresented groups.<sup>240–242</sup> If present trends continue, by 2060 the overall percentage of underrepresented faculty in the U.S. will lag about 20% behind demographic parity, at both research-intensive universities and liberal arts colleges.<sup>243</sup> While some countries are beginning to approach gender parity at entry-level faculty ranks,<sup>244,245</sup> this is only true when the data are aggregated across disciplines. Furthermore, women advance more slowly through the ranks than men, even when the data are corrected for productivity.<sup>246</sup>

These disparities are most pronounced in science, technology, engineering, and mathematics (STEM).<sup>247–253</sup> In the U.S., for example, less than 2% of chemistry and biology faculty are Black and only 3% are Hispanic.<sup>252,254</sup> In the U.K. in 2013, 18% of first-year undergraduate chemistry majors identified as Black or minority ethnic (excluding Asian students),<sup>255</sup> yet there was a singular Black faculty member in chemistry as of 2020.<sup>256</sup> A partial explanation lies in the dearth of doctoral degrees awarded to students of color,<sup>257–259</sup> e.g., in the U.S. only 3% of physical science Ph.D.s awarded in 2019 went to Black students and only 7% to Hispanic students.<sup>259</sup> Percentages are similarly low in engineering disciplines.<sup>260–262</sup>

That said, the widely-used “pipeline” metaphor<sup>263</sup> does not fully explain lack of representation. In 2001, women accounted for more 25% of physical science Ph.D.s awarded annually in the U.S.,<sup>264</sup> yet by 2017 more than half of the top-50 chemistry departments still had no more than 20% female faculty, and none had more than 32%.<sup>265</sup> The talent pool is “underutilized”,<sup>247</sup> in the sense that the proportion of assistant professors who belong to underrepresented groups continually and significantly lags the gender and racial composition of recent Ph.D. recipients.<sup>243,247–249,265–268</sup> For the past decade, the fraction of women hired by U.S. universities has been unchanged or has decreased in 107 separate fields of study,<sup>241</sup> despite the fact that women tend to be interviewed at somewhat higher rates than a random sample of applicants would produce.<sup>269</sup> Higher rates of attrition<sup>240–242</sup> partly explain why gender disparities are more pronounced at the rank of full professor,<sup>244,245</sup> and for the most prestigious awards and senior editorships.<sup>207,213,270,271</sup>

Data from the U.K. indicate that the fraction of women who express interest in an academic career plummets from 72% to 37% over the duration of the Ph.D. degree, whereas no significant drop occurs for men.<sup>240,272</sup> In the U.S. in 2016, only 26% of chemistry postdocs were women as compared to 41% of graduate students.<sup>265</sup> The pipeline leaks, so the metaphor goes, but often those leaks are evidence of systemic bias;<sup>156,243,273</sup> *something* is keeping women and people of color out of academic jobs. For women, documented concerns include work/life balance,<sup>274–284</sup> lack of professional support or mentoring,<sup>272,285</sup> a hyper-masculine workplace culture,<sup>240,286,287</sup> and differential standards that are reported by women but not perceived by their male colleagues.<sup>288</sup> For aspiring faculty of color, additional factors include the psychological stress incurred in navigating a professional landscape that expects conformity with the



prevailing White hegemonic culture,<sup>156,262,289–295</sup> as well as role models whose effort to be colorblind fails to acknowledge racial inequities in student preparation.<sup>296</sup>

Training additional underrepresented students up to the Ph.D. stage will be an insufficient salve until these underlying factors are addressed. Hiring data across disciplines suggest that the U.S. is approaching a steady state with regard to gender representation in academia, and one that is well below parity.<sup>242</sup> Why? One hypothesis is that family considerations limit the participation of women within the current structure of academia. Specifically in STEM disciplines, childbirth is a major driver of gender inequity as women leave their fields at much higher rates than men following the birth of a child.<sup>297,298</sup> Cultural schemas within academia continue to stigmatize motherhood and other caregiver responsibilities,<sup>278,299–303</sup> despite the fact that childbirth has no long-term effects on academic productivity.<sup>302,304</sup> Gender disparities persist in caregiver obligations, as evidenced by disparities in various productivity metrics during the COVID-19 pandemic.<sup>305–312</sup> The increasing “casualization” of the academic science workforce (e.g., postdoctoral scholars or adjuncts on short-term contracts),<sup>313–315</sup> combined with a lack of effective labor unions for students and postdocs at most universities, serves to calcify inequity in the form of an exploitative workplace culture that disadvantages anyone with obligations beyond the narrow scope of their scientific duties.<sup>301–303</sup> (Recent successful labor activism at the University of California is an interesting exception,<sup>316</sup> where students won a small subsidy for child care.<sup>317</sup>) All of these factors are likely to depress the metrics of potential faculty candidates who have caregiver responsibilities. The more emphasis that we place on those metrics, the more we tilt the supposedly meritocratic evaluation process in favor of candidates with no such obligations.

What can be done to mitigate the compromises that women feel they must make in order to pursue an academic career? University leadership must address abusive workplace culture,<sup>301</sup> including excessive working hours.<sup>315,318</sup> (Some studies have suggested that working beyond about 55 hours per week does not lead to increased productivity.<sup>319–322</sup>) Workplace culture may be partly responsible for a growing mental health crisis amongst graduate students and postdocs.<sup>314,323–329</sup> As a community, we must normalize the idea of flexible work schedules and a work culture that makes home life visible,<sup>315</sup> as women in academia often report feeling they must de-emphasize their role as a caregiver.<sup>302</sup> If an expectant mother already has federal grant funding, then administrative supplements are available under limited circumstances,<sup>330,331</sup> but we should not predicate this support on securing extramural funding. Paid maternity leave, access to child care, and conference travel grants to support child care would further mitigate the motherhood penalty.<sup>298,304,332–334</sup> While we are at it, why shouldn't we extend such benefits to graduate students and postdocs? If the answer to that question is “cost”, then I would ask: what monetary value should we place on equity? Developing or expanding the aforementioned programs would almost certainly help to recruit and retain women in academia.<sup>304</sup>

Whatever the underlying causes, it is farcical to suggest that the statistics cited above represent the equilibrium state of a merit-based hiring process. This “unwillingness to name the contours of racism”<sup>335</sup> (or sexism) is a defining characteristic of how White (male) supremacy permeates our culture.<sup>164</sup> Out-of-proportion hiring of White men is never viewed as a racial or gender preference, yet every candidate of color risks being labeled a “diversity hire” in the eyes of some. Network effects exacerbate inequality by amplifying the advantages of privileged groups,<sup>192,336–340</sup> meaning that those who aren't victimized by systemic discrimination actually benefit from it. The supposed meritocracy frequently devolves into pattern-matching, with a template that reflects the legacy elites who have historically dominated the scientific enterprise.<sup>341</sup>

These observations are not inconsistent with the fact that faculty diversity has improved somewhat in recent decades, especially with regard to gender. Studies suggest that older female academics sometimes conform to the values (and unconscious biases) of their male colleagues, in particular a science-above-all mentality and a philosophy of “toughness”,<sup>273,342</sup> as well as a belief in meritocratic rather than structural explanations for gender disparities in academia.<sup>343</sup> These factors dilute the effect that these women might otherwise have in reshaping academic culture.<sup>273,342</sup> That these pioneers have struggled and succeeded is evidence that some women are able to navigate a traditional male power structure, albeit sometimes by adopting stereotypically masculine traits.<sup>344,345</sup> Their success, however, need not indicate that the male-dominated power structure is fundamentally changing. Institutionalized discrimination manifests in the way that we support diversity in principle, yet we demand that a diverse cohort succeed according to metrics that were established by a hegemonic White male power structure. There are, however, some signs that younger women may be succeeding in academia without conforming to masculine norms.<sup>342</sup>

For all of these reasons, terms like “systemic racism” and “systemic sexism” seem inadequate, and only “White male supremacy” properly characterizes a world in which Whiteness and masculinity are the normative standards.<sup>9,164,346</sup> Some opponents of DEI initiatives advocate for separating science from morality according to Merton's principle of universality,<sup>25,28,37</sup> which supposes that it is possible to evaluate truth according to criteria that are unaffected by gender or ethnicity. This principle has been used to delegitimize the lived experience of minoritized groups,<sup>37</sup> ignoring the manner in which the entire academic system is designed around the lived experience of White men. A reality-based analysis must reject Merton's abstract conceit, as the notion that unconscious bias can be eliminated is wishful thinking, inconsistent with scientific data.<sup>347–351</sup> Merton's universalism supposes that science is open to anyone with talent, but science is not practiced in a vacuum and our social structures are neither race- nor gender-neutral.<sup>299</sup> That is Bell's “hard-to-accept fact that all history verifies”.<sup>5</sup>

Nevertheless, the idea that science and engineering are strictly meritocratic, apolitical endeavors is an endemic one, instilled from students' earliest training.<sup>352</sup> The notion that anti-racism efforts are detrimental to White interests is similarly deeply



rooted.<sup>353–359</sup> The latter view, however, is also politically partisan,<sup>358–360</sup> having been a mainstay of conservative American politics since the 1960s.<sup>360</sup> Much of the backlash against DEI efforts reads to me as the politics of White victimhood that emerged as a reaction to the movement for African American civil rights, and which is showcased whenever “merit-based hiring” is framed as the antithesis of “diversity hiring”.<sup>361</sup> It is a fallacy and an insult to suggest that these strategies are mutually antagonistic, or that merit and diversity constitute a zero-sum game. It is equally absurd to suppose that any unbiased metric exists, according to which candidates can be objectively ranked. Should that metric be the length of a candidate's publication list? Of course not, because the nature and content of the papers matters. (Moreover, the conventional narrative of peak productivity early in one's career does not hold up to detailed scrutiny.<sup>362</sup>) Should it be citation counts, which have well-documented gender bias?<sup>200–204</sup> Should it be the ranking of the candidate's doctoral institution? The latter encodes significant bias, given the overwhelming Whiteness of most elite institutions, many of which actively excluded people of color (as well as women, Jews, and others) for decades if not centuries. Western cultural schemas to evaluate merit evolved in Europe and the U.S. over those same centuries, when science in Western countries was pursued almost exclusively by White men. These paradigms inherently disadvantage women, people of color, and also gender non-conforming men.<sup>299,302,363</sup> For example, the “work-devotion schema”,<sup>302</sup> in which excellence demands singular focus on scientific activities, actively stigmatizes parenthood.<sup>299,301–303</sup> To a significant extent, our entire construction of the academic scientist (and thus our paradigm for “merit”) is predicated on the existence of domestic support structures.<sup>299</sup>

In practice, institutional pedigree is the metric that best correlates with who gets a faculty job,<sup>241,338,364–368</sup> and a tiny number of institutions account for the majority of U.S. faculty.<sup>241,365</sup> For example, half of the chemistry faculty at the top 25 research universities obtained Ph.D.s from just 10 institutions.<sup>369</sup> Across all disciplines, 20% of U.S. universities produce 80% of its faculty,<sup>241,367</sup> with just five institutions accounting for 1 in 8 faculty members.<sup>368</sup> One might hypothesize that candidates from these top universities are simply more qualified than their competitors but that assumption is at odds with existing data. Enhanced productivity at elite institutions has been objectively documented,<sup>370–372</sup> yet it has been demonstrated to be a function of environment rather than pedigree.<sup>339,372–375</sup> In other words, access to resources (including better students<sup>372</sup> and collaborator networks<sup>375</sup>) serves to amplify faculty productivity at elite institutions, as does the “Matthew effect” of accumulated advantage,<sup>339,376–379</sup> whereby notoriety begets greater recognition for work of comparable quality. In-group bias based on peer networks is also a likely contributor to documented racial disparities in grant funding,<sup>186–189,191,192</sup> which in turn contributes to documented retention issues for faculty of color.<sup>239,241</sup> (Experiments with double-blind review produced mixed results on the question of whether it aids underrepresented authors,<sup>380–386</sup> but do suggest that authors from top-ranked universities experience lower acceptance rates when their identities are concealed.<sup>384–388</sup>) Crucially, individuals

who obtain their Ph.D.s from lower-ranked institutions wind up being just as productive at elite institutions, despite differences in pedigree.<sup>339,374</sup> Unfortunately, the achievements necessary to attend an elite university (where peer networks begin to foment) represent a form of social capital, and systemic racism ensures that people of color have less of that capital.<sup>389</sup> Limited-submission “pathway to independence” awards (in the style of the NIH-K99 program,<sup>390</sup> but with a fixed number of applicants per institution) have been suggested as a strategy to promote institutional diversity amongst new hires.<sup>242</sup>

## 4 Diversity should be empowering, not threatening

In view of these data, it is difficult to defend the premise that academia is a meritocracy,<sup>302</sup> and hard to hear the phrase “merit-based hiring” as anything but a dog-whistle whose real meaning is to encourage a process that protects existing power structures by ignoring both implicit bias and the overwhelming evidence of systemic oppression of underrepresented groups within the scientific enterprise.<sup>155–159</sup> Prestige-driven hiring is a form of ambient White supremacy that reinforces existing social capital.<sup>336–340</sup> In reality, “merit” is not so easy to define or measure, and it is precisely because of that subjectivity that the process is vulnerable to implicit bias; there is always a tendency for successful people to use their own life experience as a paradigm to evaluate others. That homophilicity manifests within the faculty search process in language such as “top person”, “star”, or “visionary”, which is often used without qualification or quantification, and which is frequently code for promoting White men. The phrase “good fit” is an especially widespread form of euphemized bias,<sup>391–396</sup> by means of which the definition of merit is redefined on-the-fly in order to match idiosyncratic credentials of a particular applicant.<sup>397</sup>

This subjectivity, while daunting, also presents opportunities to broaden how we define merit. Why shouldn't a candidate's outreach or mentorship activities be considered alongside their discipline-specific technical proficiencies? Why shouldn't a candidate's bold ideas regarding how to advance inclusivity be considered alongside their clever proposals for new laboratory experiments? What if a candidate has ideas to address the ways in which introductory science courses disproportionately drive minoritized students out of STEM?<sup>398–401</sup> Progress towards mitigating that pernicious problem might be worth the equivalent of a considerable number of incremental research articles in an assistant professor's tenure dossier, though it will require research-intensive institutions to embrace and encourage young faculty members who have new ideas about teaching.<sup>402</sup> I suggest that a holistic view of faculty hiring must accept that excellence has many facets, including not just research endeavors but also an obligation to teach, mentor, and train new generations of scientists. The latter responsibilities are often overlooked at research-intensive universities. Women and faculty of color are left to shoulder the burden of mentorship, at significant professional cost,<sup>403</sup> in what is sometimes called the “minority



tax".<sup>404</sup> Not coincidentally, women are overrepresented in awards for teaching, mentoring, and service.<sup>206</sup>

That said, to ignore mentorship is to create a feedback loop whereby predominantly White Ph.D. recipients from top-ranked institutions continue to dominate academia. Given a student body that is increasingly non-White (46% of U.S. college and university students) and more than half female (59%),<sup>235</sup> we are increasingly depriving students of role models who look like themselves, setting up a self-perpetuating cycle of unsupportive mentoring relationships.<sup>156,405,406</sup> To counter this, evidence suggests that people of color benefit when their White mentors acknowledge race as a potential obstacle.<sup>220,295,407–409</sup> Social cognitive exercises, such as explicit discussion of issues related to representation, have been shown to have a positive effect on women's attitudes towards physical science.<sup>410–412</sup> Such exercises might combat stereotypes about intellectual ability that drive young women out of STEM disciplines.<sup>413–415</sup>

As academics, it is our job to ensure that educational resources are accessible to students of all backgrounds, but when our language fails to be inclusive—and rants comparing DEI initiatives to totalitarianism can hardly be considered otherwise—the effect is to maintain and bolster hostile environments for students and coworkers who are not White, or who belong to other historically marginalized groups. This includes the LGBTQ+ community, which may include as many as 1 in 5 young adults in America.<sup>135,136</sup> That community has faced its own representation, retention, and harassment issues within STEM,<sup>416–427</sup> sometimes in the form of *heteroprophesism* or the need to hide one's identity in the workplace.<sup>428</sup> (Within academia as within society, these issues are much more severe outside of the U.S. and parts of Europe.<sup>428–431</sup>) Unsurprisingly, LGBTQ+ individuals are more likely to be open in the workplace when they perceive a supportive environment and when employers have policies that protect against discrimination based on sexual identity.<sup>432–434</sup> Representation matters,<sup>423,429</sup> because it lowers barriers for others to be open. That simple fact has characterized the entire historical evolution of the struggle for LGBTQ+ rights.<sup>435</sup>

In contrast, non-inclusive language creates barriers (either implicitly or explicitly) that prevent some students from having the same access to educational resources as their peers. For example, an unwelcoming environment towards LGBTQ+ students within a particular research group might cause those students to self-select away from that group, closing off entire career opportunities even if students never experience explicit harassment. It is our duty as scholars and educators to make it unambiguously clear that individuals from all backgrounds are valued members of our community, and that means advocating for diversity.

Beyond that responsibility, however, we should place real value on diversity and not simply acquiesce to demographic changes, because data suggest that diversity enhances the health and productivity of the scientific enterprise.<sup>436–444</sup> Everyone has blind spots, and building a diverse community of scholars is how we collectively fill those gaps in knowledge, experience, and appreciation, while avoiding “group-think”.<sup>199,445</sup> Conversely, the semi-closed academic ecosystem

created by non-meritocratic, prestige-driven hiring impacts what research topics are pursued by newly-minted faculty.<sup>446</sup> Diversity thus pays dividends for scholarship, and educational practices can create a positive feedback loop. For example, curricula developed around DEI concepts can improve student buy-in by providing real-world context,<sup>447–449</sup> and there is evidence that diversity itself both enhances student engagement<sup>450</sup> and improves graduation rates for underrepresented students.<sup>451</sup>

To address stark racial disparities in college graduation rates, which do not correlate with secondary school preparation,<sup>452</sup> some have suggested elevating anti-racism studies in higher education.<sup>453</sup> Recognizing that racism (whether implicit or explicit) has often driven both curriculum and scholarship,<sup>454–458</sup> efforts are actively underway to “decolonize” the science curriculum in the U.K.<sup>459–461</sup> In pursuing such efforts, one must summon the resolve to face inevitable backlash, as students from culturally homogeneous backgrounds often perceive anti-racism efforts to be threatening.<sup>353</sup> Peer-cooperative instruction practices have been suggested as means to retain underrepresented students in STEM disciplines.<sup>452,462–464</sup> As scholars, we need to recognize that education is not a race-neutral construct,<sup>9,164</sup> and that an essential part of our job is to provide context and to “educate for critical consciousness”.<sup>9</sup> The challenges faced by underrepresented students cannot be adequately addressed so long as we insist on viewing society and education through colorblind schema.

## 5 The dangerous language of right-wing grievance

Much of what has been written recently in defense of academic free speech enthusiastically embraces the language of right-wing grievance. These similarities are not esoteric and should disturb even those who take an expansive view of free expression. Terms such as “cancel culture”,<sup>22,465–468</sup> “woke ideology”,<sup>19–23</sup> and “critical race theory”<sup>13–15,173–176</sup> are now routinely used to promote a political agenda that opposes progressive policies. Americans' feelings about “cancel culture” correlate with their overall political leanings,<sup>469–471</sup> suggesting that much of the current outrage over supposed threats to free speech may in reality be a response to perceived threats to White identity.<sup>471</sup>

Much of this language originates in the U.S., yet the volume of American media is such that it has quickly been exported. The same rhetoric has been adopted enthusiastically by Viktor Orbán in Hungary,<sup>472–474</sup> whose advocacy for the racist “Great Replacement Theory”<sup>475–477</sup> parallels that of leading figures in right-wing American politics.<sup>477–486</sup> Anti-LGBT hate speech by Orbán,<sup>487,488</sup> and by Vladimir Putin in Russia,<sup>489,490</sup> has made both men into darlings of the American political right.<sup>473,474,490–498</sup> Former Australian Prime Minister Scott Morrison described efforts to remove discrimination protections for the LGBTQ+ community as a fight against “cancel culture”,<sup>499,500</sup> and U.K. Prime Minister Rishi Sunak has described such





protections as “woke nonsense”.<sup>501</sup> In France, the epithets “woke culture” and “cancel culture” have been used in an attempt to discredit academics working on race and gender issues,<sup>502–504</sup> who have been labeled as “Islam-leftists”,<sup>504</sup> while the bombast of “cancel culture” and “woke ideology” has also been embraced by ultra-right parties in Germany and Italy.<sup>505–509</sup> These phrases are now fully dissociated from their progressive origins,<sup>18–21,56</sup> having become slogans for conservative politics and codewords used by those who would defend the status quo against progressive change.

Consider an example that involves a genuine free speech issue, namely, a recent move by the U.S. state of Florida to eliminate the institution of tenure in higher education by requiring that all academic appointments be renewed every five years.<sup>510–512</sup> (Similar efforts are underway or have passed already in several U.S. states.<sup>51–55,513</sup>) The Florida legislation follows an “intellectual diversity” survey that was sent to faculty,<sup>510</sup> and the Speaker of Florida’s House of Representatives made it clear that the goal was to prevent faculty from promoting a “radical agenda”.<sup>510,511</sup> Who decides what is radical? In this case, it is the same state government that passed a “Don’t Say Gay” law aimed at stifling discussion of LGBT+ issues.<sup>514–516</sup> Another new Florida law, designed to limit classroom and workplace discussion of race, is literally titled the “Stop WOKE Act”.<sup>516–518</sup> Florida’s governor has described that law, which faces legal challenges,<sup>519</sup> as a ban on CRT.<sup>520</sup> His rants against a “radical vigilante woke mob”<sup>521,522</sup> are indistinguishable (to my ears) from the language used by academics who defend birthright speech.<sup>24–27,29–38</sup> Whereas the latter group’s premise is that academics are devouring their own academic freedom, these examples encapsulate how catchphrases such as “woke identity” and “woke activism” are in fact used by politicians as a pretense to restrict speech, under the guise of a crusade against a purportedly anti-speech “cancel culture”.<sup>523–528</sup> It is these restrictions, rather than squabbles about offensive remarks by this or that academic, that are having a real impact on academic freedom.<sup>525–529</sup> It is disappointing that some members of the academic community are willing to join conservative politicians engaging in rhetorical sleight of hand.

Just as Noah Carl’s Oxford credentials were touted by White supremacists in order to promote eugenics,<sup>113</sup> amplification of right-wing talking points by academic scientists provides intellectual cover for policies and behavior that actually function to restrict free speech, and to embolden attacks on marginalized communities. Consider the following examples.

- Several U.S. states have recently passed legislation restricting classroom discussion of gender and sexuality.<sup>530</sup> At present, 18 states have banned transgender athletes from participating in youth sports,<sup>531,532</sup> and some are denying other transgender accommodations as well.<sup>532–534</sup> Florida’s governor has characterized such legislation as an effort to eliminate “woke gender ideology” from the curriculum.<sup>535,536</sup> A conservative politician with anti-LGBT views was recently selected to lead the University of Florida,<sup>537–539</sup> despite strident opposition from within the university.<sup>539,540</sup> Meanwhile, the person primarily responsible for the U.S. Republican party’s anti-CRT and anti-transgender obsession<sup>14,15</sup> has

been appointed to the Board of Trustees of a Florida liberal arts college.<sup>526–528</sup> In the U.S., transphobia has become a political statement.<sup>125,541–547</sup> The situation may be even worse in the U.K.,<sup>548–560</sup> where mainstream media outlets skew anti-trans<sup>556–563</sup> and there have been calls to remove legal protections for gender identity.<sup>501,562–564</sup>

- Anti-CRT rhetoric is equally politicized.<sup>170–176</sup> At least two dozen U.S. states have passed legislation that restricts the ability of educators to discuss race and other “divisive concepts”.<sup>565,566</sup> Similar laws are under consideration elsewhere,<sup>567</sup> and DEI efforts in general are under siege.<sup>177–179</sup> Absent serious discussion of race at the classroom level, racist ideologies such as Replacement Theory will continue to spread.<sup>567,568</sup>

- *This has led to harassment.* With coaching from anti-CRT advocacy groups, White parents in the U.S. state of Georgia mobilized to destroy the career of a Black educator who was set to become a school district’s first-ever coordinator for DEI initiatives.<sup>569</sup> Opposition to her appointment was framed as a fight against “woke political understanding”.<sup>569</sup> The state of Oklahoma recently moved to revoke the credentials of a teacher who provided access to books about LGBT+ identity,<sup>570–572</sup> which were banned under a new law that is part of a broader effort by U.S. conservatives to eliminate discussion of race and gender identity in the classroom.<sup>573–577</sup> (Over 100 anti-LGBT bills were introduced in U.S. state legislatures in the first few days of 2023.<sup>576–578</sup>) In the Oklahoma case, teachers were urged to avoid terms such as “diversity” and “white privilege”.<sup>579</sup>

- *This has led to violence.* Numerous mass shootings in the U.S. over the past decade can be traced to racist ideologies, inspired in part by Replacement Theory.<sup>475,580–583</sup> Nevertheless, some have tried to blame “cancel culture” for causing young White men to commit acts of mass murder.<sup>584</sup> Intimidation by armed protestors is the new reality for LGBT+ events in the U.S.,<sup>585–587</sup> fueled by a right-wing narrative that the LGBT+ community is “grooming” children.<sup>588–590</sup>

Contemporary enthusiasm for transphobia is especially troubling in view of data indicating that 30–40% of transgender individuals have attempted suicide,<sup>591–595</sup> with transgender adolescents at significantly greater risk than their cisgender peers.<sup>596</sup> Studies suggest that policy changes described above are already having a negative impact on the mental health of LGBT+ youth.<sup>597,598</sup> It is therefore notable that LGBT+ teenagers are more than four times more likely (as compared to heterosexual peers) to contemplate suicide.<sup>599</sup> They also experience homelessness at far higher rates.<sup>600,601</sup>

Transphobia has become a point of fixation for the birthright-speech community,<sup>30–32,36,37</sup> which has once again attempted to disguise bigotry under a patina of academic freedom.<sup>30,602–612</sup> One example is a controversial study of “rapid-onset gender dysphoria”,<sup>613</sup> a pseudoscientific term invented and weaponized by the trans-antagonistic community.<sup>614,615</sup> When that study was corrected following post-publication review,<sup>616–618</sup> there were accusations (from free-speech hardliners) of editorial interference.<sup>30,602,610</sup> In reality, the correction



added important clarifications such as the fact that data were not collected from the adolescent subjects themselves, nor from clinicians, but only from parents who were recruited from websites known to be skeptical of gender-affirming medical care.<sup>616</sup>

Efforts to de-platform so-called gender-critical scholars (a term that is itself a form of euphemism) have also drawn concerns over academic freedom.<sup>609–611</sup> The gender-critical community has successfully adopted the language of martyrdom and victimization,<sup>548,562,619–621</sup> in order to repackage attacks on transgender people into an ostensibly neutral guise that is palatable to certain establishment liberals who do not ordinarily traffic in right-wing tropes.<sup>563,619</sup> It is “laundered extremism”,<sup>615</sup> but in reality there is disconcerting overlap between gender-critical activism and far-right ideologies.<sup>620–625</sup> By suggesting that the trans community is denying “the material reality of sex”,<sup>610</sup> gender-critical scholars base their objections on a dimorphic, gendered-at-birth essentialism that presents a façade of neutrality,<sup>548,563</sup> but which ignores the diversity of non-binary sexual identity.<sup>561,621</sup> The existence of transgender people threatens those who would dichotomize gender,<sup>626</sup> with gender-critical scholarship often promoting a form of zero-sum feminism that is eerily reminiscent of White backlash again immigration, diversity hiring, and anti-racism efforts.<sup>627</sup>

One of the most visible gender-critical feminists is Dr Kathleen Stock, formerly of the University of Sussex, who has become a flashpoint in the free-speech debate. Her writing offers a shifting rationale for excluding trans women from female-only spaces,<sup>628,629</sup> and she has attacked the LGBT+ advocacy group Stonewall for its trans-inclusive activism,<sup>630</sup> suggesting that it exaggerates claims of anti-trans violence and has “turned universities into trans activist organisations”.<sup>612</sup> (There is no evidence that allowing access to toilets conforming to one's gender identity leads to any increase in sex crimes.<sup>631–633</sup>) Hundreds of academics signed an open letter decrying Stock's rhetoric for its role in promoting further oppression of the trans community.<sup>87,634</sup> Although publicly defended by her university in the face of student protests,<sup>635–637</sup> Dr Stock ultimately resigned her academic position citing lack of support from colleagues.<sup>638</sup>

While some of the protest efforts against Dr Stock might be characterized as harassment,<sup>607–610,639</sup> and with the strict caveat that threats of violence should never be acceptable, such incidents cannot reasonably be equated with the intimidation and violence that has been directed against transgender people.<sup>640–644</sup> Some have expressed concern that the calamitous departure of Prof. Stock from her academic position may have a “chilling effect” on academic discussions of gender identity,<sup>612</sup> but a competing viewpoint is that one should not expect outspoken bigotry to be met with polite debate. Denial of trans identity is a form of harassment and thus transphobia,<sup>640,645–647</sup> even when couched (as it often is) in a veneer of concern for the well-being of transgender or gender-questioning individuals.<sup>647</sup> When it comes to calling out bigotry, protesting gender-critical speakers, or petitioning universities to investigate

“scholarship” that undermines trans identity, I find it difficult not to sympathize with a community whose very legitimacy is constantly under attack. People *should* protest the denial of their rights, even when that rejection is camouflaged with a pretense of “academic freedom”. Transgender rights are human rights, and to abandon the former is to surrender the latter.<sup>590</sup>

Dehumanizing language aimed at historically marginalized groups, whether spouted by politicians or disguised as scholarship, has the effect of normalizing discrimination and creating a climate that foment stochastic terrorism.<sup>594,648–653</sup> Hate crimes are on the rise,<sup>654–657</sup> including those targeting the LGBT+ community.<sup>643,644,652</sup> For example, 40% of transgender Britons say they have experienced a hate crime within the past year.<sup>658</sup> In the U.S., there are indications that universities are failing to provide an equitable learning environment for LGBT+ students, leading to disproportionately high dropout rates as compared to heterosexual peers.<sup>659,660</sup> For students of color, the prevalence of hate crimes reinforces the “battle fatigue”<sup>661</sup> that they already experience at predominantly White institutions.<sup>262,290,291,661–663</sup>

## 6 Standing up: silence is complicity

Academics who desire freedom from the consequences of their own language strike me as this generation's “white moderate[s]” (to use King's phrase), unaware or unconcerned that their arguments resonate with the backlash against non-White perspectives that lies at the heart of anti-CRT rhetoric.<sup>664</sup> Overwrought concern over “outrage mobs”<sup>24,26–34,36–38</sup> reads like a desperate plea from in-group elites who are terrified that they are losing control of the social narrative to a younger generation that is both more diverse and more progressive.<sup>665</sup> Likewise, strong reactions to the climate in today's universities can be understood as a reflexive defense of the status quo, in the face of a new generation that is disgusted with the racism and sexism that have long been perpetuated by academic institutions. Those of us who belong to the dominant elite—and I certainly count myself in that category—need to recognize our own privilege,<sup>666</sup> and learn to appreciate that what strikes us as ostensibly neutral policy or objective measure often carries the full force of legacy discrimination and disenfranchisement behind it. Too often, tenured faculty work to protect the system that put them in a position of privilege, without questioning the assumptions that underlie the institution. This is precisely the power dynamic that CRT was formulated to dissect, and serious scholarship has been dedicated to understanding how paradigms constructed by White men over centuries have distorted our view of scientific achievement.<sup>302,667</sup> This is not “woke ideology”, but rather critical and essential self-examination.

Suggestions that we should not “politicize” the scientific enterprise,<sup>25,40–42</sup> or that scientific journals should keep social commentary out of their pages,<sup>45–47</sup> fail to recognize that doing nothing to address the legacy of racism and unequal representation is itself a social science policy: it is ambient White supremacy. Those who question the need for equity policies are effectively denying unequivocal evidence of systemic racism and



gender discrimination in science.<sup>155–159</sup> In some cases that rejection is explicit, as in calls to avoid injecting concerns about race into science,<sup>40–42</sup> with scholarship addressing racial inequality being dismissed as “political activism”.<sup>42</sup> This is a perfect example of White privilege, in its assumption that the scientific enterprise is unblemished by the racist society in which it exists. Any attempt to question the hegemonic power structure is regarded by the dominant group as inherently political, whereas behavior that perpetuates the status quo (and thus tacitly endorses the hegemony) is taken to be politically neutral. The privilege inherent in “just asking questions” is a tacit but no less pernicious denial of the manner in which those questions attack minoritized communities by reinforcing the norms of a White heterosexual male culture.

Freedom of expression and the freedom to pursue one's own research agenda are factors that have drawn many to pursue academic careers, but the present times call for caution and intentionality. Social pushback against non-inclusive speech is not the enemy of the academic freedom that we cherish, and even for tenured faculty there must be limits.<sup>90</sup> There are certainly genuine debates to be had regarding the climate and culture of modern universities, including what should be done when conservative provocateurs invite speakers to campus whose basic theses are attacks on marginalized communities.<sup>146,668–670</sup> Who decides what is controversial *versus* what is simply inflammatory? Who shall pay for security when communities targeted for harassment invariably come out to protest?<sup>146–148</sup> Social media has amplified this debate and altered its contours in ways that prevent simple comparisons to the campus free-speech movement at Berkeley in the 1960s.<sup>671</sup> In its contemporary incarnation, invitations to radical “alt-right” speakers are often intended simply to focus attention on far-right points of view;<sup>668</sup> the outrage and the protests are not a by-product, they are the goal. With regard to these and other campus free-speech issues, there are undoubtedly cases where university officials have overreacted, though perhaps not with nefarious intent, but the complexities are difficult to disentangle when the defenders of birthright speech insist upon euphemizing bad behavior.

It is the duty of decent people not to aid in furtherance of racist ideas, and as members of the academic and scientific communities we cannot allow ourselves to provide intellectual cover for—and thereby lend credibility to—society's worst elements. Replacement Theory is no longer a fringe idea but a mainstream one,<sup>473,476,672</sup> espoused by top-rated television news programs and conservative politicians.<sup>477–486</sup> By some measure, the last few years have seen radical right-wing politics enter mainstream conversations to an extent not seen in a generation.<sup>673</sup> Those who advocate for a perceived entitlement to say whatever they want, without fear of backlash, are using their privilege and the megaphone that it provides in order to advance the language of exclusion rather than inclusion, in dangerous resonance with the enemies of progressive social change. These are the elements of genuine illiberalism, and to counter those forces it is incumbent upon the rest of us to hear the voices of those with less privilege and to choose our words in ways that welcome students and colleagues of all backgrounds.

As a prerequisite to any serious discussion, we need to divorce ourselves (and our literature) from the language of White supremacy, from the language of transphobia, and from those who enable or promote either.

Lack of diversity in academia requires structural solutions that go beyond bemoaning the “pipeline”, and which recognize that underrepresented scholars—even those who make it to a Ph.D. degree—face real barriers. Others have articulated specific ideas regarding improvements to faculty hiring procedures,<sup>393,674</sup> mentoring practices that are explicitly conscious of racial identity,<sup>262,409,675–678</sup> creation of an anti-racist university atmosphere and curriculum,<sup>447–449,461,677–683</sup> and more equitable grading strategies.<sup>684–687</sup> These must be introduced in tandem with institutional support and reward structures for DEI activities.<sup>674,688</sup>

We must fight the reflexive urge to defend the status quo against change, and acknowledge that the present way of doing things supports White supremacy.<sup>689</sup> Along those lines, a common refrain from colleagues is “I support diversity, but...”.<sup>393</sup> Although the speaker usually trails off, one may easily complete the sentence: “...I am unwilling to do anything beyond pay lip service, especially if it requires changing the way that we do things”. The speaker might as well admit that he or she supports diversity, *provided that everyone acts like a White, gender-conforming man*. (This is documented in scholarship and evaluation penalties for non-White faculty.<sup>239,404,690</sup>) Thus we get search committees who triage applicants using curriculum vitae, because that is easier than reading entire research statements, and prestige-based hiring persists. *Complacency supports White male supremacy*. As an alternative, consider reading anonymized research and diversity statements,<sup>691</sup> assessed using rubrics,<sup>397,692,693</sup> prior to looking at vitae or recommendation letters. This requires more effort, but no one said that dismantling hegemonic power structures would be easy. Department Chairs need to recognize the significant service commitment that is required to run a faculty search the right way,<sup>694</sup> and they need to appoint faculty who can be trusted to do so.<sup>393,695</sup> Search committees need to be vigilant in holding their colleagues accountable and calling out counterproductive behavior.<sup>393,696</sup>

There is room for debate about tactics, so long as that debate is not overtly hostile to the idea of using diversity as one aspect of a holistic approach to evaluating merit in our future colleagues. Should we have faculty searches that are open only to underrepresented candidates?<sup>697</sup> Should we screen applicants based on diversity statements alone?<sup>698</sup> Extend the tenure clock for everyone, in order to accommodate childbirth without exacerbating the gender pay gap?<sup>699</sup> I mention these specific examples because they make me uncomfortable, even as an advocate for diversity, yet I am open to discussion. A careful consideration of tactics does not mean that we discard the entire idea of a holistic evaluation of merit. Moreover, these conversations need to acknowledge what Bell called the “permanence of racism”:<sup>700</sup> White people being invested in the status quo is not an aberration, it is the norm,<sup>701</sup> and STEM is no exception.<sup>155–159</sup> We must acknowledge the dramatically different lived experience of many underrepresented students



as compared to their advisors. To have a truly free and fair debate, we must maintain a clear, bright line between our community and the true enemies of academic freedom, who are working hard to perpetuate the status quo. DEI efforts by universities and scientific societies are not a slippery slope towards totalitarianism but rather good-faith attempts to name the contours of White male supremacy (and of prestige-driven pattern-matching), and in so doing, begin to erode them.

A first step is to acknowledge that those who are not victims of systemic discrimination are its beneficiaries. (Others have said this out loud,<sup>157,702</sup> but many are squeamish. The suggestion that science is anything but a perfect meritocracy is often perceived as an attack on the integrity of the scientific enterprise itself.<sup>341</sup>) It is morally incumbent upon those who have benefitted from discrimination—namely, White men—to do some of the work of calling out retrograde ideas when they are encountered, even if they originate with friends or colleagues. Bystander intervention training is a proven strategy to combat sexual harassment and sexual violence,<sup>679,703–706</sup> and one may expect that similar strategies can be effective against other objectionable behavior.<sup>422,707</sup> Intervention is often awkward and uncomfortable, but revolutionary change is always disruptive. Don't accept it at face value when a friend or colleague complains that they must self-censor to avoid the “diversity police”; ask for a real example of something that person was afraid to say. Just as words can be political, silence also makes a statement,<sup>708</sup> and ignoring the legacy of racism and sexism in science, along with the ways in which toxic indifference continues to shape our culture, is a capitulation to White male supremacy. The status quo will persist so long as those in power are comfortable doing nothing, or relegating diversity considerations to sideshow discussions. We cannot “just focus on the science”, because the manner in which society intersects science is a critical aspect of the scientific enterprise. Instead, we need to speak and act as advocates for social change. *What is the purpose of tenure, if not for a struggle such as this?*

Beyond being confrontational, take a moment to consider whether you wish to provide a platform to those with noxious ideas. There is no shortage of scientists with tremendous technical accomplishments, so is a person who is committed to the social status quo, or who pushes an agenda of speech without consequences, the best choice for an invited speaker, or for an award? (The Royal Society of Chemistry does not think so.<sup>709,710</sup>) When forming leadership committees, or search committees to hire new faculty, consider whether such individuals ought to function as gatekeepers. For such duties, a person's technical prowess is only one consideration. Speech *should* have consequences because words have ramifications, especially when they originate with people in positions of power. Allowing a tenured academic the freedom to pursue their own research agenda does not mean that their biases should be allowed to stall progress towards a more inclusive academic and scientific community. This is not “cancelling” so much as *recalibrating*.<sup>60</sup> It is a necessary step in moving science and society forward.

## Data availability

No new data were produced as part of this work.

## Conflicts of interest

There are no conflicts to declare.

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