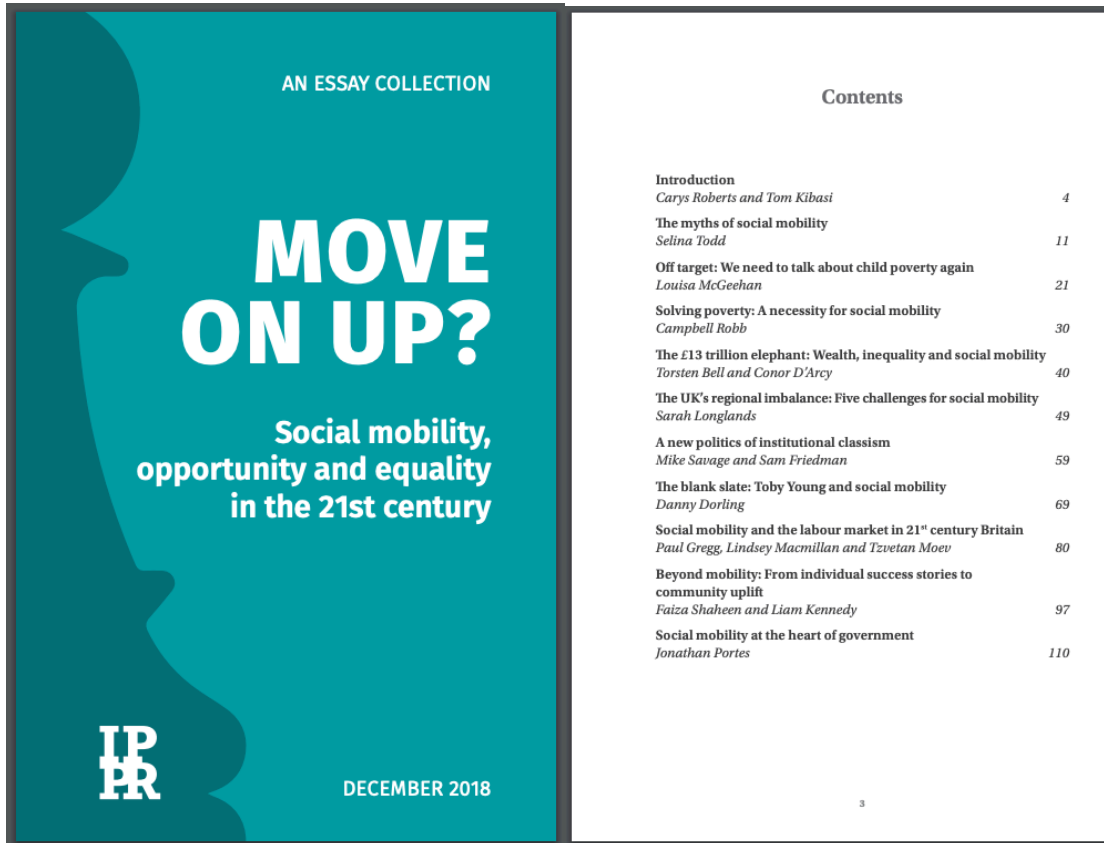


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The Blank Slate – Toby Young and Social Mobility

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Just a few days before his well-documented fall from grace – in response to the publication of an academic paper Sally Tomlinson and I had had published a year earlier¹ – the Conservative government's advisor,² Toby Young, posted this Tweet:

¹ Dorling D and Tomlinson S (2016) The Creation of Inequality: Myths of Potential and Ability, *Journal of Critical Education Policy*, 14, 3, 56-79. <http://www.jceps.com/archives/3204>

² Member of the Board of the Office for Students, 2 January 2018 to 9 January 2018



Toby Young _ @toadmeister24 Dec 2017 .Replying to Wow! Didn't know about the Danny Dorling paper. Incredible how robust the myth of the Blank Slate is!

1 reply 0 reTweets 3 likes 1 _3 _

<https://twitter.com/toadmeister/status/944958537809186818>

Three people liked it. A few days later Toby was spending his Christmas holidays desperately deleting thousands of his Tweets,³ but he left this one up, maybe for posterity.⁴

The blank slate is the idea that children are all born alike. They are slates just waiting to be written upon and what they go on to do is almost entirely a product of how they are brought up rather than their inherent nature.

Toby's argument is that children are born with greatly varying potentials due to their differing genetic endowments. He suggests that only a few can go on to be great and the Toby Young view of social mobility is that education should be used to identify those few who have the potential within them to be hugely able, who have within them the genes for great cleverness. This short article is about why Toby and those who agree with Toby are wrong.

All slates are, of course, different. Blank slates, like newborn babies, may look very similar, but within them the grain always varies slightly. Of course, some babies are male and others female, some are more brown and others pink, but they are all human babies and few people today would try to argue that these different varieties have greatly differing potentials. No two slates are ever exactly identical. The shale they are made from varies. Cut two slates from the very

³ Cowburn A (2018) Independent, 3 January. <https://www.independent.co.uk/news/uk/politics/toby-young-twitter-delete-tweets-universities-regulator-appointment-ofs-office-for-students-a8139841.html>

⁴ <https://twitter.com/toadmeister/status/944958537809186818>

same piece of rock and they will look identical, like identical twins; but, even then, the way they have been cut and how they are later transported will alter them.

Toby didn't mention my co-author, Sally, but it would have helped him to know that she knows a thing or two about potential and meritocracy. Sally Tomlinson was a very good friend of Toby's father, Lord Michael Young. She was a Council member of ACE, the Advisory Centre for Education, one of the many organisations started by Michael. She was Chair of ACE in 1993 and a member of Michael's Education Extra – a Learning from Experience Trust from 1992 to 1999.

Sally often talked with Michael about how one's children turn out. Michael wrote the 1945 Labour party manifesto 'Let us Face the Future and, in the Guardian on 29 June 2001 Michael Young, under the headline 'Down with meritocracy'⁵ explained: 'I have been sadly disappointed by my 1958 book, 'The rise of the meritocracy'. I coined a word which has gone into general circulation, especially in the USA and most recently found a prominent place in the speeches of Mr Blair. The book was a satire, meant to be a warning ... it is good sense to appoint people to jobs on their merit. It is the opposite when those judged to have merit of a particular kind harden into a new social class without room for others. ... '.

Michael Young continued: 'a social revolution has been accomplished by harnessing schools and universities to the task of sieving people according the education's narrow band of values... in the new social environment the rich and powerful have been doing mighty well for themselves. General inequality has become more grievous with every year that passes and without a bleat from the party who once spoke up so trenchantly for greater equality'. Michael died in 2002. Were he alive today he would see that the Labour party does not just bleat, but now loudly proclaims the case for greater equality, and not just of opportunity, but of respect, rights and understanding.

⁵ <https://www.theguardian.com/politics/2001/jun/29/comment>

In that 2016 article, Sally Tomlinson⁶ and I explained how the idea of great inherent differences between children dates back to Plato and his belief in golden children. Plato thought that others, those unlike him, were silver, iron or brass children, destined to be farmers and craftsmen, not philosophers – and that you should ‘breed according to your kind’. We know now that Plato’s guesses were wrong.

Sally and I explained in the paper that Toby disliked so much, how the differences between the average level of ability at mathematics between nation-states could not be explained by genes but had to be due to the different nature of their differing societies and educational systems. We went on to show that young adults in the US, UK and Ireland, were worst amongst the citizens of affluent countries at problem solving; whereas those in Sweden, Finland, South Korea and Japan did best. We plotted the home post codes of students who secured a place at Oxford University and suggested these were not the home locations of the special ‘golden children’, but far better reflected wealth. We explained that geneticists know that ‘Genes only matter greatly when everything else matters hardly at all’ and that in 2015 they calculated that ‘raw parent-child correlations in education may reflect one-sixth genetic transmission and five-sixths social inheritance’⁷. We showed how people like Dominic Cummings believed the very opposite but had been misled. We went on to say a lot more than that, but we suspect Toby read little of it before he Tweeted – perhaps he does not have the genes for diligence?⁸

Only within the last decade have we had access to genome-wide studies. These suggest that our inherent variation in nerdiness only explains up to 3.4% of the differences between people in terms of

⁶ The article has since then been greatly expanded into a book: Danny Dorling and Sally Tomlinson (2019) *Rule Britannia: From Brexit to the end of empire*, London: Biteback, to be published January 15th 2019.

⁷ Conley D, Domingue B W, Cesarini D, Dawes C, Rietveld C A and Boardman J D (2015) ‘Is the Effect of Parental Education on Off-spring Biased or Moderated by Genotype?’ *Sociological Science* 2: 82-105p. 82

⁸ To paraphrase from Dr Seuss’s epic tale, *The Cat in the Hat*, ‘Sally and I did not know what to say. Should we tell Toby, the things that we now know today?’ – As the good Dr said: it is fun to have fun. But you have to know how. Toby sometimes teases, he may think he pleases, but it is the antithesis

mathematical ability.⁹ In 2010 this research revealed that for measured English ability for children aged 11–14 the genome-wide association is similarly very small, or as the researchers themselves stated: ‘Put another way, these differences approximate to a tenth of that seen across the sexes for performance in English at this age’. We know that nowadays girls tend to be much better than boys, on average, at these particular ages. Children with what appeared to be a special genetic advantage in English had, on average, only a very small greater natural affinity.¹⁰

We now know that the idea of using an exam at age 11 to try to identify children with such tiny additional traits for nerdiness, is futile. The inherent differences between our children are just too narrow, never mind all the other disadvantages that come from separating children from each other at such an early age into separate schools by ‘ability’ and labelling a few as clever and most as stupid.

If you are older than me, or were unlucky enough to have grown up in an English county that preserved the 11-plus and were forced to take that test, at least you now know that if you failed the test, this tells us almost nothing about your inability. If you passed it, in the vast majority of cases, that was because you were coached, or it was due to your upbringing and social advantages. The testers did not actually discover something special in you. Ignore the IQ score you were given as a child. It is no great measurement of achievement and neither should you treat it as a curse.

Attempting to unlock the hidden potential in children is a futile exercise as almost all children have great potential. And almost all of us are very capable of being stupid. Toby has gone out of his way to help demonstrate this over the course of his long series of careers. There are no golden children. Social mobility cannot be about allowing those with the potential to do best to rise to the top, because that group, the golden children, do not exist.

⁹ Docherty S J, Davies O S P, Kovas Y et al. (2010) ‘A genome-wide association study identifies multiple loci associated with mathematical ability and disability’. *Genes Brain and Behaviour*, 9:234–47

¹⁰ For a much longer explanation see Dorling D (2015) G is for Genes, *International Journal of Epidemiology*, 44, 1, 374–378. <https://academic.oup.com/ije/article/44/1/374/655644>

Social mobility, if it is to serve any useful purpose, has to be about allowing people not to be constrained by circumstance and not to have to follow in the footsteps of their parents. Who would want to constrain the child of a banker to being a banker? How cruel would that be?

I joke! But in a society with low social mobility, those in the wealthiest brackets of that society are almost as limited as those from the poorest backgrounds. This is in their choice of what they might in future do, who they might meet, marry or otherwise pair up with, what jobs they might do and which neighbourhoods they might live in. Both groups are also much more likely to fear and misunderstand each other, especially when compared to people who have had the good fortune to grow up in more economically equitable and hence more socially mobile societies.

Education matters. The education system in Germany actually reduces social mobility a little in that otherwise much more equitable country. In contrast, at least as of the year 2008 when the data used in the graphic below was collected, the comprehensive education school system that covered most of the UK slightly reduced the otherwise very high levels of social immobility that come with living in such an economically unequal country as is the UK (see Figure 1).¹¹ The UK has the widest income inequalities of any large country in Europe – on a par with Russia (which has a land mass that is mainly not in Europe).

Economic inequality matters far more than education when it comes to determining levels of social mobility. In countries with very wide income inequalities, most parents at the top try desperately and constantly to ensure that their children will not drop out of their wealth bracket. This is entirely understandable. Most will do almost everything they can to ensure that their own children will not be trying to get by on two or three times less than they had. However, in

¹¹ Dorling D and Hennig B D (2010) 'Angles, Saxons, Inequality, and Educational Mobility in England and Germany', *Social Europe Journal*, contribution to 2010 online debate, 17 March. <https://www.socialeurope.eu/angles-saxons-inequality-and-educational-mobility-in-england-and-germany>

doing this, they cut off the rungs of the ladders that other might have climbed.

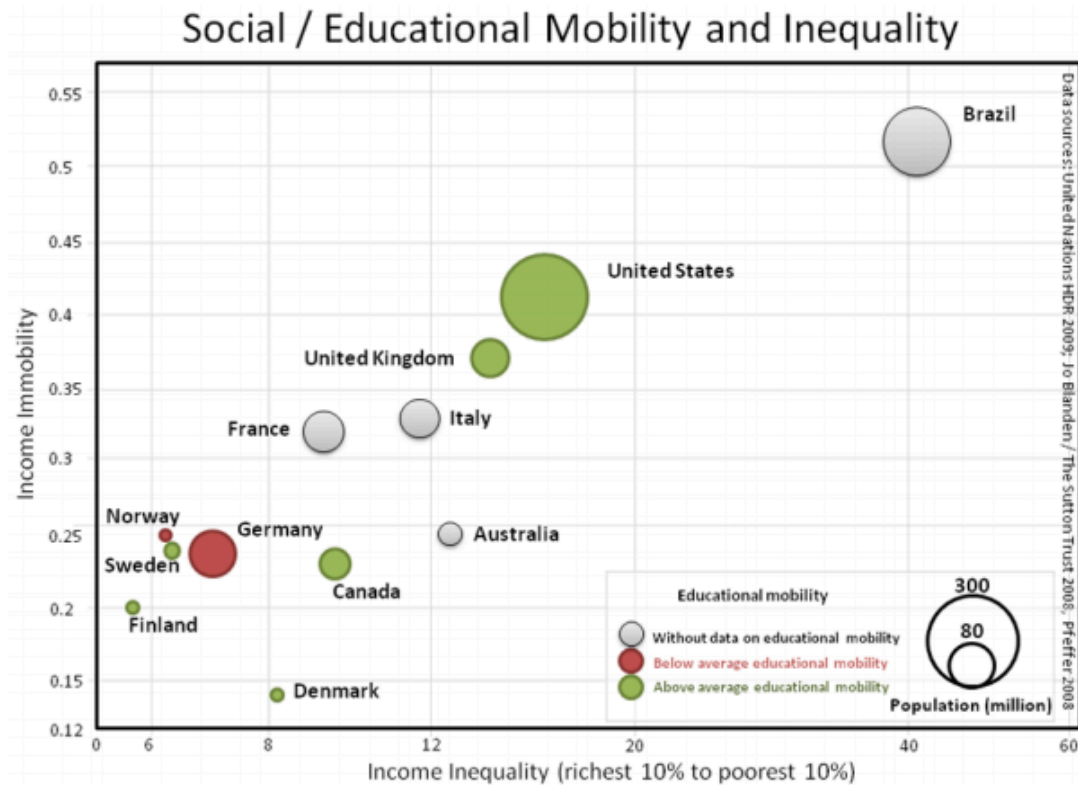


Figure 1: Social/Education Mobility and Inequality Source: <https://www.socialeurope.eu/angles-saxons-inequality-and-educational-mobility-in-england-and-germany>

The unfair advantage

Genetic information is very useful. It can be used to discover that, regardless of any inherent cognitive ability, higher ability children from disadvantaged backgrounds are disproportionately less likely to attain good grades at examinations in the UK, compared to children from more socially advantaged backgrounds. In addition, systems operate to add to this inequality as children in fee-paying secondary schools outperform their state secondary school counterparts regardless of ability (both the small amount that is inherent and all that later attained).¹²

¹² Morris T, Dorling D and Davey Smith G (2016) 'How well can we predict educational outcomes? Examining the roles of cognitive ability and social position in educational attainment', *Contemporary Social Science*, 11, 2/3, 154-168. <https://www.tandfonline.com/doi/full/10.1080/21582041.2016.1138502>

Furthermore, we can use genetic information to discover that it does not make sense to try to judge which teachers are doing better than others through the use of so-called ‘value-added measures’. We find that genetic endowment does appear to contribute a small amount to value-added measures that additionally control for background characteristics. In other words, we find that some children may be more receptive, more easy to teach, than others. Furthermore, we find that ‘value-added measures built from teacher rated ability have higher heritability than those built from exam scores’.¹³ In others words, the genes of children can be used to predict what teachers think of their ability much more than any actual ability each child has. As yet, we do not know why this is. It could be that teachers are biased towards thinking that children who look a certain way, or who are more subservient and less cheeky, or a myriad of other possibilities – are more clever. At present we just know it is this way.

Everything is effected by our genes. If all else is made equal then genes become all that matters. For instance, in a world without tobacco, genes would be key to determining who dies of lung cancer. When it comes to who benefits from potentially good or bad teaching, it is hardly surprising that some children might better soak up conventional classroom teaching and some might be more resilient to such an environment than others, but taught in another less conventional way other groups of children might prosper better. Some children are more compliant, so trying to measure value-added has problems that can only be revealed by genome-wide analysis. We, in the UK, would do much better to teach more like they do in Finland, and try to measure both pupils and teachers less. The measurements can be greatly biased.

In a summary of this very recent work, two of its authors explained that ‘our results demonstrate that some value-added measures may not be robust to genetic differences between students, particularly

¹³ Morris T, Davies N, Dorling D, Richmond R and Davey Smith G (forthcoming) ‘Examining the genetic influences on educational attainment and the validity of value-added measures of progress’, *British Educational Research Journal*, accepted 10 July 2018 and first published online. <https://www.biorxiv.org/content/early/2018/01/03/233635>

when calculated from teacher-reported ability'.¹⁴ You can think of this (if it helps) as the 'pretty nose' effect – one of the huge number of possible ways in which genes may interact with valued-added measures. Teachers say that – nose shape being genetically influenced – a child with a prettier nose is more able. We know from a huge amount of research that white teachers often underestimate the ability of black pupils when asked to assess them, the pupils almost always doing better in actual examinations (on average) than predicted. Given such an obvious finding, there must be a huge number of other far less obvious implicit biases at play effecting everything from the outcomes of all job interviews, to who receives attention first when two students put up their hands at the same time.

Children are not blank slates, but they are so close to being so when it comes to their capacity to learn and be influenced that we would do well to treat them as such. Ironically the most recent study to help reveal this is one in which Toby Young himself was an author. In a paper published on 23 March 2018, Toby Young and his colleagues suggested that 'We found substantial mean genetic differences between students of different school types: students in non-selective schools had lower EduYears GPS compared to those in grammar ($d=0.41$) and private schools ($d=0.37$).'¹⁵

In other words, they were saying that they thought they had found that children who attended private schools in England were simply genetically more able, advantaged from birth in a way that could not be modified. What Toby and his colleagues appeared not to have realised, was that the key qualification for attending a private school is that your parents are wealthy enough to be able to pay the fees. Some private schools have entrance tests, but an equal (and in many ways opposite) number do not. Those private schools largely exist to

¹⁴ Morris T and Davies N (2018) 'Do value-added measures of school and teacher performance reflect genetic differences between students?' The BERA Blog. <https://www.bera.ac.uk/blog/do-value-added-measures-of-school-and-teacher-performance-reflect-genetic-differences-between-students>

¹⁵ Smith-Woolley E, Pingault, J B, Selzam S, Rimfeld K, Krapohl E, von Stumm S, Asbury K, Dale P S, Young T, Allen R, Kovas Y and Plomin, R (2018) 'Differences in exam performance between pupils attending selective and non-selective schools mirror the genetic differences between them', *Nature Partner Journals: Science of Learning*, 3. <https://www.nature.com/articles/s41539-018-0019-8>

take the children of the affluent who fail such tests. Whatever the 'EduYear genome-wide polygenic score (GPS)' Toby and his colleagues were measuring was, it was not about being especially smart or quick or clever. It is possible it might be associated with being acquisitive. The one thing the parents of these children tended to have in common was that they had acquired greater wealth and income than most other people.

The most interesting part of Toby Young and his colleagues' 2018 paper was in the supplementary material which is available online.¹⁶ In the supplementary material the authors report that they found no genetic disadvantage associated with attending a secondary modern school in those counties of England that still have such schools. In other words, whatever they have found, it is not about any genes to do with being worse at passing the 11-plus.

None of this would matter much if one of the authors of the supplementary material was not listed as Tim Leunig, the former Chief Scientific Adviser at the Department for Education during Michael Gove's tenure, and current Scientific Advisor in the Department of the Environment, which Gove now leads. Interestingly Tim's name did not appear as an author of the main paper alongside Toby's – but they had been working together on the data. It would be interesting to know why Tim was an author of the supplementary material on this paper, but not the paper itself. I have never seen that happen before with an academic paper, it is not good practise but hopefully indicates that Tim Leunig, who is a very astute civil servant, may have been having doubts as to the usefulness of going down this particular road of agreeing with Toby Young's ideas about genes.

¹⁶ <https://www.nature.com/articles/s41539-018-0019-8> - Sec22

Looks (and Prejudice) Matter

Genome-wide analysis has largely rendered twin research obsolete. It suggests that the findings of twin-studies tend to magnify the small actual differences in personality between us that can be attributed to our genes by as much as a factor of ten.¹⁷ However, in 2013 a paper was published that studied twins in a different way. It included twins who were brought up assuming they were identical, but later (genetically) found not to be (they were dizygotic or DZ), and the opposite, twins thought to be not identical, but who technically were (they were monozygotic or MZ).

Those incorrectly thought to be identical, started with very similar birth weights and ended with very similar heights and weights. What was interesting was that the assessment of their academic ability, using the US cumulative high school grade point average, was equally highly correlated as that for twins correctly thought to be identical.

What twin studies often actually reveal is that similarly looking children have similar outcomes in life, especially if they are born at the same time and place (as all twins are). They do not reveal that some people are genetically superior to others in overall ability. But rather that we live in societies that have strong prejudices over how people are treated based simply on looks and first impressions, and on characteristics such as being more extrovert or more impatient. This paper was the first because, as its authors said, ‘we are the first to apply the misclassified twins approach to a recent sample with accurate genetic zygosity information for all twins’.¹⁸

Until genome-wide analysis became possible, which has only been in very recent years, it was possible to argue that there were gold, silver, iron and brass children and that they needed to be identified

¹⁷ Dorling, D. (2018) Review: Robert Plomin: *Blueprint: How DNA makes us who we are*, Times Higher, November (forthcoming).

¹⁸ Conley D, Rauscher E, Dawes C, Magnusson P K E and Siegal M L (2013) ‘Heritability and the equal environment assumption: evidence from multiple samples of misclassified twins’, *Behaviour Genetics*, 43, 5, pp. 415–26. <http://link.springer.com/article/10.1007/s10519-013-9602-1> and <https://scholar.princeton.edu/dconley/publications/heritability-and-equal-environments-assumption-evidence-multiple-samples>

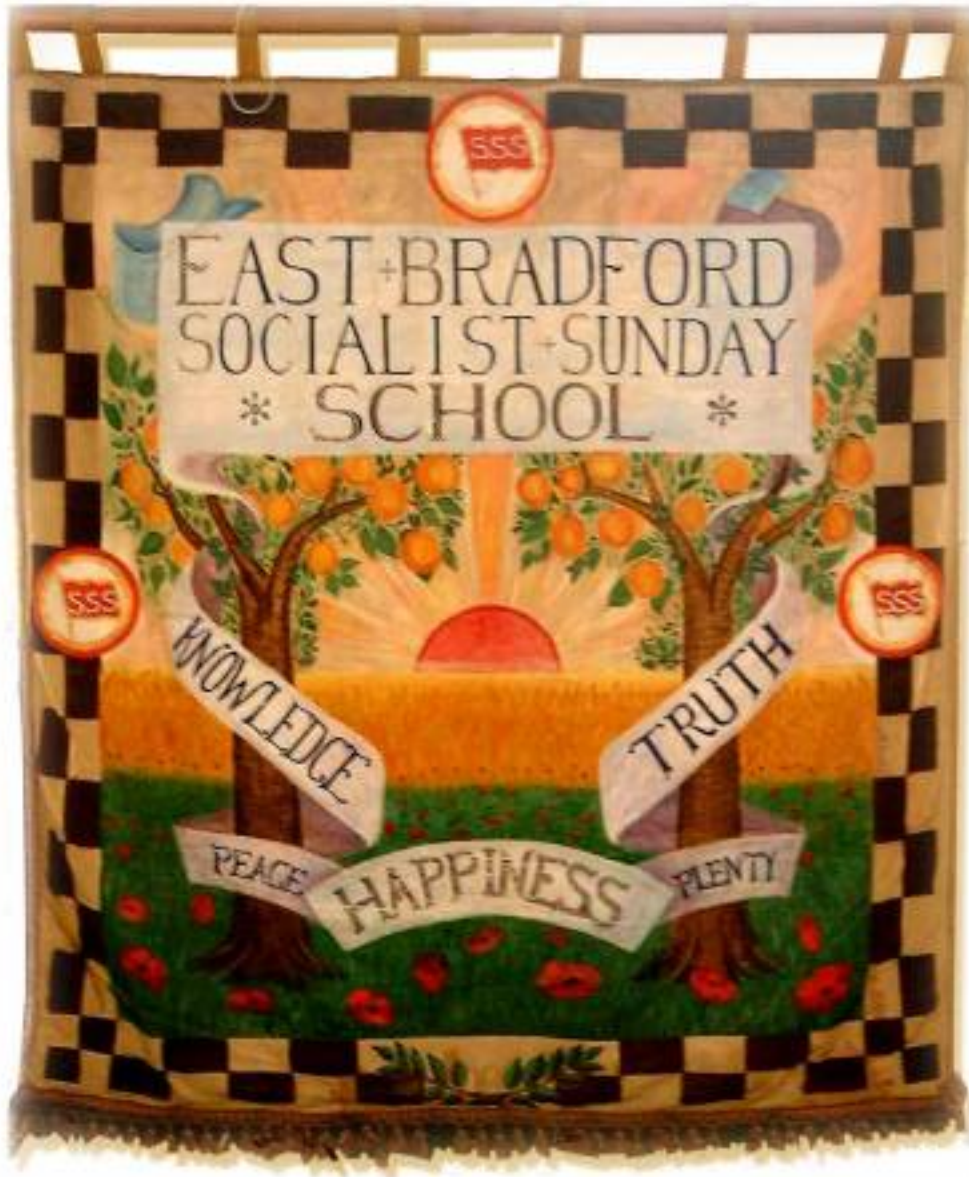
and separately educated,. Social mobility was seen as the process of identifying golden children born to brass parents and propelling them upwards. Now we know all that to be deeply flawed rubbish. We are all slates of one kind or another. We are born very blank and incredibly plastic, able to be moulded into a very wide variety of forms. Growing up in a society where this truth is not widely understood is a terrible misfortune. It is time we rectified this particular error. We should thank Toby for his help in all this.¹⁹

Finally, we should remember that because of Britain's unique history and remarkable class divides, a strong eugenic streak runs through every political party, including the Labour party. The original Clause IV of the Labour party, drafted in 1917 and accepted in 1918, began with the words: 'To secure for the workers by hand or by brain the full fruits of their industry...'. It thus included a eugenic distinction between two types of worker, which was hardly surprising as Sidney Webb, its author, was known to be a eugenicist, as were so many leading thinkers of that time. However, that tradition was not altered by Tony Blair when his new clause IV was adopted in 1995 with its promise 'to create for each of us the means to realise our true potential'. We now know just how little those true potentials vary and thus that a concern about variance in potential is unfounded. When that clause comes to be rewritten again, whenever that is, it will be rewritten in the light of what we now know, and all that we are about to learn, about the incredible potential to be found in almost all of us to be so much better than we currently are, when set free from today's constraints and prejudices. The implications for social mobility, for patrician politics, for elite universities, and for society as a whole are profound. We now know that there are not just a few among us who have within them the true potential to be truly great, to be great leaders, steering society with their great minds. We

¹⁹ I don't wish to be mean to Toby. I do believe he has the potential within him to come round to another way of thinking. I'll end with the immortal words of Dr Seuss (from Oh! The Places You'll Go!):

You have brains in your head.
You have feet in your shoes.
You can steer yourself
any direction you choose.
You're on your own.
And you know what you know.
And YOU are the one who'll decide where to go

should aim for a society that allows the greatest number to contribute and participate, that would be real social mobility – for the many – not social mobility merely for a few.



Source: <https://www.wcml.org.uk/our-collections/creativity-and-culture/leisure/socialist-sunday-schools/banner-of-the-bradford-socialist-sunday-school/>