
Science, Race, and Scientific Truth, Past and Present

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This article examines the violation of longstanding scientific norms, in particular universalism, objectivity, and truth orientation by new identity policies such as the principle of ‘diversity, equity, and inclusion’ (DEI). The imposition of this principle by public opinion, administration, and mass media, particularly in the United States but also in other countries, contradicts the principle of equal opportunity regardless of race, gender, nationality, and class, by putting the emphasis of assessment on group identities. The implementation of this principle has begun to damage careers, threaten scientists and lower standards in academia. In order to provide a historical perspective, I review how the violation of scientific norms has impacted scientific success in past authoritarian countries, in particular the USSR under Stalin, and Nazi Germany. The comparison with past authoritarian countries does not aim at equating situations from then and now, but can help understand social and political mechanisms of current events. It also highlights in a drastic way consequences that a violation of scientific norms may have for science today.

Introduction

The ‘rapid growth [of China’s research capacity] has not necessarily been accompanied by an equally measured promotion of the cultural norms of the scientific enterprise. Most troubling is a lack of research integrity, which may hinder China’s growth in original science, damage the reputation of Chinese academics, and dampen the impact of science developed in China’ (Yang 2013). This assessment of the president of the Chinese National Science Foundation, Wei Yang, serves here as a reminder of the indispensability of the compliance with scientific norms for science to be successful. Most philosophers of science agree that science is a rule-governed

activity for the generation of beliefs about the physical world (see, for example, Laudan 1984). These rules or norms, most importantly objectivity, universalism, and truth orientation, have been generated over centuries, first in Europe and then in other countries. They have been highly successful in basic and applied science, but they are fragile and need constant support. They have to be accepted by scientists and society as cultural norms in order to lead to success.

Scientific objectivity and truth-orientation are considered major reasons for the recognition of scientific knowledge as the basis of the authority of science in society, despite the changing nature of these concepts and their multiple meanings. Many scientists have biases and can be driven by beliefs in the correctness of their theories. Objective knowledge is the result of a process where individual biases are gradually filtered out; scientific results have to be confirmed by more than one researcher in order to be objective. ‘Scientific truth’ has remained a contested notion in philosophy of science, and its standards and the methods to achieve it have changed throughout the course of history (see, for example, Hacking 1983; Daston and Galison 2007). However, the notion of truth, not as absolute and unchanging truth, but as reliable knowledge based on experiment and logic, has become – and has remained – a fundament of the empirical sciences since the days of Bacon and Galileo in the early seventeenth century, and in modern biology since the end of the nineteenth century. Most empirical scientists hold that there is an objective reality and that experimentally corroborated scientific theories largely reflect aspects of that reality.

Scientific knowledge about the natural world is based on scientists’ competence and methodologies. According to Robert Merton (1973 [1942]), the idea of universalism means that scientific work and findings should be evaluated on the basis of ‘preestablished impersonal criteria: consonance with observation and with previously confirmed knowledge.’ It may sound idealistic given that throughout the centuries, under political pressure or for other reasons, scientists have been influenced by prevailing ideologies. Yet universalism is one of the principles that, together with special methods and epistemologies, has enabled science to generate knowledge that is superior and more reliable than that generated by any other human activity.

In this article, I examine how the violation of basic scientific norms has impacted scientific success and the notion of truth in past authoritarian countries, and how these norms are violated today by Diversity, Equity, and Inclusion policies that are a part of Critical Social Justice/Identity politics, where the words no longer carry their original meaning but a refined one (see, for example Pluckrose and Lindsay 2022). Although a comparison of today’s conditions with the past should not equate situations from then and now, it can help understand social and political mechanisms of current events. Likewise, analysing current events can shed new light on past events, showing that some of them may not be so unique as has been believed. Significant differences from past authoritarian countries, in particular the USSR under Stalin, and Nazi Germany, are that the relevant ideologies today are not generated by authoritarian governments or totalitarian parties, but often by societal movements, and that dissenters or racially/ethnically not accepted people do not lose

their civil rights and are not deported to gulags and concentration camps. Looking into the past also shows that different sciences in different authoritarian countries were affected by ideology in different ways, some not at all. The fate of a particular science does not permit generalization to all sciences, nor conclusions about the character of a regime. The fact that some sciences in the USSR and in Nazi Germany prospered does not render the regimes less murderous.

I begin with a short review of the severe blow that Lysenkoism dealt to genetics and agronomy in the USSR. As already mentioned, I do not use this example to equate the situation in democracies with that of the USSR under Stalin. Lysenkoism is also not exemplary for what happened to science in the Soviet Union, where in contrast to genetics and agriculture, physics seems to have been hardly affected. Instead, I use this well-known case to remind us of the fragility of the basic scientific norms of universalism, objectivity, and truth orientation and to illuminate what consequences their violation may have for science.

Lysenkoism and Neo-Lysenkoism – Effects of the Violation of the Norms of Truth-orientation and Objectivity

The anti-genetic campaign launched in the USSR in the late 1920s was the strongest ideological attack on science and scientists in the USSR and in the modern history of science in general, leading to a complete transformation of a discipline into pseudoscience. It had its roots in the nineteenth century, when Darwin's materialistic ideas played a major role in secularizing Russian society, and Mendel's new genetic concepts were shunned as an attack upon Darwinism and the accepted materialist view (Lazcano 2010).

Trofim Lysenko was an agronomist from Ukraine who, in the 1930s and 1940s, became the leader of biology and agronomy in the Soviet Union. The strong anti-Mendel and pro-Darwin tendencies among the Russian leftists formed the ideological background against which Lysenko built his anti-genetic doctrine of heredity, but the devastating situation in Soviet agriculture after the large-scale collectivization of private farms was as important for his success. Lysenko raised hopes for the rapid breeding of new crops through novel methods. He became known in the public in 1928 when his publication on 'jarowisation' (vernalization) was sensationalized in *Pravda*.

The idea of vernalization, a practice that originated outside Russia, was that by treating seeds with moisture or cold, they could be induced to produce a crop with different properties. For example, winter wheat would germinate even in spring. Unlike the scientists who first conducted the research on vernalization, Lysenko claimed to have succeeded in producing 'vernalization' on a large scale and to have increased crop yield. His later claims that the 'vernalization' effects were inherited and that he could transform one species into another (both baseless) marked the beginning of his fight against established genetics (Deichmann 2014).

Lysenko's opposing 'genetics' did not originate from scientific discussions about heredity or other topics; his ideas were not derived from Lamarckism or Lamarckians' discussions in the Soviet Union (Joravsky 1970), although he later used the notion of the inheritance of acquired characteristics as an ideological tool. In the main, he derived his ideas from practical agriculture and popular beliefs. His model was Ivan V. Michurin, a popular agricultural practitioner and breeder of fruit trees, whose basic principle was 'the purposeful and directed training of hybrids' by the environment (Yakovlev 1949), likewise an unfounded idea.

Lysenko vehemently rejected the distinction between genotype and phenotype, which he equated with 'Mendelism-Morganism-Weismannism'. To him, the established genetics was 'the same as idealism in biology' that he contrasted with the 'Michurin trend in biology, . . . a materialistic trend because it does not separate heredity from the living body and the conditions of life' (Lysenko 1948). Lysenko denied the relevance of mathematics and statistics for biology, using extremely small and genetically heterogeneous samples and almost no controls.

Lysenko's work became politically ideologized starting around 1930 when he joined forces with Isaak I. Prezent, a Communist party ideologue who recognized the ideological potential of Lysenko's 'genetics'. A pseudoscientist, Lysenko disregarded or rejected well-established theories and practices in genetics and cell theory. He was supported by political power and terror in a way that was unprecedented in modern science. Starting in the 1930s, institutes of genetics were closed down, journals ceased to appear, books were removed from library shelves, texts were revised, and names became unmentionable. Opponents of Lysenko's genetics lost their jobs or were forced into other areas of work. Dissident scientists, among them Nikolai I. Vavilov, an internationally renowned geneticist and botanist, and the Jewish geneticists Israel Agol, Max Levin, and Solomon Levit, were murdered, many of them denounced by Lysenko himself.

Genetics was fully defeated in August 1948 at a session of the Lenin All-Union Academy of Agricultural Sciences headed by Lysenko and personally directed by Stalin. It marked the USSR's commitment to developing a national science, separated from the global scientific community. This session is a prime example of the swiftness and efficiency with which scientific dissidents were silenced and forced into public retractions (Borinskaya *et al.* 2019). The wave of suppression and murder of dissident scientists that followed Lysenko's rise to power, especially from the late 1940s, has been documented by Zhores A. Medvedev (1969), David Joravsky (1970), Loren Graham (1993), Valery Soyfer (1994), Nikolai Krementsov (1997), Svetlana A. Borinskaya *et al.* (2019), and in articles in the Russian language. Not until Khrushchev's fall from power in 1964 did Lysenko finally lose power, and his pseudoscientific doctrine lost government support.

It is most alarming the Lysenkoism re-emerged in Russia after the collapse of the Soviet Union in the 1990s. This neo-Lysenkoism is supported by 'Putin's revival of Soviet attitudes' (Graham 2015) and is caused, among other things, by the old debate between national and global culture in Russia and the political fight against the West (Kolchinsky *et al.* 2017).

To conclude, Lysenkoism shows that, within a few years, ideologies combined with political pressure changed the ‘cultural norms of science’ and took precedence over the principles of truth-orientation, objectivity and universalism. The prevalent ideologies were an anti-Western, nationalist identity ideology and a populist anti-genetic ideology that was in line with the communist primacy of the environment and re-education. As a result, a flourishing science, namely genetics in Russia, was almost completely demolished in the past and is threatened again today.

Threats to Objectivity and Truth-orientation Posed by Current Identity Policies

The norms of scientific objectivity and truth have been repeatedly challenged in Western democracies, for example in philosophical–sociological discourses about the denial of the existence of scientific facts that are related to names such as Foucault, Latour, Bloor, Fuller, and others. However, in most cases, these discourses took place as intellectual discussions in the humanities and the public; they rarely affected the (natural) sciences. In contrast, identity policies today are not intellectual discourses, but powerful movements allegedly aiming at improving social justice in all academic disciplines and institutions. They are related to group identities of race and gender and operate under the labels of Decolonizing Science or Diversity, Equity, and Inclusion. I demonstrate their power by first reviewing the case of Tomáš Hudlický and the journal *Angewandte Chemie* before offering a more general view.

The Case of Tomáš Hudlický and Angewandte Chemie

Tomáš Hudlický, professor of chemistry at Brock University in Canada, was a renowned chemist in the field of organic synthesis. He became a victim of campaigns launched against him, predominantly in the name of ‘diversity, equity, and inclusion’ (DEI) after publishing an article that contradicted some dominant opinions. His case sheds light on the ideological pressure that has started to severely affect the freedom of expression brought about by the DEI movement and other ideological strands.

Hudlický’s essay, “‘Organic Synthesis – Where Now?’ Is Thirty Years Old. A Reflection on the Current State of Affairs”, was published by the renowned German chemistry journal *Angewandte Chemie* in its international edition on 4 June 2020. Along with historical reflections on chemistry, Hudlický pointed to positive and negative factors that have, in his opinion, influenced organic synthesis and science in general. A public outcry on social media, especially Twitter, followed, mostly from North America. Not only were Hudlický’s views attacked, but he himself was declared to be ‘racist’, ‘misogynist’, ‘sexist’, ‘patriarchal’ and even ‘abusive’ (Tibollo 2022). The magazine felt compelled to remove the piece two days later, on 6 June 2020. Note, this extreme response was not simply a retraction, with a retraction note.

The following is a summary of the incriminated passages in the paper. Addressing the topic of ‘Diversity of Workforce’, Hudlický defended the merit system and the

idea of equality of opportunity in academia, and he expressed reservations about preferential hiring on the basis of race and sex if it was not supported by merit:

New ideologies have appeared and influenced hiring practices, promotion, funding, and recognition of certain groups. Each candidate should have an equal opportunity to secure a position, regardless of personal identification/categorization. The rise and emphasis on hiring practices that suggest or even mandate equality in terms of absolute numbers of people in specific subgroups is counter-productive if it results in discrimination against the most meritorious candidates.

This statement reflects long-established norms, but it is neither racist nor sexist. In fact, it points to the racism inherent in the ‘diversity, equity, and inclusion’ principle that may lead to the denial of equal opportunity to meritorious scientists who don’t have the right skin colour or gender. It should be emphasized that Hudlický was not racist in his practice either: his own workgroup was highly diverse in both gender and ethnicity.

Discussing ‘transference of skills’, he endorsed Michael Polanyi’s view that the training and mentoring of new generations of professionals must be attended to by proper relationships of ‘masters and apprentices’ without dilution of standards. Polanyi was a physical chemist who, after his forced emigration from Nazi Germany as a Jew, turned to being a philosopher of science. His ‘master and apprentice’ metaphor (Polanyi 1962 [1958]) is borrowed from traditional German craftsmanship where, in order to learn, apprentices follow their masters (*Meister*) until they qualify to execute professional work on their own and guide apprentices themselves. The metaphor has nothing to do, as insinuated in Twitter messages, with conditions of slavery. It refers to a conservative educational principle in many areas, including sports and music.

Finally, in discussing ‘the integrity of literature’, Hudlický criticized certain publication practices by Chinese scientists in Western journals:

In the 21st century, more publications on organic synthesis originate in China than from any other country. The pressure on Chinese academics to publish in ‘Western’ journals is immense, and it is therefore not surprising that fraud and improper publication protocols are common.

He cites two papers published following an investigation into Chinese publication practices in the West, by the journal *Science*. These papers document and criticize practices such as commercial concerns that guarantee publication in a high-impact journal for a fee (Hvistendahl 2013; Yang 2013). As mentioned above, Wei Yang, the president of the NSF of China, criticized that the rapid growth of China’s research capacity had not been accompanied by a promotion of the cultural norms of the scientific enterprise. Yang pointed, for example, to widespread competitive research grants that provide an economic incentive for ethical violations, and to the use of quantitative rather than qualitative measures of merit that encourage misconduct. In

other words, Hudlický criticized Chinese ethical maxims in science that already had been a source of concern not only in Western countries, but also in China itself.

Responses from the journal *Angewandte Chemie* and other chemical institutions to Hudlický's article reveal an alarming degree of conformism with the opinion of militants on social media. The German Chemical Society, the owner society of *Angewandte Chemie*, explains the removal of the article as follows: Hudlický's article

was published on the website of *Angewandte Chemie* as an 'Accepted Article.' The article expressed offending views about women and other groups underrepresented in science. In addition, the Chinese research community was unjustly defamed. It contained a description of mentorship in science that contravenes the values of good working practice and education. The opinions expressed in this essay are those of the author and they violate the values and codes of conduct of the journal, the members of staff, the Editorial Board, and the German Chemical Society (GDCh), the owner society of *Angewandte Chemie*. As a first immediate response, the article was removed from the Wiley Online Library. A full investigation of the case has been initiated. (GDCh 2020)

The Society included links to the deleted article and Hudlický's comments from July 2020 in its webpage (GDCh 2020).

A day after the article had been removed, Brock University's Provost and Academic Vice-President, Greg Finn (2020), publicly condemned Hudlický's statements, risking damage to his (Hudlický's) professional reputation permanently. The Organic Division of the Canadian Society for Chemistry categorically rejected the views of its former award-winner and 'stands with those working to dismantle the entrenched structures of discrimination based upon (but not limited to) gender, race, age, disability, religion, sexual orientation, or national origin' (Tibollo 2022). Representatives from the three federal agencies that administer the Canada Research Chairs Program, which brought Hudlický to Canada and helped fund a large portion of his career, joined in the public condemnation of the chemist: 'As the heads of Canada's federal research funding agencies, we wish to be explicit in stating that we do not support the deplorable views on equity, diversity and inclusion (EDI) represented in (Hudlický's) paper' (Tibollo 2022).

Two days after the article was removed, in a most alarming action, 16 members of the International Advisory Board of *Angewandte Chemie* resigned, denouncing the 'disturbing act of *Angewandte Chemie* accepting and publishing an essay that promotes racist and sexist views'. A day later, on 9 June, the journal apologized to its readers 'that this offensive and misguided essay was published in our journal,' denouncing its 'offensive and inflammatory language aimed toward people of different genders, races, and nationalities' (Retraction Watch 2020).

To reiterate, the article supported conservative values, but it did not contain 'racist' or 'sexist' views, nor can any 'offensive and inflammatory language' be found in it.

The resignation of the 16 members of the International Advisory Board (IAB), 15 of whom are from North America, deserves closer examination. Apart from a baseless accusation of Hudlický, their resignation letter also harmed a very renowned European chemistry journal through an attitude that appears to be a complete over-reaction devoid of tolerance for different opinions in a situation in which advice and support for the editors should be expected. This was expressed by Ehud Keinan, professor of chemistry at the Technion in Haifa and editor of the *Israeli Journal of Chemistry*, in a letter on 10 June 2020, to ‘his friends at *Angewandte Chemie* and GDCH’:

[...] I feel that the intense attack on one of the best chemistry journals worldwide has gone out of proportion. Obviously, accepting that article was a terrible accident but certainly not evidence of any conspiracy theory. . . . for many people, some phrases in the letter [written by the 16 members of the advisory board] could imply that *Angewandte Chemie* has some hidden agenda: ‘correct its actions . . . the clear need for drastic change at *Angewandte Chemie* . . . a path forward for the journal to remake itself and lead in a way that promotes a future for our field that rejects institutional racism and sexism and instead visibly and clearly embraces diversity and inclusivity.’ This language could imply that racism and sexism have been the journal’s open or hidden policy. I am sure that none of the IAB members ever embraced such an attitude.

Keinan, who knows nearly all the 16 chemists personally, fails ‘to understand the mass resignation, which looks like a punitive action against the journal’. (I am grateful to Ehud Keinan for showing me his letter.)

It should be added that the author of this essay contacted all signatories of the resignation letter but received only two answers to the question about their reasons for the resignation; stating (i) that the handling of the affair by the editors was the prime reason, and (ii) that among the initiators were several people whom this signee greatly respected. Thus, the reasons for this mass resignation mainly remain unclear.

Hudlický himself was most troubled by the fact that

social media rage led to the intimidation of the executive staff of a major journal, attacked me personally, and induced Brock University into issuing a strong moral condemnation of my views (and my values), with threats of taking further action against me.

He received support from many institutions and individuals (Hudlický 2020a), including the *Canadian Association of University Teachers* and the *Brock University Faculty Union*. On 3 August 2020, Hudlický explained his position in greater detail and made clear his anti-racist and anti-sexist stance (in theory and practice) (Hudlický 2020b). Indeed, his research group shows a much greater gender and ethnic diversity than that of some of the advisory board members of *Angewandte Chemie* who resigned in protest against the publication of his article.

Epilogue

When Lynn Wells replaced Gregory Finn as Provost and Vice-President in July 2020, the president of the National Association of Scholars, Peter Wood, wrote an open letter to her, asking her to right the wrong committed by her predecessor (Wells did not respond):

If you and Brock University publicly vindicate Professor Hudlický and reaffirm that your bedrock values are academic freedom and charitable tolerance rather than enforced conformity to diversity, equity, and inclusion, you will be honored for making the right choice – and for restoring Brock University to its better self. (National Association of Scholars 2020)

According to his wife, Tomáš Hudlický passed away ‘unexpectedly’ on 10 May 2022, at the age of 72 during a visit to Prague, the city in which he was born and raised, and from which he emigrated in 1968 (Tibollo 2022). The obituary of Brock University written by Wells on 12 May 2022, contains the sentence, ‘The passing of a Brock community member who has had such a distinguished career as a researcher, is tremendously upsetting.’ It does not mention the campaign against him, including from Brock University, following the publication of the incriminated article.

Hudlický’s case was presented here in greater detail because it shows how the power of a new ideological principle combined with a militant social media storm can seemingly override the rationality even of highly renowned scientists and scientific institutions and damage the reputation of a respected chemist. It also shows that an American publisher can inflict severe harm on a leading European international chemistry journal for reasons we can only speculate on.

The Increasing Power of Diversity, Equity, and Inclusion Policies in Scientific Institutions

In recent years, calls to prioritize social advocacy issues over science have increased significantly. According to Dorian Abbot and Ivan Marinovic (2021),

American universities are undergoing a profound transformation that threatens to derail their primary mission: the production and dissemination of knowledge. The new regime is titled ‘Diversity, Equity, and Inclusion’ or DEI and is enforced by a large bureaucracy of administrators. Nearly every decision taken on campus, from admissions to faculty hiring, to course content, to teaching methods, is made through the lens of DEI.

Mason Goad and Bruce Chartwell (2022) conducted a quantitative study on the rapid spread of DEI policies in universities and colleges in the United States. Focusing on the science, technology, engineering, and mathematics (STEM) fields, they showed that DEI indicators linked with STEM have risen 2600% compared with a decade ago on university websites, with similar trends observed in social media

content. They explain this rise in part by significant increases in government spending. Thus, the National Institutes of Health (NIH) and the National Science Foundation (NSF) increased DEI-related research spending by roughly 300% in one year alone (2020–2021).

The power of students in alliance with a university administration to suspend a highly respected teacher on the pretext of racism simply because he or she insisted on treating all their students equally is illustrated in the case of Gordon Klein (Klein 2021). Klein teaches financial analysis, law, and public policy at the University of California, Los Angeles. Urged by a (non-African American) student to grade his black classmates with greater leniency, Klein made it clear that he would not treat any student differently because of their skin colour. In protest, students circulated a petition and collected around 20,000 signatures, demanding that Klein be fired. After three days, Klein was suspended in the midst of a growing online campaign that included death threats and antisemitic insults to the extent that he received police protection (Klein 2021). Meanwhile, a campaign was launched in his support, and the university's Academic Senate's Committee on Academic Freedom condemned the administration for violating Klein's rights; after around three weeks he was reinstated. This is not merely an academic case, since several of the law firms and other corporations for which Klein consulted terminated their collaboration after he had been suspended, so that he filed a lawsuit against the University of California system (Klein 2021).

Identity policies such as DEI or campaigns to 'decolonize science' have been adopted by major scientific institutions and journals, as the campaigns of *Science* and *Nature* to fight alleged 'systemic racism' and to 'decolonize science' demonstrate. *Science* editor-in-chief Holden H. Thorp openly advocated political interference with science. Deploring the 'systemic racism' that in his opinion persists in science in the United States, he demanded a 'difficult soul-searching about the underrepresentation of racial ethnic groups' as well as the establishment of new inclusive norms in science. Disregarding the devastating consequences of political interference with science in authoritarian regimes, he concluded that 'the old ideal of keeping politics out of science has not served the United States well' (Thorp 2020).

The American Association for the Advancement of Science (AAAS) that publishes *Science*, was strongly criticized for its 'wokeism' and the suppression of debate by cognitive psychologist at Harvard University and science writer Steven Pinker. According to him, 'scientific organizations must cultivate a reputation for objectivity, neutrality, openness to debate, and consideration of evidence for alternative hypotheses.' He deplored that '*Science* magazine appears to have adopted wokeism as its official editorial policy and the only kind of opinion that may be expressed in the magazine.' (For 'wokeism' in the context of other social justice policies, see the article by Nathalie Heinich in this Focus.) Thus, it is accepted 'as dogma that the underrepresentation of African Americans is caused by "white privilege": that 'the dominant culture has discouraged diversity' (Coyne 2022).

The widespread insinuation of the existence of 'systemic racism' is also reflected in an initiative outlined in *Nature* with the title 'The giant plan to track diversity in

research journals’ on 23 February 2022 (Holly and Perkel 2022): ‘More than 50 publishers representing over 15,000 journals globally are preparing to ask scientists about their race or ethnicity – as well as their gender’ when submitting a paper or editing or reviewing manuscripts. This initiative is meant to contribute to the effort to analyse ‘researcher diversity around the world’. The information should ‘help to analyse who is represented in journals, and to identify whether there are biases in editing or review’. The initiative raises serious questions, such as how biases in editing or reviewing can possibly be detected by correlating results with race or gender. Moreover, it turns upside down the longstanding guiding principle in science that personal attributes such as race, belief, nationality, and, later, gender, must not play a role. But pilot testing of the initiative to track diversity had the disturbing result that more than 90% of the scientists reported their race and ethnicity, and about half said they would be comfortable providing this information when submitting a paper. People who rejected the initiative because it is reminiscent of Nazi policy – race testing was required for academic positions and student enrolment – or because it contradicts the merit system and the idea of equality of opportunity irrespective of personal attributes, were in the minority.

The current author remembers the shock she felt during her online submission of an article to a journal published by Elsevier, when she was asked to state her gender, nationality, and race, not even couched as ethnicity (which she did not). The removal of the race category was one of the first measures of the denazification of academia in Germany, and it seemed unimaginable that it would be re-instated again after the Second World War. But, as Sergiu Klainerman wrote in his article in this Focus, wokeism ‘elevates race as an essential category by which people are to be judged’.

Accusing white men of alleged systemic racism and making race a central category of scientific practice is widespread. It is illustrated here by a syllabus statement that Brown University presented as a model diversity and inclusion statement on the website of its Center for Teaching and Learning:

... much of science is subjective and is historically built on a small subset of privileged voices. I acknowledge that the readings for this course, [...] were authored by white men. Furthermore, the course often focuses on historically important neuroscience experiments which were mostly conducted by white men. Recent edits to the course reader were undertaken by both myself and some students who do not identify as white men. (Sheridan Center 2019)

This statement is remarkable. It is a fact that until at least until the mid-twentieth century – for a variety of reasons – most science was conducted by white men. It is also a fact that few women could engage in science before the twentieth century and that their contribution to science has often been overlooked. But apologizing for this truth disregards the complexity of history and becomes dangerous when it implies that the scientific achievement of past centuries is unworthy of serious consideration today because it was mainly the work of white males. Discarding such work or disregarding its value in keeping with current ideology would take away the basis for

scientific development as well as medical and technological applications, irreparably damage the public trust in science and scientific practice, and make future scientific progress difficult, if not impossible.

Historian and former Justice of the Supreme Court in the UK, Jonathan Sumption, points to a dark historical dimension of the call for atonement for heritable guilt when it is directed against a particular group, for example, white people at Oxford University, a call that he considers ‘not only irrational’ but also ‘morally repellent’: ‘Historically, the idea that particular groups bear an inherited responsibility for some past iniquity has been the basis of ugly prejudices and vicious persecutions’ (Sumption 2023).

Renowned African American linguist John McWhorter highlights the perils of ‘woke racism’ in his book *Woke Racism. How a New Religion Has Betrayed Black America* (2021). He argues that an illiberal neo-racism, disguised as antiracism, is hurting Black communities, and weakening the American social fabric.

The introduction of a racial category into academia has many antecedents, the most prominent being Nazi Germany. To understand this historical dimension, I now briefly summarize what happened during this period and show similarities and differences of past and present developments. The origin of the German race ideology, its implementation in the Nazi era, the role of the government, and especially the consequences for the victims, differed greatly from those of DEI or other identity policies. But a closer look reveals similarities in certain ideological content and also in the mechanisms by which such content was imposed on the academic system.

Parallels and Differences Between the Current Identity Movements and Race Ideology in Academia in Nazi Germany

Unlike in the Soviet Union under Stalin, where the terror exerted by Lysenko and his political supporters was directed against all scientists who opposed the ideologically desired pseudoscientific doctrines, Nazi terror in science was mainly directed against a particular group of scientists who were defined by what was considered their race, namely, Jewish scientists. This was irrespective of their scientific or political views; scientific achievements did not play any role. Nazi race ideology was grounded in the Volkish movement, an ethno-nationalist movement of the nineteenth century, which promoted the idea of *Volk* (people or nation) as an organic unity.

Nazi race ideology affected the sciences and humanities in Germany in various ways. There were attempts to integrate racial ideology into research and teaching (see below), and some research content was geared towards nationalistic goals. But it had its most detrimental impact through the dismissal and forced emigration of Jewish scientists and scholars following the implementation of the ‘law for the resurrection of the professional civil service’ on 7 April 1933. This law provided for the dismissal of ‘non-Aryan’ university teachers defined as those with at least one Jewish grandparent, and a small number of leftist ones, many of whom were also Jewish or

‘non-Aryans’. This purge was followed by the dismissal of non-Jews who were married to a Jew, and of Jewish scientists in Austria after its annexation in 1938. The expulsions led to considerable losses in many academic disciplines (see below).

The law implied a fundamental change of scientific norms endangering scientific performance, a fact that was recognized by many German scientists, though most of them did not publicly object; this would increasingly have endangered their positions and worse. Yet a few non-Jewish scientists did not comply with certain anti-Jewish measures. To give just one example: the organic chemist and Nobel laureate Adolf Windaus defended his academic freedom by refusing to compromise with Nazi activists. When a group of National Socialist students attempted to expel the only Jewish doctoral student at the institute, Klaus Neisser, Windaus asked the Ministry of Education for his own dismissal, clearly stating that he would not tolerate political agitation. Interestingly, the Ministry accepted Windaus’ conditions for staying on: the main activists had to move to another university and the Jewish student could complete his doctorate. Windaus was persuaded to stay in his position; in his case the continuation of the research of a renowned chemist was considered more important to the politicians than the fulfilment of political and ideological demands (Deichmann 1999). Many young scientists supported the political measures because they hoped to be appointed to the vacant positions. Political activism and antisemitism were particularly strong among students, who were the drivers of the ‘National Socialist revolution’ at universities.

Fritz Haber was a chemist who probably embodied the hopes, success and, finally, failure of German-Jewish scientists more than anyone else. In 1909 he succeeded in synthesizing ammonia from its elements, thus securing the supply of fertilizers and ammunition during the First World War, an achievement for which he was awarded a Nobel Prize in chemistry in 1918. A German patriot, he pioneered chemical warfare, which earned him the praise of German nationalists and the condemnation of the Western Allies. From 1911 until 1933 he was a professor of physical chemistry at the University of Berlin and director of a prestigious research institute, the Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry. In 1933 Haber was temporarily permitted to remain in his position because of his contributions to the German war effort during the First World War, but after having communicated their dismissal to his Jewish workers, Haber resigned from his position. His letter of resignation to the Minister of Education clearly points to the violation of long-standing academic norms (unlike in the case of Windaus, the Minister of Education did not try to persuade him to stay put):

My decision to ask for resignation stems from the contrasting notion of the research tradition, the one in which I have lived till now, with the one which you, Minister, and your Ministry represent as part of the actual great national movement. Holding a scientific post, my tradition demands from me that, when choosing my workers, *I consider only their scientific merits and character, without asking about his or her race.* (Deichmann 1999, emphasis added)

A year later, Haber died in exile.

The purge of Jewish scientists was preceded by campaigns of non-Jewish students demanding quotas for German-Jewish students (and also students from East European countries) to curb their rising number in Germany. The call for quotas or a *numerus clausus* to restrict the number of Jews at universities was not unique to Germany. Many other countries introduced quotas to limit or deny access for Jews to universities, such as Canada, Hungary, Russia and the Soviet Union, and some private universities in the United States.

In Germany, the expulsion of Jewish scientists and scholars from universities in 1933 ended a long period of their increasing participation and success. Following the legal emancipation of Jews in Germany in 1870, Jewish scientists and scholars were admitted to academic positions and became prominent in such fields as biochemistry, chemistry, medicine, mathematics, the classics, law, sociology and psychology. Thus, the purge in 1933 had far-reaching consequences (Bergmann *et al.* 2012; Deichmann 1996, 2001). Chemistry, mathematics, and medicine were affected to a much larger extent than biology and physics: about 25% of academic chemists and 33% of biochemists and mathematicians were forced to leave their positions; many of them emigrated. The loss of prominent Jewish biochemists was a major reason for the decline of formerly world-renowned German biochemistry. Many Jewish refugees helped significantly raise the scientific level of certain disciplines in their countries of refuge; among them, biochemistry in the United States and the United Kingdom, and mathematics in the United States. Many excellent German or Hungarian Jewish physicists and mathematicians contributed decisively to the Manhattan project.

The expulsion of Jewish scientists was the single most important reason for the decline of some sciences in Germany after the Second World War, a decline to which the international isolation and self-isolation of German scientists greatly contributed (Deichmann 2001). With slogans such as ‘science is a product of blood’ (a metaphor of race) and ‘scientific universalism is a manifestation of past liberal and Jewish ways of thinking’, ideologues such as Hitler’s race representative, Alfred Rosenberg, also aimed – largely unsuccessfully – at instilling political ideology into the content of research and teaching. The movement of ‘German physics’, launched by the two physics Nobel laureates Philipp Lenard and Johannes Stark in the 1920s, rejected quantum mechanics and relativity theory as Jewish science and succeeded in filling some university chairs of theoretical physics by applied physicists (see, for example, Beyerchen 1977). But these campaigns came to an end during the Second World War and did not succeed in committing scientists to a pseudoscience.

It should be added that political ideology also provided the frame for scientists to conduct highly unethical and murderous research practices. Examples are psychiatrists who implemented euthanasia on a large scale and other medical scientists who took advantage of the possibility to carry out unethical and in part scientifically questionable experiments on ‘inferior people’, with Josef Mengele as the most infamous representative (see, for example, Baader 1992; Müller-Hill 1988 [1984]; Nyiszli 2012 [1946]). These aspects of Nazi race policy point to some of the major differences between science in Nazi Germany and in democracies today.

Differences also exist in aspects that are otherwise similar: while in both cases race was made a central category for academic assessments, there is no parallel in the way this was done and in the consequences. Today, the suppression of freedom of expression in teaching and publications, the removal of publications by editors and publishers, and the use of racial categories in the hiring, promoting, and publishing of scholars and scientists are not followed by their loss of civil rights and confinements to concentration camps as in Nazi Germany. Nevertheless, some ideological content and mechanisms for its implementation are similar in both systems, similarities that I briefly summarize here to close this section.

- *Race as a decisive category in academia*

In Nazi Germany, the allocation of academic positions or the right to study became linked to a racial precondition – to be an ‘Aryan’. Race was given priority. All Jewish scientists and those with Jewish ancestry, independently of any criteria of merit, were expelled and, some years later, Jewish students were completely denied access to universities. As with all other anti-Jewish policies, this one, too, was justified by being beneficial to the German people, in this case, to ‘remove’ numerically overrepresented Jewish scientists and restore justice to non-Jewish students.

Despite large differences from the past, identity policy such as DEI practice is also a racist measure that is justified by benevolent intentions. It has already been used to discriminate against Asian Americans. Inherently, even if unintentionally, it will lead to de-facto quota systems for ‘over-represented’ minorities such as Jews and Asians (in North America). Quota systems, however, contradict the idea of equality of opportunity. Ethnicity appears to be confined to skin colour, which means it is a purely racial category. Other questions are ignored, such as how should equality of gender be achieved in minorities with patriarchal structures? Do different economic statuses also count as diversity? Or how can women or members of a dark-skinned minority be protected against the possible stigma, reproach, or self-doubt, of having received a position due to an institution’s need to demonstrate gender or ethnicity diversity?

- *Self-censorship and denunciation*

In Nazi Germany, universities were forced by law to dismiss Jewish academics and students. But institutions and individuals also adjusted to the new political situation in anticipatory obedience. Scholars displayed their allegiance to the new regime by joining the Nazi party (which never became compulsory), denouncing colleagues, not greeting Jewish colleagues, or by hoisting the swastika.

Today, the Nazi party and swastika are not acceptable, but denunciation is. According to the organization ‘Scholars under Fire’, incidents that target academics have been on the rise since 2015 and are ‘increasingly coming from within academia itself – from other scholars and especially from undergraduate students. These targeting incidents take a multitude of forms, including demands for an investigation, demotion, censorship, suspension, and even termination’ (German and Stevens 2021). This organization found that, in a most unfair way, ‘scholars were targeted most often for speech involving race (e.g., racial inequality, historical racism, racial slurs, BLM [Black Lives Matter], DEI)’, and, in addition, by gender and institutional policy. The number of examples of academics whose scholarly reputation and careers have been destroyed is rising, as the list of ‘cancelled’ professors indicates (Acevedo 2023).

- *Populism*

Unlike the intrusion of ideology into science in authoritarian countries in the past, the movement of DEI was not manufactured by political parties but by parts of society. But the National Socialist racial transformation of universities likewise made ample use of populist sentiments and was driven in particular by students and young academics who resented the strong representation of Jewish scientists and students. In 1933, students protested against Jewish professors who, as former front-line soldiers, had been temporarily granted a special permission to retain their positions. It was also students and their organizations who organized the ‘book burning’ events in 1933, in which books by Jewish or left-leaning authors, and other undesirable books, were burned in many university cities. Today, other forms of protest are replaced by social media campaigns, particularly Twitter storms that target ideologically deviant behaviour. The resulting academic responses show that protesters often reach their goal (see, for example, Stevens *et al.* 2020).

- *Violation of the norm of universalism*

By making race an essential basis for admission to faculty, right to study, funding, and publishing, Nazi politicians as well as DEI promoters have violated the norm of scientific universalism, according to which scientific work has to be evaluated on the basis of impersonal criteria, not affiliation to race, gender, religion, etc. (Merton 1973 [1942]). In Nazi Germany, the merit principle continued to apply, but scientists deemed racially not acceptable, that is Jewish scientists, were excluded. Unlike the social justice movements, which do not deny academic rights to ‘white men’ completely, universalism was essentially eliminated.

Summary: DEI, the Merit System, and Equity Versus the Maxim of Equality of Opportunity

By emphasizing group identities as criteria of assessments, DEI violates longstanding academic maxims that are based on individuals. DEI weakens the existing merit system that rewards individual talent and achievement. Even if the merit system was never fully realized, and has been criticized for its flaws (see, for example, Sandel 2020), it was – and remains – one of the foundations of scientific success, the results of which we perceive today in reliable theories about nature and the achievements in medicine and technology. Instead of dismantling the merit-based system, we should focus on fixing its imperfections. Aiming at predetermined numbers of people representing social, ethnic or gender groups, the equity principle leads to the marginalization of individual qualifications. The danger of the push for equity, as political scientist Charles Lipson (2021) observes, is that it paradoxically challenges America’s (and also other Western countries’) principle that people should be treated equally and judged as individuals, not preferentially judged as members of certain groups.

DEI overrides the individual-based maxim of ‘equality of opportunity’ that has to be distinguished, as sociologist Daniel Bell (1972) emphasized, from ‘equality of result’. Equality of opportunity does not necessarily lead to equality of outcome. The term ‘equal opportunity’, which originated in different ways in different countries, is

usually understood as the absence of discrimination based on personal attributes, such as gender, race or ethnicity, religion or belief, disability, or age. It implies fair competition for limited positions and funding.

The increasing suspension or limitation of the merit system through the implementation of DEI in the United States and the ensuing lowering of scientific standards inflict serious damage not only to individual scientists but also to the international position of its science. Deift *et al.* (2021) warn of a strong decline of the science, technology, engineering, and mathematics system (STEM) in the United States, believing that the country is at risk of losing the dominant position in the mathematical sciences that it has held since the forced emigration of Jewish scientists from Europe in the 1930s. In addition to the low level of mathematical education and other countries', in particular China's, aggressive competing with the United States to recruit top talent, the authors see the reasons for their concern in the 'nationwide effort to reduce racial disparities', which has weakened the connection between merit and scholastic admission and also served to discriminate against certain groups, mainly Asian Americans. The authors hold that 'the social-justice rhetoric used to justify these diversity, equity, and inclusion (DEI) programs is often completely at odds with the reality one observes on campuses', because the concept of 'fighting white supremacy', doesn't apply to the mathematical sciences where 'America-born scholars of all races now collectively represent a small (and diminishing) minority of the country's academic STEM specialists'.

In conclusion, the authority that science has in modern societies is grounded in the fact that scientific methods and reasoning are best suited to generate reliable objective knowledge and solve outstanding problems in many fields. This authority is dependent on competent researchers, independent of their gender and ethnic group or race.

As pointed out by Sergiu Klainerman in his article in this Focus, racial and gender inequalities in the sciences are not only the result of workplace discrimination. They are also, and sometimes primarily, the result of biological, cultural and environmental factors that include differences between men and women in career and lifestyle preferences. Ethnicity and gender influence, among other things, scholars' and scientists' motivation, ability and perseverance. Different ethnic groups, men and women, and individuals within each group, differ in one or more of these and other characteristics. This explains, for example, why in the United States Asian Americans are disproportionately successful in some sciences and mathematics. Therefore, basing employment, promotion, or funding on the categories of race and gender to reach equity endangers scientific achievement. In addition, the suppression of a free debate about what the conditions for good science are, contributes to its decline.

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