

Analysis

What has postmodernism done to evidence-based medicine?

Postmodernism eludes straightforward definition. Muir Gray wrote, in 1999, that the philosophical school 'is characterised by relativism, namely that there are no such things as objective facts ... reality has a plurality of meanings and is contingent'.¹ It emerged in the late 20th century, and philosophers such as Foucault, Derrida, and Kellner challenged the idea of a single objective reality, instead finding that individuals, with their unique experiences, must instead construct their own. Gray warned: 'a self-centred preoccupation with excellent science will be no protection against the criticisms of a well-educated public; openness is the only option'.¹

Medicine moved from being an unquestionable power to one that appreciates the value of evidence and has used it to develop interventions (such as vaccines or joint replacement) while renouncing harmful or ineffective practices (such as routine enemas and shaving before childbirth). Yet medicine has, in many respects, embraced postmodernism. For a profession historically traditional, hierarchical, and authoritative, this is remarkable. While challenges to the 'doctor-knows-best' model have been rightfully welcomed, other features of postmodernism may have resulted in harms, particularly when considering the differences between gender and sex, and medical challenges to self-identity. The COVID-19 era has accelerated some of these changes as patients, laypeople, and professionals use information, evidence, and expertise in new and challenging ways. This has advantages, but without sufficient interrogation and consideration may risk good medicine and scientific progress.

POSTMODERNISM AND SCIENCE

Postmodernism, which grew out of literary theory, directly challenges the scientific method. Science aims to be objective: it uses experiments to test hypotheses, with publishing, peer review, and attempts to reproduce findings as means to increase knowledge, reduce uncertainty, and establish fact. Postmodernism denies a single truth, rejects objective knowledge, and argues that all interpretations experienced are mediated through the individuals' perspective. This tension erupted in the 'science wars' of the 1980s, where hoax papers parodying postmodernism were

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published by scientists critical of what they saw as poor scholarship. The publishing editors later reflected on 'the gulf of power between experts and lay voices ... is it possible, or prudent, to isolate facts from values ... Should non-experts have anything to say about scientific methodology and epistemology?'²

Foucault, a French philosopher and activist, expressed concerns about the power of psychiatry to define and treat 'madness'.³ Indeed, knowledge is always partial. Scientific research can illuminate, but it can also compound invisibility in terms of what is not studied, not published, or overlooked and ignored. For example, doctors and people with disabilities disagree about the meaning of quality of life; people with obesity experience 'weight bias';⁴ females and some ethnic groups have been understudied in research trials; and researchers have often not addressed outcomes of importance to patients. In other words, while science may resolve to be objective, its methods are mediated by humans, who are flawed and often unconsciously biased.

EVIDENCE-BASED MEDICINE

The evidence-based medicine (EBM) movement gained momentum in the 1980s, also challenging the supposition that 'doctor knows best'. Postmodernism would agree, but also disagree that 'evidence based' is possible. For example, Foucault does not argue against reality, but that human bias – cultural, societal – prevents its realisation.

As EBM started to identify and appraise evidence it was concerned with finding and addressing bias, whether publication or lead time, or financial conflicts. Defined as 'the conscientious, explicit, and judicious use of current best evidence ... about the care of individual patients', EBM should include 'thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences'.⁵

During the COVID-19 pandemic, EBM

was challenged to 'adapt or die': 'Thousands of lives were likely lost as a result of what was incorrectly claimed to be an "evidence-based" approach.'⁴

Yet a lack of EBM has resulted in repeated, avoidable harms; infamously, Dr Spock did not test his advice about sleeping positions for babies, and use of poor evidence in cardiac patients resulted in avoidable deaths. Different types of evidence (mechanistic, observational, qualitative) are not excluded from EBM. Rather, the question is, 'What type of study best answers this question?'

Denying the need for the highest-quality studies – no matter the type – and/or failing to acknowledge the potential for bias from poor-quality or uncontrolled work can cause harm. The process of identifying a lack of evidence for an intervention is an action, because we can then address it. While in mathematics proof is beyond doubt and permanent, evidence-based medicine instead deals with reducing, and not removing, uncertainties. Unfortunately, social media, conducting much debate on EBM, does little to reflect that nuance. Statements of uncertainty are good science, but often painfully lacking. Being uncertain does not mean that we cannot act; however, we should act with the knowledge that we may be wrong, and test our actions in ways that allow us to detect unintended harms and unexpected consequences.

Rather than considering whether EBM can provide 'the answer' – as medical 'truth' is strung on degrees of uncertainty – it is far better to consider EBM as the framework to establish the relative presence, or absence, of useful knowledge.

THE EXTERNAL SCRUTINY OF MEDICINE

Despite strong professional codes, oversight of the practice of medicine is necessary to check its power and question whether it is over-reaching (pathologising and medicating normal psychological and physical parameters), corrupt (profiting

from unnecessary medicalisation), or biased. These values can be investigated scientifically, for example, why variations in numbers of hysterectomies or opioid prescriptions occur (and whether it is associated with financial reward, competence, or culture).

Patient input into research can generate fair information with outcomes of value to patients. This can be done scientifically: critical evaluation makes good progress towards better-quality health care.

MEDICINE AND POSTMODERNISM

Postmodernism presents a 'plurality of meanings' and 'multiplicity of truths' as valid as scientific methodology. Doctors have been told 'all patients are experts, however uninformed or misinformed they may be about health issues'.⁶ This is really a plea for doctors to appreciate the different values and experiences of patients. But 'expertise' means 'elite, peak, or exceptionally high levels of performance on a particular task or within a given domain'. Randomised controlled trials can quantify harm. Qualitative research helps understand experiences. But the latter cannot, for example, reliably inform patients how frequent adverse impacts are, or how likely they are to benefit from preventive care. There should be no competition of expertise. This is not helped by organisations (many themselves funded by industry or corporate donations) prioritising campaigning over the availability of support with quality, critiqued knowledge for patients and families.

SELF-DECLARATIONS

Medicine's power came partly from its ability to bestow or withhold diagnoses. Diagnoses can benefit (for example, via access to effective treatment, trials of treatment, or financial benefits) and harm (through unhelpful or inaccurate labels, diagnostic overshadowing, medicalising normality, ineffective, costly, or harmful treatments).⁷ Many patients describe how they did not feel believed by doctors, compounding their distress. Doctors are not always accurate diagnosticians, and can be swayed by fashion, ease, or financial reward. The medical profession may have

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found itself resisting the need to act against industry-funded pressure. Rare is the lobby group concerned with overdiagnosis: mainly, citizens and doctors are warned of the risks of delayed diagnosis or inadequate treatment.

However, while attention deficit and hyperactivity disorder is normally diagnosed by a professional, some have advocated the use of self-diagnosis, which can be intrinsically linked to identity. For example, one advocate writes that, 'a self-diagnosis is a real diagnosis... Your diagnosis is valid'.⁸

Doctors not supporting an 'identity' diagnosis face different challenges compared with not diagnosing a chest infection or skin cancer. Some view this as a misuse of medical power, and lack of acceptance of patient experience and certainty. Yet we should also be concerned for erroneous diagnosis and their sequelae. Experience and the ability to interpret symptoms across all domains can exclude other conditions, variations of normality, and an external perspective. Postmodernism allows for individuals to validly self-declare with no recourse to objectivity. This does not equip us to recognise unknown terrain or consider uncertainties. As with doctors, patients and citizens may also be influenced by media narratives that also do not express evidence clearly. New patterns of clinical presentations require their uncertainty in aetiology and epidemiology acknowledged and investigated.

QUEER THEORY

The culmination of postmodernism is encapsulated in the medical establishment's enthusiastic response to one aspect of postmodernism, queer studies. Judith Butler, a US philosopher, has argued that sex is 'assigned' at birth, rather than immutable,

observed, and described.⁹ The binary sex classes are argued to be products of society, not an observable, fixed scientific category, with gender identity more important to state and record than sex. Yet sex is immutable, fixed at conception, and often observed before birth. Instead, stereotyped, gendered roles are products of society (the idea, for example, that girls like pink and are kind, whereas boys like mud and enjoy taking risks). However, many laboratory results, risk assessments, and organisation of services depend on accurate sex recording. NHS medical records now reflect postmodernism ideals, being coded at patient request to reflect gender identity, not sex. Medical journals and NHS information have referred to 'people with vaginas', 'birthing people', or 'pregnant people' rather than 'women'. Data without information on sex means that discrimination related to childbirth, maternity, and menopause will be more difficult to track.¹⁰

The greatest controversy has been around what the medical reaction to children who express an innate 'gender identity' at odds with their sex should be. Lobby groups have advocated for an affirmative approach. Postmodernism tells us that, given the validity of personal experience and individual truth, the identity described by an individual is correct. EBM would tell us that there is no clear evidence for the existence of a gender identity that benefits from medical intervention in young people, as the interim Cass report states.¹¹ Class actions against gender identity services, accused of offering inappropriate and harmful medical intervention to affirm a gender identity, are in progress.

CONCLUSION

Medicine has evolved from haphazard, harmful, eminence-based medicine, to understanding that evidence is necessary to improve health and avoid unintended harms. This needs to be gathered with a strong sense of professional values and virtue of 'first, do no harm'. Medicine should be open to challenge, critique, and discussion, but a lack of reciprocal critical

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appraisal of postmodernism has stymied progress. Described experiences can be recognised and believed by doctors as a truthful description. The question is of how far these should instruct or inform doctors, or patients or laypeople, on what justified medical interventions are. This includes doctors making diagnoses or offering treatments who should have a professional duty to independently assess the situation, consider the evidence, and the uncertainties it presents.

In the aftermath of the COVID-19 pandemic, and as we look to how we should create, critically appraise, and use evidence in health care, we should be definite not just about the uncertainty we face, but also about what we are very certain of – fundamentally, the need for science in our work. The challenge for medicine now is to retain scientific authority while not being authoritarian.

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Provenance

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Competing interests

Margaret McCartney's competing interests can be found at <https://www.whopaysthisdoctor.org/doctor/6/active>.

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