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Measuring participation in UK medical schools: Authors' reply

1. ***Trisha Greenhalgh***, professor (p.greenhalgh@pcps.ucl.ac.uk), Department of Primary Health Care, University College London, London N19 5LW
2. ***Danny Dorling***, visiting professor in social medicine University of Bristol, Bristol

EDITOR—In a 600 word short report it was not possible to provide a detailed analysis of medical school admissions data. Such analyses are provided in the articles referenced in the report.

Our purpose was to share a tool that we developed to analyse admissions by ethnic group, sex, and social class by using publicly available data and offering some illustrative worked examples. The standardised admission ratio could of course be used alongside other measures (such as the biomedical admissions test (BMAT), A level performance, school deprivation index, etc) to test systematically the speculative hypotheses which the above authors have raised, and thereby throw light rather than heat on the widening debate on participation.

This work began as a medical student's project—perhaps another student might like to pick up the challenge?

Footnotes

- **Competing interests** None declared.

The reply was to the following correspondence, which is in reverse of chronological order and which carried on after the reply was sent.

1. Re: Re: Re: The motivations of other scientists are problematic to interpret...

O

Peter Morrell, Hon Research Associate, History of Medicine Staffordshire University, UK

Probably the best way to comply with this request, and try and explain the obvious, is to dissect once again this absurd paragraph of McManus:

"Post-1945 Britain has been very much a meritocracy, with social class strongly related to intelligence, extensive social mobility between classes depends primarily upon intelligence [1,2], and intelligence showing moderately high within-family correlations). Since intellectual ability is also a major predictor of examination results and hence university entrance, it is hardly surprising that individuals from social classes I & II are accepted at higher proportions than their representation in the population." [1]

So as to minimise any ambiguity, let us take it line by blessed line...

"Post-1945 Britain has been very much a meritocracy..."

No, it hasn't...and isn't.

"...with social class strongly related to intelligence..."

No, it isn't...

"...extensive social mobility between classes depends primarily upon intelligence..."

No, it doesn't...

"and intelligence showing moderately high within-family correlations)..."

No, it doesn't...

"Since intellectual ability is also a major predictor of examination results and hence university entrance..."

IS IT? It depends what you mean by "intellectual ability," which Chris McManus has had ample opportunity to define more clearly, but he has declined to do so.

"...it is hardly surprising that individuals from social classes I & II are accepted at higher proportions than their representation in the population."

Open question...if the above string is incorrect, then how can the conclusion be?

The other points I made in my responses concerned the alleged usefulness of numerical and reductionist methods in social science, the shortcomings of which I feel are much more significant than Chris McManus does.

The paragraph Mr Lack refers to, concerning suicidal depression was merely one example of the complex factors inherent to the term 'social class' that are obviously irreducible to mathematical formulae, and which formed part of my discussion of the limited applicability of reductionism in social science.

I am fairly sure that covers the request of illuminating points previously made at length. I hope that is now a clearer overview.

Competing interests: None declared

[Submit rapid response](#) Published 26 October 2004

Re: Re: The motivations of other scientists are problematic to interpret...

O

J Alastair Lack, Trustee The River House SP54LX

Peter Morrell must have a serious point in his tirades against Professor McManus' response to this article. However as an independent observer I find it impossible even after several readings of his responses to discern it.

He criticises McManus for "failing to define such blurred and woolly terms as post-1945 Britain, social class..." I would have thought that 'post -1945 Britain' has a pretty obvious definition, and perhaps he should quarrel with the original authors, for they were the ones to use the term 'social class'.

I find it difficult to appreciate the relevance of paragraphs such as 'McManus ignores such potent social factors as the degrading effect of low self-esteem, high crime, bullying and the grinding hopelessness of poverty, not to say the demoralising impact of living in dangerous, run-down districts and unpleasant visual environments on only a meagre and uncertain income. Because many less skilled people "live in a depressing situation with severe social and activity restrictions at work, play and in relationships, it is not surprising that situational depression occurs."'

Nobody has referred to situational depression, that I am aware of; the authors of the papers didn't refer to it, that I can see. So why expect McManus to think it relevant?

If Dr. Morrell would be kind enough to summarise his arguments into two or three succinct and objective paragraphs, I am sure it would be most valuable to those of us concerned with making the best choice of applicants to medical school

Competing interests: None declared [Submit rapid response](#) Published 25 October 2004

Re: The motivations of other scientists are problematic to interpret...

O

Peter Morrell, Hon Research Associate, History of Medicine
Staffordshire University, UK

I apologise to Chris McManus for any 'vehemence' he found in my post about his views on meritocracy in Britain. I am genuinely sorry that the points I made do seem to have come out more ad hominem than ever I intended and I will just have to accept that damages my case slightly. I regret failing to polish and tone down the parts of it that probably stem from a general impatience with 'scientists' expressing comments about complex social issues in specifically reductionist and numerical terms, which they have a bad habit of doing, and which can be simplistic, non- insightful and crass—in many cases. However, I am pleased he enjoyed the article by Roscoe.

Aside from that, however, and getting back to the main point, I note that he does not respond to my rebuttals of his points, specifically that although Britain is more meritocratic than it was 50 years ago, it is still not a meritocracy and that career progression in the professions cannot be adequately defined solely in terms of qualifications, 'intelligence,' [whatever that is] or numerical data. I attempted to expose the existence of a sizeable cluster of complex and unquantifiable social factors that more adequately describe and explain the social patterns we have been discussing. I think I gave a justifiably comprehensive account of the shortcomings of the positivist approach, which remains the core of the problem.

In brief, Chris McManus was wrong to claim that Britain is a meritocracy and that any impressive juggling of figures—in isolation from social class descriptors—can somehow generate useful insights about career progressions in the professions—they can't and don't. What they do generate, of course, are the type of simplistic illusions 'scientists' seem to enjoy. It might have been better had Chris McManus admitted his failings more candidly.

The British rock band Oasis inadvertently [?] described the epistemological problem quite well in a song lyric thus:

"And all the roads we have to walk are winding
And all the lights that lead us there are blinding." [1]

This adequately summarises the problem too many scientists create by kidding themselves that they have knowledge they do not in fact possess—but which requires far deeper analysis—and which flows from their feeble and intrinsically doomed impulse to explain and quantify things that are much better left as descriptive statements. In truth, reductionist and positivist 'lights' seem especially blinding.

Positivism is "the view that all true knowledge is scientific," [2; 669] and that all things are "ultimately measurable." [3] Because of its "close association with reductionism," [2; 669] it is worth saying that positivism and reductionism involve the view that "entities of one kind...are reducible to entities of another," [2; 737] such as societies to numbers, or mental events to chemical events. It also involves the contention that "processes are reducible to physiological, physical or chemical events," [2; 737] and even that "social processes are reducible to relationships between and actions of individuals," [2; 737] or that "biological organisms are reducible to physical systems." [2; 737]

Ultimately, all this means that science eagerly accepts the primary assumption that all life experience can be satisfactorily reduced to solely physical and chemical events, that is to matter and molecules in various states of size, activity and interaction. This is the positivism I railed against in my previous post. It is a position that is absurd to the obvious extent by which it is out of touch with real-world life experience at the social and artistic level, which brings us back to precisely all those things I said before and what Berlin says, which need not be repeated.

The stark gulf between the humanities and science appears as wide and as unbridgeable as it ever was. The issue is certainly about positivism and reductionism—that science eagerly assumes to be a valid step towards real understanding, but which the humanities have long since rejected as an unwarranted assumption that might be applicable in limited cases, such as in *in vitro* chemical and physical systems, but which is unworkable for larger and *in vivo* systems or societies. Crucially, in this act of crude reductionism the key complexity of such systems is lost.

The contention is that you cannot satisfactorily reduce social phenomena to chemical events and numerical studies and to do so merely create simplistic nonsense of the McManus type. This means that you cannot truly make much sense out of such social systems without recourse to the views of people like Kant, Hegel, Marx and Husserl, as a minimum, because the alleged 'sense' that you do get from untenable reductions/positivism is non-insightful 'garbage' of limited "predictive power." [4] I'm sorry if Chris McManus regards that as another unwelcome dose of 'vehemence,' but it is an infinitely more honest account of how things are than masquerading pure kidology as 'dispassionate science.' I don't actually believe that any of the greatest scientists were as remotely dispassionate as their devotees like to pretend, but that is another topic.

I hope this sufficiently illuminates the requested 'motivation' behind the comments I made previously, which the sentiment implicit to Chris McManus' post seemed to hold in question. My motivation is transparent enough—to seek a wider view, in the context of which many things become better understood. My principle objection therefore—to positivism and reductionism—is that such approaches always adopt an excessively narrow view of phenomena, and this necessarily precludes the wider view of life I prefer—a bad case of throwing out several babies with the proverbial bathwater.

Sources

[1] Oasis, You're my Wonderwall, released 10 March 1995 <http://www.lyrics007.com/Oasis%20Lyrics/Wonderwall%20Lyrics.html>

[2] Alan Bullock and Stephen Trombley, [Eds] *The Fontana Dictionary of Modern Thought*, London: Harper-Collins, 1999

[3] O E Guttentag, Trends toward Homeopathy Present and Past, *Bull Hist Med*, 8.8, 1940, 1172-1193; [quote from p.1177]

[4] Ferguson et al, Pilot study of the roles of personality, references, and personal statements in relation to performance over the five years of a medical degree, *BMJ* 2003;326:429-432 (22 February)

Competing interests: None declared

[Submit rapid response](#)

Published 18 August 2004

3.

The motivations of other scientists are problematic to interpret...

O

Chris McManus, Professor of Psychology and Medical Education
University College London

I confess I was surprised by the vehemence, length and personal nature of Dr Morrell's response to my brief comment on Greenhalgh et al's original paper. However, I certainly wouldn't like Morrell to think I have not taken his comments seriously, and I hope he will forgive me for not doing a Michael Portillo or a Matthew Parris, since I was unable to obtain a lucrative TV contract to live like the poor. I did however follow his advice and I have read Roscoe's most interesting 1995 article and much enjoyed it, since it showed the complexities of using the term positivist as a pejorative label, and displays much wisdom and anthropological insight concerning the ways that scientists really work. Perhaps I could just quote one phrase from it, as it sums up many of the real difficulties behind disputes such as this, and it shows the dangers of making ideological interpretations of the motives and cognitions of other scientists based on short published texts:

"To be sure, many scientists discursively entertain highly positivistic notions about what they are doing, clothing their practice in a rhetoric of objectivity, the disinterested collection of facts and the like. But to suppose that this accurately reflects what they are really doing is to mistake what the natives say they do for what they actually do." (Roscoe, 1995, p.495)

Competing interests: None declared

[Submit rapid response](#)
Published 3 August 2004

4.

Britain is not a meritocracy...

O

Peter Morrell, Hon Research Associate, History of Medicine
Staffordshire University, UK

I find much of what McManus says disappointing and questionable. One labours in vain to find any truth in this entire paragraph: "Post-1945 Britain has been very much a meritocracy, with social class strongly related to intelligence, extensive social mobility between classes depends primarily upon intelligence...and intelligence showing moderately high within-family correlations. Since intellectual ability is also a major predictor of examination results and hence university entrance, it is hardly surprising that individuals from social classes I & II are accepted at higher proportions than their representation in the population." [McManus]

In failing to define such blurred and woolly terms as post-1945 Britain, social class, social mobility, intelligence and meritocracy, he then provides a thoroughly unconvincing case that the UK is "very much a meritocracy," either now or back in the 1950s. He builds a fabric solely composed of fatuous generalisations. Concerning meritocracy, more people probably gain advancement in life from unquantifiable and unpredictable random factors—relatives, friends, chance meetings, etc, that is from what they are, or what they seem to be, not from what they know. Such is not reducible to straight IQ or qualifications terms. I think this has always been the case—rightly or wrongly—and though truer perhaps of pre-1960 Britain than post-1960, it is still in broad terms true today everywhere on the planet.

While Britain has become a more meritocratic, and credentialised society since the 1950s, that is a more modest and realistic claim than using it as a sweeping and absolute tool of social analysis, or converting it into a ham-fisted over-generalisation. Credentialism has been defined as, "the use of credentials as a way of selecting people for employment;" [Buon] "the use of educational credentials as a means of job selection... an over-reliance on credentials in selecting staff;" [Buon] and often "denotes the...use of credentials as a means for screening people into jobs." [Buon] Of course, there is much more credentialism today than in the 50s, especially in the professions, entry to which requires, by definition, certain mandatory qualifications. Such is broadly self-evident, but outside the cosy world of professions, this so-called axiom melts into a mere supposition, if not indeed a fiction.

In any case, his preference for data encourages McManus to ignore too much of the real world. For example, in Britain, for very many decades, a rich person could buy his son or daughter a place at private school and Oxbridge and guarantee them a job in the City, in Law, medicine, the Church, an officer's post in the Army or Navy, in the Foreign Office, the Diplomatic service or publishing, regardless of their innate intelligence—in other words, elite professions of high status giving well-paid careers for life. This 'old boys network' [OBN] is still in operation today, so please don't try to kid people that Britain is a meritocracy when it so obviously isn't and never has been. Who you know [accident of birth] not what you know is, and always has been, a more reliable indicator of career progression and social status than qualifications or intelligence—as McManus claims. Such privileged groups exist in all societies and though the power of the OBN has been significantly eroded in the last forty years or so, only the socially blind could seriously claim that Britain is a meritocracy.

Even in the USA, Canada and Australia, which might make better claims of being meritocracies than Britain, there exist privileged groups and social elites—mostly white, male, middle-class, heterosexuals—who fare better and rise quicker in life than all the rest. To be so ignorant of such potent social facts of life in a so-called intelligent discussion of this topic, as McManus is, truly beggar's belief. What planet is he living on? As social research has repeatedly shown in the last ninety years or so, the only way a person who is not from these social elites can gain advancement, apart from education, is through crime, sport, films or pop music. These may well seem illegitimate and demeaning means of social advancement—being perhaps rewards disproportionate to 'talent' or ability to succeed in the school system—yet they are obviously viable and alternative routes to success and even to 'celebrity status.' For many, they are the only hope and dream they have left.

McManus claims that "social class is strongly related to intelligence." Do we simply have to accept this notion just because he says so? What does he mean by 'strongly related to'? What does he mean by 'social class' or 'intelligence'? They are not simple clear-cut matters. It may well be true nowadays that "extensive social mobility between classes depends primarily upon..." well, upon something, possibly qualifications, but not intelligence, as McManus claims. Intelligence and qualifications are very different beasts. His claim that "intelligence shows moderately high within-family correlations," crumbles under even the briefest scrutiny, because just as many 'bright people' come from modest circumstances as from well-endowed families. The data simply cannot be contrived into the kind of crude social slide-rule that McManus seems eager to wield; more truthfully, intelligence and families are only loosely correlated if at all.

Are not so-called lower-class, unskilled people also intelligent in their own ways? Do they not live satisfying and rewarding lives—often with little complaint—just as well as 'intelligent and well-qualified' people do? McManus blunders on, skating blithely over such complex issues with more than a whiff of social elitism underpinning his disfigured landscape of generalised and unreferenced opinions. When he claims that "intellectual ability is also a major predictor of examination results and hence university entrance," well, who says so and why? McManus just hands down his scantily-defined words as if carved upon tablets of stone. On what does he base his view that qualifications = intelligence?

Nor does he anywhere explore the real barriers against social mobility that still exist, such as low self-esteem and lack of ambition among lower-class people. What about such important and largely unquantifiable confounding factors as class-based, culture-bound and money-based inequalities in educational and employment opportunities? If you live in a poor district, you cannot even get your kids into a 'good school,' let alone a university—where is the meritocracy in that?

Arguably, none of these glaring social inequalities are explicitly determined by IQ. McManus remains dumb on these pertinently large tears in the otherwise neat fabric of his equations. Not even mentioning them shows how much he really regards them. Yet, these are all critically important factors to the so-called 'under-achievement' of unskilled and uneducated people. There is also the matter of rich people being more able to pay for their child through university today—a door that remains stubbornly shut for the poor.

Wielding "a species of positivist reductionism," [Coleman] McManus has signally failed "to analyze the manifold relations between different dimensions of social inequality, especially class, gender and ethnicity." [Kocka] He has failed to appreciate the value and significance of "networks and relations [which] become objects of study, instead of social entities like specific societies or groups within specific societies." [Kocka] He has failed to progress much "beyond uni-directional models of causality in the quest for a means of grasping and making sense of the complexity of the social world." [Hunt]

Cognisant of "the dangers of reductionist views in the study of social reality," [Coleman] most sociologists oppose "positivism...in the social sciences," [Coleman] and would rightly condemn his approach as a heavy-handed mis-use of top-down quantified data about populations rather than people, spawning spurious conclusions, which fall a long way short of obvious, unquestioned or universally accepted truths.

McManus ignores such potent social factors as the degrading effect of low self-esteem, high crime, bullying and the grinding hopelessness of poverty, not to say the demoralising impact of living in dangerous, run-down districts and unpleasant visual environments on only a meagre and uncertain income. Because many less skilled people "live in a depressing situation with severe social and activity restrictions at work, play and in relationships, it is not surprising that situational depression occurs." [Fraser]

He could follow the examples of Michael Portillo recently [BBC], or Matthew Parris 20 years ago [Mclean] "to live on supplementary benefit for a week. Parris, then a new MP full of puppyish enthusiasm for Thatcherite dogma, had been defending the low level of benefits for the unemployed." [Mclean] Social mobility, educational advancement and intellectual achievements are pretty meaningless terms in such districts. Maybe he should abandon his mathematical formulas and enter such districts himself, to live as they live and acquire some first-hand research. Counterbalanced with some real-world experience from 'roughing it' in bad streets, his opinions and formulas might carry a little more credibility.

Laying out an ambitious feast of bold but essentially fatuous opinions and blurred definitions—an unquantified muddle "of loosely connected assumptions," [Gupta]—does NOT constitute a cogently reasoned analysis of observable social entities. Crisply quantified mathematical toys, neatly arrogated in a formulaic manner, a pretentious form of intellectual juggling, and the misleading arithmetic window-dressing of what are complex social phenomena—such approaches miserably fails to generate authentic conclusions. The issue requires more varied and subtler interpretations across a spectrum of opinion; there exists no consensus about the view he peddles. I don't buy his formulas, his categories or his conclusions.

One should never "underestimate the psychosocial dimension," [Infanta]; factors such as "culture, material circumstances, health care access and social expectations," [Bhopal] inevitably impact upon the career aspirations and subsequent achievements of unskilled people. And such features are endemic to the lives of unskilled and uneducated people the world over, inspiring them to aim low in life, to be grateful for a few crumbs rather than a banquet of rewards and opportunities, to drift through life in a generally unambitious way and to mysteriously mis-value education's golden potential to lift them out of perhaps drab, unrewarding lives, and so into the comparative paradise of the educated professions. These are the very social realities McManus ignores.

None of these pertinent factors figure significantly in McManus' fancy but flawed equations, probably because they are inherently resistant to quantification, being mere "labels...loose and inaccurate shorthand developed for non-scientific purposes." [Casey] That should not exclude them from the analysis—marginalised by an essentially positivist approach: "connoting an embarrassing affiliation to vulgar positivism, scientism and technocracy," [Aldridge] and spouting the "positivist catechism, so embarrassing that few of us can bear to read about." [Aldridge]

McManus succeeds only in demonstrating how inappropriate such mathematical approaches ultimately are in social analysis. Such pretty formulas are "artificial constructions, logical figments with no necessary relation to the outside world." [Berlin, 123] Mathematical models always "leave out the richest and most important part of human experience...daily life, history, human laws and institutions, the modes of human self-expression." [Berlin, 110] Failing to appreciate the subtle complexity of social worlds, they get excluded from the formulas, even though, "no easy reductionism will do justice to the material." [Coleman] He fails to concentrate "on social structures, processes, and actions in a specific sense (inequality, mobility, classes, strata, ethnicity, gender relations, urbanization, work and life of different types of people, not just elites)." [Kocka]

Algebra may seem like some "unshakeable deductive edifice, but it cannot give us factual information, any more than a game or a piece of fiction, which we have made up can, as such, describe the world to us. Mathematics is not determined by reality outside itself, to which it has to conform, but only by our own fancy or creative imagination, which moulds the material as it pleases." [Berlin, 36] Mathematics and logic "are not forms of discovery at all but of invention." [Berlin, 41] There thus exists an irreconcilable "logical gulf between mathematical truths and those of fact," [Berlin, 198] or, as Goethe said, mathematics "can achieve nothing in the moral sphere." [Berlin, 287 footnote]

Finally, there is the sticky matter of cautious interpretation—well, where is it? Statisticians are "very cautious when they examine causal inferences from observational studies," [Wang] because "cautious interpretation is required to avoid erroneous conclusions." [NCI] Furthermore, "in order to compare categories, it becomes essential to define those categories as well as you can. Defining categories with some 'complete certainty' is not possible, therefore you must cautiously do the best you can; and then remain very aware of difficulties of classification." [abelard] Likewise, "many of the things we might wish to study are not subject to experimental manipulation (e.g. health problems/risk factors). If we want to understand them in a causal framework, we must be very cautious. It will require a multifaceted approach to the research." [Helberg]

Far from adopting a cautious interpretation of the figures, McManus excludes a subtle multi-faceted approach in favour of rampant positivism and the desire to make inflated interpretations from globalised figures, leading only to misleading conclusions. This is further compounded by his unwillingness at the outset to more carefully define terms and categories. He might profit from reading Wax and Roscoe as a starting point—or better still, follow the example of Parris and Portillo to feel and then understand poverty from first-hand contact.

Sources

abelard.org, 'intelligence': misuse and abuse of statistics <http://www.abelard.org/statistics.htm>

Alan Aldridge, Prediction in Sociology: Prospects for a Devalued Activity, Sociological Research Online, vol. 4, no. 3, 1999 <http://www.socresonline.org.uk/socresonline/4/3/aldridge.html>

BBC, Your views: Portillo as a single mum, 16 Oct 2003 <http://news.bbc.co.uk/1/hi/entertainment/reviews/3195040.stm>

Sir Isaiah Berlin, Three Critics of the Enlightenment: Vico, Hamann, Herder, Princeton: Princeton Univ Press, 2000

Raj S Bhopal, Persistence of bias against females can be tested in migrants, BMJ e-letter, 15 July 2004, [reference url currently unavailable]

Tony Buon, The Use Of Educational Credentials For Employee Selection, 1998 <http://www.buon.net/papers/credential.htm>

William F Casey, Re: Comparison of reporting ethnicity in US and European randomised controlled trials, BMJ e-letter, July 2004 [reference url currently unavailable]

John A. Coleman, Sociology of Religion: The bible and sociology, the 1998 Paul Hanly Furfey Lecture, Sociology of Religion, Summer, 1999

Douglas T Fraser, Re: Re: Please don't let me be misunderstood, BMJ e -letter, 11 July 2004 <http://bmj.bmjournals.com/cgi/eletters/329/7457/112-b#66714>

Vinod K Gupta, MD, Re: Re: Randomized controlled trials: the mythical hypomagnesaemia -- intrinsic noradrenergic activation -- cortical spreading depression nexus in migraine, BMJ rapid response, 8 July 2004 [reference url currently unavailable]

Chay Helberg, Pitfalls of Data Analysis, (or How to Avoid Lies and Damned Lies) <http://my.execpc.com/~helberg/pitfalls/>

Alan Hunt, Anxiety and social explanation: some anxieties about anxiety, Journal of Social History, Spring, 1999

Claudia Infanta, ¿How do medical complaints regulate medical practice? BMJ e-letter, 8 July 2004 <http://bmj.com/cgi/eletters/328/7452/1338-e#66198>

Jurgen Kocka, Losses, Gains, and Opportunities: Social History Today - introducing the issues, Journal of Social History, Fall, 2003

I C McManus, Social class data are problematic to interpret, BMJ e- letter, 27 Jun 2004 <http://bmj.com/cgi/eletters/328/7455/1545#64772>

Gareth Mclean, Poverty as Entertainment, 28 Jan 2004 <http://www.buzzle.com/editorials/1-28-2004-49935.asp>

NCI, Cancer in Alaska Native Women: Key Points, Vital Statistics and Social Indicators <http://dcccps.nci.nih.gov/womenofcolor/alaska.html>

Paul Roscoe, The Perils of 'Positivism' in Cultural Anthropology, American Anthropologist, 97 (3) 1995: 492-504

Chamont Wang, Statistics, <http://www.cwrl.utexas.edu/~tonya/309m/class/paper4/browser/estat.htm>

Murray Wax, On Negating Positivism: an Anthropological Dialectic, American Anthropologist, 99 (1) 1997: 17-22

Competing interests: None declared

[Submit rapid response](#)
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5.

Don't penalise the willing

- dipan n mistry, SpR
- Kanchan Bhan
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The issue of 'widening participation' is an important one.[1] However, we feel that adopting the standardised admission ratio as a measure of 'equality of access' would lead to positive discrimination in favour of under-represented groups without due attention to each individuals ability. This would be a regrettable step that would penalise willing and able students from over-represented groups. We believe that admission to university should be based on ability alone, based on a fair and transparent system of selection.

1. Kieran S, Trisha G, Danny D. The standardised admission ratio for measuring widening participation in medical schools: analysis of UK medical school admissions by ethnicity, socioeconomic status, and sex. BMJ 2004;328:1545-1546

Competing interests: None declared

[Submit rapid response](#)
Published 17 July 2004

6.

Social class data are problematic to interpret

○

I C McManus, Professor of Psychology and Medical Education
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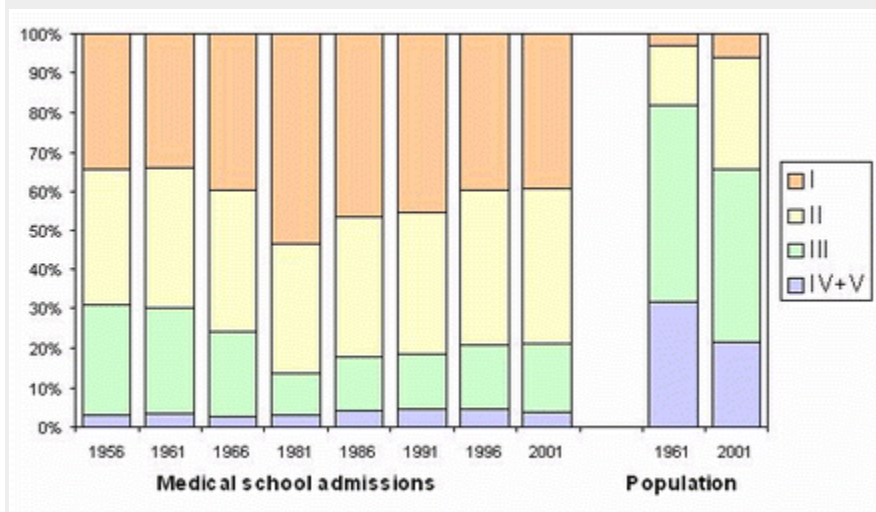
Although an interesting concept, the standardised admissions ratio (SAR) has a number of problems which make it too problematic for routine use for comparing institutions. In particular there is reason to believe a) that the UCAS figures may well not be a valid measure of social class, and b) it is not clear for social class whether the ratio should or could ever reach a value of unity. That makes interpretation of SARs difficult.

a) Until 2001, UCAS assigned social class on the basis of the very brief, often only one-word, description of parental occupation included on the application form, the glossary stating that it is,

"based on an applicant's parental occupation (or the occupation of the person contributing the highest income to the household if the applicant is aged 21 years or over). Provision of this information was voluntary ... " (www.ucas.ac.uk/figures/enq/index.html)
Even ignoring the 15.9% of applicants overall and the 11.4% of applicants for medicine who did not provide information, UCAS' assignments of class are unlikely to be reliable or valid (and UCAS provides no information that they are). A one-word description of a job can hardly summarise the subtleties of modern social class, particularly when many 17-year olds have little idea about their parents' jobs. Not only is there scope for upwards bias in describing occupations, but neither is it obvious how UCAS can code such one-word terms as 'manager' – of a small rural petrol station or a multinational oil company? SARs therefore have a numerator which is close to uninterpretable, a problem further exacerbated by the denominator being calculated by an entirely different method from a different database (and finding those figures in the mass of material available at www.statistics.gov.uk is nigh on impossible).

b) Post-1945 Britain has been very much a meritocracy, with social class strongly related to intelligence, extensive social mobility between classes depends primarily upon intelligence[1,2], and intelligence showing moderately high within-family correlations). Since intellectual ability is also a major predictor of examination results and hence university entrance, it is hardly surprising that individuals from social classes I & II are accepted at higher proportions than their representation in the population. There is therefore little likelihood that the SARs for social class will ever approximate the utopian ideal of unity. Elsewhere I have calculated what the social class distribution might be expected to be if admission to medical school mainly depends on intellectual ability [3]. I estimated that the proportions from social class I, II, III, IV and V would be about 14%, 35%, 41%, 8% and 2%. The SARs would then be 2.25, 1.18, .97, .48 and .30, with that for social class I being 7.7 times higher than that for social class V.

A long-term view of medical school entrants shows that over the years 1956 to 2001 the social class distribution of UK medical students remained almost constant (despite different methods of measurement). The figure below shows the proportions of each social class in medical school entrants from 1956 to 2001. Methods of assessing social class differ somewhat between studies and therefore only the broad trends should be considered. Nevertheless it is clear that over nearly half-a-century, and despite a substantial decline in the proportion of manual occupations in the population as a whole, there is little evidence of a broadening of the social class of medical school entrants. The SAR for social class I would have dropped from 12.3 in 1956 to 6.76 in 2001 but that is only because twice as many of the population are now in social class I.



Sources: 1956, 1961 and 1966: Royal Commission on Medical Education [4]; 1981 [5]; 1986 [6]; 1991 [7]; 1996 & 2001 www.ucas.ac.uk

Reference List

1. Halsey AH, Heath AF, Ridge JM. Origins and destinations: Family, class and education in modern Britain. Oxford: Clarendon Press, 1980.
2. Nettle D. Intelligence and class mobility in the British population. *British Journal of Psychology* 2003;**94**:551-61.
3. McManus IC. The social class of medical students. *Medical Education* 1982;**16**:72-5.
4. Royal Commission. Royal Commission on Medical Education (The Todd Report), Cmnd 3569. London: HMSO, 1968.
5. McManus IC, Richards P. An audit of admission to medical school: 1. Acceptances and rejects. *British Medical Journal* 1984;**289**:1201-4.
6. McManus IC, Richards P, Maitlis SL. Prospective study of the disadvantage of people from ethnic minority groups applying to medical schools in the United Kingdom. *British Medical Journal* 1989;**298**:723-6.
7. McManus IC, Richards P, Winder BC, Sproston KA, Styles V. Medical school applicants from ethnic minorities: identifying if and when they are disadvantaged. *British Medical Journal* 1995;**310**:496-500.

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7.

More insight needed

○

J. Alastair Lack, Retired

Home SP54LX

Thankyou for two most interesting articles on our medical school admissions. However I see no attention paid to the three major determinants of academic aptitude for any career - IQ, EQ (Emotional Quotient), and education.

Testing for aptitude for a career as broad as medicine is challenging, but certainly an adequate IQ as well as an adequate EQ (in my view almost more important) is necessary. You give no data on the ethnic and sex distribution of these in applicants.

Nor is any attention paid to the distribution of those who have had an education to the standard required for medicine. Medical schools can hardly be expected to make up for a poor education.

Your claim in the title that you deal with sex is not fulfilled. It is mentioned only in the second half of one paragraph, which in view of the major effect it has on lifetime working hours per doctor qualifying is not doing it justice.

Is not our goal to produce more doctor-hours of the highest standard possible, irrespective of a person's race, sex or origin? If applicants are not coming forward for selection in an even distribution, that is an educational problem at school level. The real test of discrimination would be of the acceptance to medical school of 'academically apt' applicants.

It would be most unfortunate if the standardised admission ratio as published were to be accepted as politically correct and therefore desirable.

Competing interests: None declared

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