

# Science, ideology, and social progress

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Common and specialist views of truth based in science are constantly evolving. In 1620, Bacon's *Novum Organum* laid the modern foundation for understanding Nature<sup>1</sup> through experimental rather than theological or philosophical methods. Last century, Kuhn exposed the impartial pursuit of truth free of human faults such as self-interest and nepotism as an illusion.<sup>2</sup> Over the last decade, scientists have been called upon to subordinate empirically grounded truth to social and political goals such as tempering climate change<sup>3</sup> and addressing the under-representation of various gender, ethnic, and other groups in the clinical workforce, particularly in senior positions.<sup>4</sup> An extreme example of this subordination of empirical science to social goals is ensuring the selection of minority candidates for medical training and progression in proportion to their representation in broader society by selection based on a random lottery, rather than by merit based on academic indicators.<sup>5</sup>

A related example is the widespread move by educational institutions in the United States to abandon objective measures of academic merit in admission decisions. For example, the journal *Science* reported that the proportion of Ph.D. programs at 50 top-ranked U.S. universities which required consideration of an exam-based merit score in admission decisions dropped from 84% to 3% between 2019 and 2022. This was explicitly justified to counter the persistent under-representation of disadvantaged groups including women and ethnic/racial minorities across all academic and professional levels, based on the argument that admission tests unfairly privilege groups such as white men, who have greater resources to prepare for and take tests.<sup>6,7</sup>

It is difficult to overstate how radical is this change in the relative importance of scientific and political considerations to medical institutions. The American Medical Association's (AMA), 'Organizational Strategic Plan to Embed Racial Justice and Advance Health Equity: 2021-2023' reorientated its institutional purpose away from the pursuit of professional excellence towards the confrontation of 'unequal distribution of power and dismantling the systems of power, advantage, and oppression' that lead to disparate outcomes such as minority under-representation.<sup>4,8</sup>

Consistent with moves to reduce the reliance upon high-stakes exams for entry into and progress through

professional training pathways, the Royal Australian and New Zealand College of Psychiatrists (RANZCP) signalled a move away from the objective evaluation of merit in training when it abandoned the Objective Structured Clinical Examination (OSCE). Echoing arguments based on workforce under-representation, this change was justified with reference to 'contemporary approaches to assessment' which view reliance upon objective high-stakes examinations for evaluating the merit of candidates for entry into and advancement in the medical and psychiatric professions as inherently unfair.<sup>9</sup>

The proposed solution was a move away from relatively more objective high-stakes exams sampling core skills towards subjective assessment based on a broader set of characteristics.<sup>9</sup> We believe that the preference for subjective over objective evidence in decisions about psychiatric training and practice may have significant negative unintended consequences. One major risk of a psychiatric workforce trained within a system that prefers subjective to objective evidence is the production of a cohort of professionals less able to identify and resist the substitution of faith in 'scientism' which treats science as a black box dispensing unquestionable knowledge, for an understanding of the inherent and continually contested uncertainties which constitute the scientific process.

## Science and ideology – 'I am the science'

The scientific method has driven rapid improvements in health, wealth, and well-being over a period of centuries. However, increasingly, public figures tend to promote their own interests in the name of 'science' as illustrated by Dr Anthony Fauci, head of the US CDC and main bureaucrat in charge of the federal Covid-19 response. Dr Fauci defended himself against criticism of pandemic-era decisions by stating 'If you criticise me, you are criticising science'. The scientific process relies upon constant criticism and refinement, while Dr Fauci used scientism as an ideological

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shield,<sup>10</sup> arguing that as the infallible representative of the unquestionable authority of the abstract entity Science, there could be no legitimate criticism of his actions.

The great strength of the scientific method is the continuous systematic questioning and search for evidence to increase confidence in our uncertain understanding. Dr Fauci's reification of himself as 'Science' is one template of how scientism can be used to pursue ideological goals. Another common technique asserts that a desired outcome is both critical and urgent to dismiss the need for scientific evidence on the basis that 'something must be done now'. Deferring the collection of evidence until after a change is implemented ignores the fact that doing something that is ineffective may be more harmful than doing nothing at all.

### Objective evidence, ideology, and social progress

We propose that the scientific method is the best tool available to develop understanding of how human relationships promote or risk health and well-being. We acknowledge there are different opinions about the most desirable goals for medicine and psychiatry in Australia and New Zealand. We argue that the subordination of empirical evidence based on experimental methods to ideological goals grounded in scientism risks harm in the name of social progress. Even if it is assumed that progressive goals are desirable, we argue that substituting subjective for objective evidence eliminates the possibility of iterative improvement based on accurate evaluation.

The best illustration with respect to medical training is that even advocates acknowledge that it is highly uncertain whether the move away from objective criteria in evaluating the merit of prospective medical students is likely to increase the representation of currently under-represented groups. The original motivation for the introduction of objective criteria to evaluate prospective medical students was to break the reliance upon affiliation

networks by identifying highly talented minority students for entry into U.S. medical schools.<sup>7</sup> In the absence of other selection methods capable of evaluating the merit of candidates as well as overcoming unfair biases against minorities, the elimination of objective measures in selection may in fact reinforce older biases.<sup>4</sup>

In conclusion, we argue that empirical evidence gathered using scientific methods which aspire to objectivity remains the best available basis of understanding in medicine and psychiatry. The subordination of objective scientific evidence to social or political goals is more likely to confirm prejudices than achieve social progress.

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