

An Onion of White Advantage? (in UK HE degree attainment)

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This paper draws on projects I have worked on over the last few years around differences in UK degree attainment across student ethnic groups. I began this work in 2015 with an analysis of four years of data at the UK and HEI levels. This was preceded by over 20 years examining the relationship between educational success and ethnicity at educational levels leading up to and including participation in /access to HE. Since 2015, the schisms between statistical practices within UK HE and all other educational levels have become increasingly apparent. This began with shock at the widespread use of a binary classification of ethnicity (White / not White or BAME or BME) but as time progressed, further problems with statistical practice in UK HE equality analyses were revealed one by one, like peeling way layers of an onion.

In this paper, the 'problems' with current HE statistical practice in UK equality analyses are presented as 'onion layers'. For each layer, the problem is described and the methodological implications discussed. This is followed by discussion of the substantive implications brought by the 'onion layers' that draws on the principles of a Critical Race Theory (CRT) of statistics (QuantCrit) as set out by Gillborn et al. (2018) and Garcia et al. (2018).

The paper highlights notable statistical schisms between the statistical practice in UK HE with all other educational levels and illustrations to suggest that UK HE equality analyses that are at best inaccurate/misleading and at worst serving White racial interests.

In an educational world with increasing data and data-linkages it seems useful to be able to place ethnic differences within HE in context with what is observed at other educational levels (i.e. FE/6th Form/A levels; GCSE/KS4; KS3; KS2; KS1 and the Early Years Foundation Stage Profile). However, currently the statistical schisms between HE and other educational levels serve to thwart this.

The focus in this paper is on degree attainment but similar methodological and statistical problems will also apply for analyses of access to and progression through HE courses and onto postgraduate study and employment.

QuantCrit

Gillborn et al. (2018) summarise the five principles for QuantCrit as:

- The centrality of racism as a complex and deeply rooted aspect of society that is not readily amenable to quantification.
- Numbers are not neutral and should be interrogated for their role in promoting deficit analyses that serve White racial interests.
- Categories are neither 'natural' nor given and so the units and forms of analysis must be critically evaluated.
- Voice and insight are vital: data cannot 'speak for itself' and critical analyses should be informed by the experiential knowledge of marginalized groups.
- Statistical analyses have no inherent value but can play a role in struggles for social justice.

Stemming from legal studies in the USA and from an essentially qualitative methodological paradigm, CRT scholars have long critiqued the inability of statistical methods to capture the nuances of everyday experiences of racism. However, in recent years there has been a growing attention on how statistics can assist in progress towards a racially equitable society, system or institution. Quantitative methods will never be able to match qualitative approaches in helping to understand the nuances of the numerous social processes that shape and legitimate race inequity. Instead, quantitative methods are suited to mapping the wider structures and highlighting structural barriers and inequalities that different racialised groups must navigate. However, at the same time, statistics can be (and are) mobilised to obfuscate, camouflage and further legitimate racial inequities.

Given this background, the starting point for QuantCrit is the adoption of a 'principled ambivalence' to number. This is not a paradigmatic anti-statistics position but is an anti- (or post) positivist, critically realist one that has a central focus on racism.

QuantCrit principles align reasonably closely with those expressed by Radical Statistics such as “(the lack of) control by the community over what & how statistical investigations are conducted and interpreted” and “the power structures within which statistical and research workers are employed” and belief that “statistics can be used to support radical campaigns for progressive social change. Statistics should inform, not drive policies. Social problems should not be disguised by technical language”.

Layer 1 (Surface): A problematic starting point

"Across UK HEIs, in 2019, 68% of the 76,610 UK domiciled graduates classified as "BAME" attained a 'good degree' compared with 81% of graduates classified as 'White'" (AdvanceHE, 2020). A 'good degree' is defined as a degree passed at either first or upper second class.

In absolute terms, this is a degree attainment gap of 13.4 percentage points. In relative terms, two perspectives can be taken using odds-ratios²:

- The extent of White advantage can be obtained by dividing the odds of attaining a 'good degree' for White graduates (4.38) with the odds for graduates classed as 'BAME' (2.13) = 2.06; in terms of odds, White graduates are over twice as likely to attain a good degree compared with graduates classified as BAME.
- The extent of disadvantage experienced by graduates classed as 'BAME' compared with White graduates is the reciprocal of this = 0.49. Graduates classed as BAME are less than half as likely to attain a good degree compared with graduates classified as White.

The surface of the onion seems to hog the Key Performance Indicator (KPI) spotlight at both national and HEI levels - although the language might vary to be the 'BAME' disadvantage gap (or degree awarding gap). There are three fundamental problems summarised at the surface, each of which will be 'peeled away':

- Measurement of ethnicity (not valid & prone to statistical inaccuracy)
- Measurement of degree attainment (statistical inaccuracy, and misses a key story)

- Exclusion (off-rolling?) of non-UK domiciled graduates from equality analyses involving student ethnicity.

Methodologically, the statistical problems can be classified as relating to the validity and reliability of measurement and/or sampling/population representation. Substantive implications for HE analyses of equality analyses involving student ethnicity are discussed within a QuantCrit analytical framework.

Layer 2: Measuring student ethnicity.

There are several problems with the use of a binary classification of ethnicity but before these are discussed, it should be highlighted that, in HE, the White group is not unpacked. The Office for National Statistics (ONS) ethnicity classification commonly has five groups within the broad 'White' ethnicity classification: White British; White Irish; White Gypsy/Roma; White Traveller of Irish Heritage and White other³. At all other educational levels, White British students/pupils are used to compare the relative educational success of other (minoritised) ethnic groups. This means that in UK HE, the degree attainment of White British and White minoritised groups are hidden behind the aggregated White classification. Whilst in recent times White Irish students/pupils have tended to have higher levels of educational success when compared with White British students/pupils, the other three minoritised White groups tend to have lower levels of educational success. This suggests that the extent of White (British) advantage in UK HE degree attainment may currently be understated through the practice of using the aggregated 'White' ethnicity classification.

Away from the White group, the 'BAME' classification is drawing growing criticism that tends to focus on the problematic assumptions of homogeneity. In 2015, ONS produced guidance on terminology around ethnicity and specifically state "Do not use the terms or acronyms Black, Asian and minority ethnic (BAME) or Black and minority ethnic (BME)" ONS, 2015⁴. However, this does not seem to have stopped the increased use of this in UK HE (although outside HE it continues not to be used).

Setting aside the fact that, in UK HE, minority groups remain hidden behind the White classification, the BAME classification could be unpacked into the actual categories that individual students select as the ethnic group with which they identify. It is critically important to understand the top-down application of the BAME classification. An analyst needs to combine more defined ethnic classifications into the two groups. Ethnicity is a social not a biological construct and has no objective measure. For example, it is possible for an individual to change their ethnicity over time. At age 13, a young person with a Black Caribbean and White British parent/guardian might identify as 'Mixed Black Caribbean and White' but change to identify as 'Black Caribbean' at age 16 and perhaps as 'White British' at another age (e.g. in an attempt to circumnavigate perceived/actual discriminatory administrative practices). No single response is an 'objective' or 'accurate' ethnicity, which highlights how ethnicity (and racism) is something that is not readily amenable to quantification.

The ethnic group that an individual identifies with is usually restricted to a list of closed categories with options for respondents to provide detail if none of the categories fit (or, of course, to refuse to respond). The UK Census first collected ethnicity details in 1991 (following 20 years of discussion). Since 1991, the categories used by ONS have expanded following lobbying from some minority groups who wanted to become statistically visible to help provide evidence of their (disadvantaged) structural position (in terms of education, health, wealth etc) - see Williams & Husk, 2013. The BAME (or BME) classification is a post-hoc / top-down measure that breaks the 'self-identified' definition - so, cannot really be seen as a measure of ethnicity. Methodologically it can be seen as an approximation of ethnicity with absolute minimum measurement validity (because it is difficult to be less valid than a binary classification).

The validity, false homogeneity, and language problems that BAME/BME bring are quite obvious - but have not yet resulted in 'reigning in' the practice of using this classification in UK HE. A second problem that is brought by BAME/BME is statistical inaccuracy due to a phenomenon known about for over a century; Simpsons Paradox (Demack, 2020). In summary, it is possible for analyses of aggregated data to contradict analyses of disaggregated data,

meaning that BME classification can be used to (inaccurately) show a declining pattern of White advantage when, in reality, across more defined groups, White advantage increases. The paradox problem intensifies when comparisons are made (over time, between institutions, types of institutions, degree courses, modules etc). For more detail on this statistical phenomenon, please email me for a copy of a worksheet that illustrates it.

I am assuming that HEI analyses that seek to provide evidence on entrenched White advantage in UK degree attainment does not aim to provide false/misleading statistics. After all, from inaccurate analyses comes mis-targeted policy that cannot really hope to address or assess current problems.

ONS have two commonly used ethnic classifications - major and minor - which are set out in Table 1 below.

There are six categories in the ONS ethnicity major grouping classification. The Chinese group are sometimes grouped with ethnicities in the Asian classification but are more commonly kept distinct. This is one oddity of the ONS major grouping - the Chinese are a more defined ethnic group than any of the other 'major' groups. They also happen to be one of the smallest defined ethnic groups and notably smaller than all the defined groups that are hidden behind the aggregated 'Black' and 'Asian' and 'Mixed' groupings. In terms of education, Chinese students/pupils have relatively high levels of educational success. Prior to HE, Chinese students/pupils are (easily) the highest attaining group at every key stage and this has been the case for over a decade and found across language, humanities, maths and science subject areas. In HE, at degree level, Chinese graduates are less likely to attain a good degree compared with White graduates but more likely to do so than any other (non- White) ethnic group.

Table 1: ONS ethnic classifications (major & minor)

Ethnicity Minor Categories	Major Categories
White British	White
White Irish	
White Gypsy/Roma	
White Traveller of Irish heritage	
White other	
Black African	Black
Black Caribbean	
Black other	
Indian	Asian
Pakistani	
Bangladeshi	
Asian other	
Chinese	Chinese
Arab	Other
Other other	
Mixed Black Caribbean & White	Mixed
Mixed Black African & White	
Mixed Asian & White	
Mixed other	

Notes & Source; There are also commonly 'missing' and 'prefer not to say' categories.

<https://www.ons.gov.uk/methodology/classificationsandstandards/measuringequality/ethnicgroupnationalidentityandreligion>

Given the size of the Chinese ethnic group, they provide a useful reference point for evaluating whether it is feasible to show other defined ethnic groups - if issues with small samples (e.g. statistical disclosure⁵) are not deemed to be problematic for Chinese HE students, the same must be the case for Black African, Black Caribbean, Indian, Pakistani, Bangladeshi, Mixed Black Caribbean & White, Mixed Black African & White and Mixed Asian & White (i.e. all defined ethnic groups except the Arab group, which is smaller than the Chinese group). This is something that urgently needs to be addressed in the UK HE equality analyses.

Unpacking the BAME classification to show more defined (self-selected) ethnic classifications reveals the problems brought by aggregation. First, disaggregating BAME into the six major groupings

reveals large differences. Table 2a does this to show the percentage attaining a 'good degree' across the six ONS 'Major' groups. Alongside the percentages are two measures that capture the extent of White advantage; the absolute gap (in percentage points) and the relative gap (as odds-ratios).

Table 2a: % attaining a 'good degree' by aggregated ethnic groups, UK domiciled Graduates 2019

Group	% with Good Degree	White Advantage*	
		Absolute (Percentage Points)	Relative (odds-ratio)
All graduates	78.2	-	-
White	81.4	-	-
BAME / BME	68.0	13.4	2.06
Black	58.8	22.6	3.07
Asian	70.0	11.4	1.88
Chinese	76.9	4.5	1.31
Mixed ethnicity	76.6	4.8	1.34
Other ethnicity	67.4	14.0	2.12

Source: AdvanceHE 2020 student equality report (for 2019 academic year), Table 3.13

* Because the pattern is so clear in UK HE, it is accurate to describe ethnic differences as 'White advantage'. This would not be appropriate at any other level of education (in England) because, unlike HE, at all other levels (and subject areas) White (or White British) students/pupils are NOT the highest attaining ethnic group.

Table 2a highlights how the BAME classification leads to statistics that understate the extent of White advantage with respect to Black graduates and overstate it for Chinese and Mixed ethnicity graduates.

The aggregated groupings bring similar problems of validity, homogeneity assumption and Simpsons Paradox seen with the BAME classification. In HE, this is most evident with the Asian category because the degree attainment of the more defined ethnic groups included in the Asian category are very different. This is not the case for Black graduates and this is (another) thing about educational success in HE that appears out of step with what is seen at all other

educational levels in England. Between ages 4 and 18 (from early years foundation up to A level), Black Caribbean pupils are commonly observed as having relatively low levels of educational success (in terms of attainment) whilst Black African pupils tend to attain similarly to White British pupils. This difference within the Black grouping is not found in HE with degree attainment - where both Black Caribbean and Black African pupils have similarly relatively low levels of success.

Unfortunately, the mixed ethnicity has yet to be unpacked in HE statistics and so remains a very generic category with little validity⁶. Of particular interest within the mixed ethnicity grouping are Black Caribbean & White and Black African & White groups because these tend to experience similar levels of educational success as Black Caribbean and Black African groups respectively.

Before examining % good degrees across defined ethnic groups, this 'measuring ethnicity' layer has highlighted two substantive patterns that, in the UK, are solely found in HE:

- Chinese educational success has been a perennial feature of the education system in England for as long as data was available - however, this long-standing pattern is broken in HE - where a clear White advantage seems to have always reigned.
- The Black African and Black Caribbean groups experience very different levels of educational success across the English education system ... until HE - where both groups are found as having the lowest success at degree level.

Which leads to three questions:

- What is it about UK HE that results in such clear White advantage not seen anywhere else in the education system?
- What happens to Chinese students?
- What happens to Black African students?

Table 2b shows the %good degree statistic across defined ethnic groups.

Table 2b: % attaining a 'good degree' by defined ethnic groups, UK domiciled Graduates 201

Group	% with Good Degree	White Advantage*	
		Absolute (Percentage Points)	Relative (odds-ratio)
All graduates	78.2	-	-
White	81.4	-	-
BAME / BME	68.0	13.4	2.06
Black	58.8	22.6	3.07
Black Caribbean	62.1	19.3	2.67
Black African	58.0	23.4	3.17
Black Other	57.0	24.4	3.30
Asian	70.0	11.4	1.88
Indian	76.6	4.8	1.34
Pakistani	66.4	15.0	2.21
Bangladeshi	65.7	15.7	2.28
Asian Other	67.7	13.7	2.09
Chinese	76.9	4.5	1.31
Mixed ethnicity	76.6	4.8	1.34
Other ethnicity	67.4	14.0	2.12
Arab	68.1	13.3	2.05
Other ethnicity	67.0	14.4	2.16

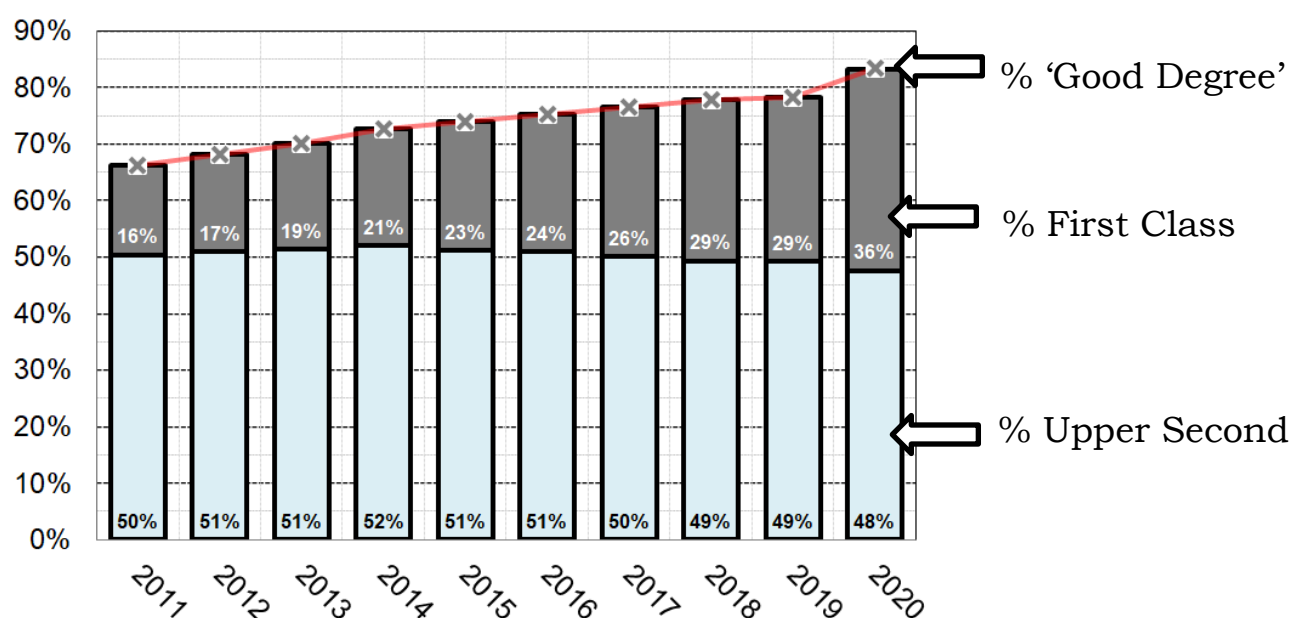
Source: AdvanceHE 2020 student equality report (for 2019 academic year), Table 3.13

In summary - the BAME classification serves to understate the extent of White advantage in UK HE and the use of this classification will result in statistically inaccurate analyses and possibly to mis-targeted policy. The aggregated (6 category) measure of ethnicity suffers similar problems to the BAME classification - most strikingly within the Asian group. Finally, there are numerous examples where UK HE is out-of-step with the rest of the education system and this is evidence for institutional racism (within UK HE) being a key cause of differential degree attainment across student ethnic groups.

Layer 3: Measuring degree attainment:

The focus of national and HEI KPIs has been on 'good degrees'. That is the proportion of graduates who attain a degree at first or upper second class levels. Of course, with KPIs, there is always a risk of meeting 'Goodharts Law'⁷ and this does seem to have happened in the UK with the 'good degree' measure. Consider Figure 1. This unpacks the 'good degree' measure to show both first class and upper second components for 10 cohorts of UK domiciled graduates between 2011 and 2020.

Figure 1: % attaining a 'good degree', UK-domiciled graduates at UK Universities 2011 to 2020



Source: ECU / AdvanceHE student equality reports 2012 to 2021.

The proportion of graduates attaining a first class degree more than doubled between 2011 and 2020 – a time period that included the introduction of a £9k/year degree course fee. At the same time, the proportion attaining upper second class degrees is seen to peak in 2014 at 52% before falling to 48% by 2020. Therefore, the increase in % 'good degrees' is seen to be driven entirely by the increases at first class [16% in 2011; 29% in 2019 and then 36% in the first year of Covid, 2020]. There seems to have been a 'surge' in first class degrees during the first summer of Covid in 2020 that came following years of a growing 'swell' between 2011 and 2019.

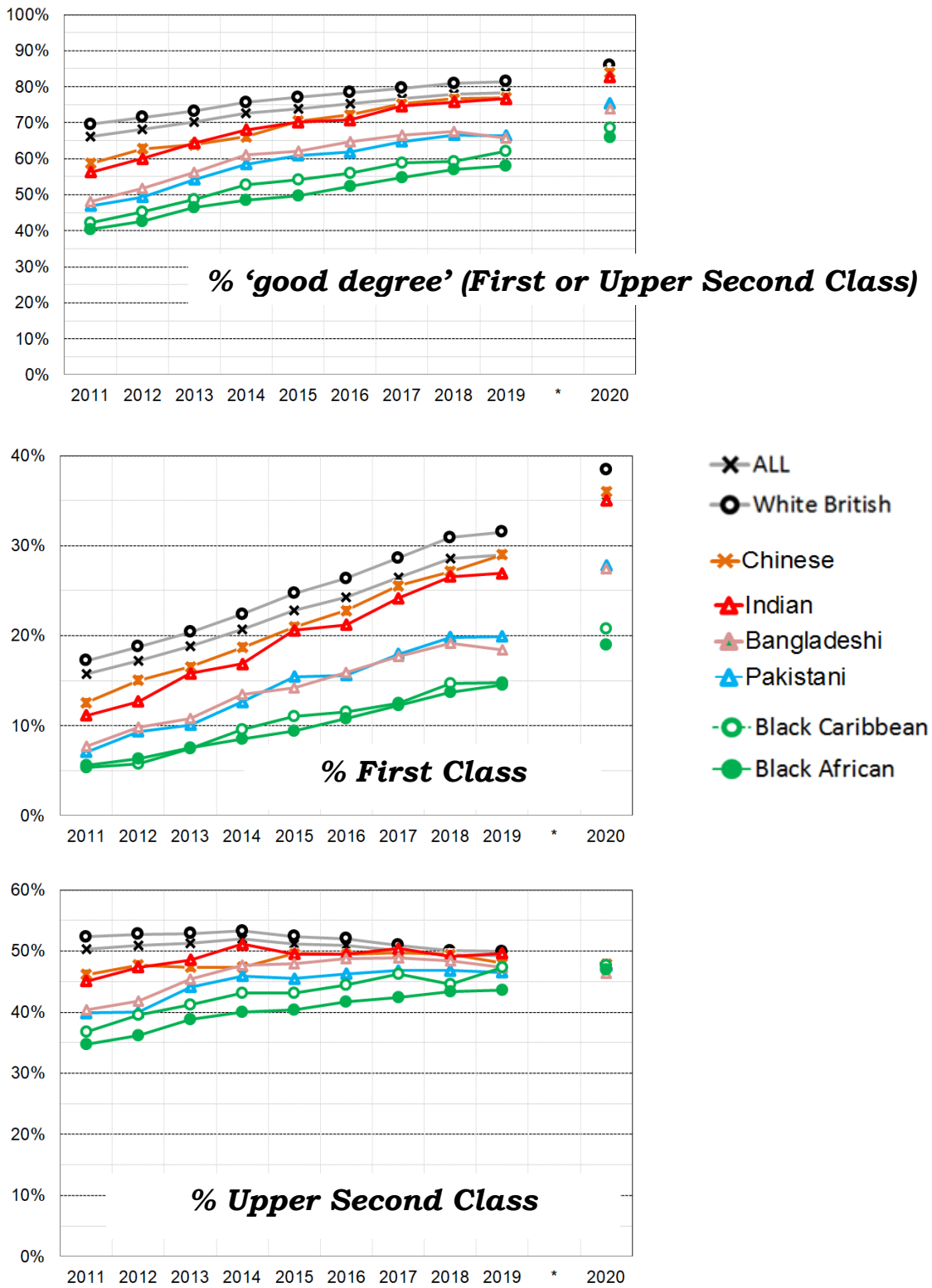
This context highlights that by focusing on ‘good degrees’, important detail is missed but does not illustrate what this means for HE ethnicity equality analyses. Figure 2 presents ethnic differences in degree attainment using the ‘good degree’ KPI and its two (first & upper second class) components.

The first graph in Figure 2 illustrates a relatively static picture in the ‘good degree’ KPI chart – one of entrenched White advantage with little evidence for this increasing or decreasing. The 2020 statistics are shown separately from the 2011 to 2019 statistics to acknowledge the arrival of Covid19 in March 2020 which may account for the notable ‘surge’ upwards seen in the first graph of Figure 2.

Below, the ‘good degree’ graph, a graph shows ethnic differences at first and upper second class levels. These charts are more dynamic compared with the ‘good degree’ one.

At first class, in the second graph of Figure 2, there is clear evidence of an increase in White advantage between 2011 and 2019. This is seen in Figure 2 by the diverging lines. Increases in % first class are sharper for some groups (White; Chinese, Indian) compared with others (Bangladeshi, Pakistani, Black African, Black Caribbean). White advantage remained relatively static with respect to the former but clearly increased with respect to the latter. As with ‘good degrees’ a notable ‘surge’ upwards is seen in 2020 but at first class this is sharper – but does not seem to have altered the relative attainment differences across student ethnic groups (so perhaps the early-Covid upward ‘surge’ in first class degrees was experienced for students from all ethnicities).

Figure 2: Degree attainment & ethnicity - three thresholds (UK-domiciled graduates)



Source: ECU / AdvanceHE student equality reports 2012 to 2021.

At upper second, there is clear evidence of a decrease in White advantage between 2011 and 2019. This is seen in Figure 2 by the converging lines – and, in 2020 they are observed to all come to a similar point of around 47-48%.

When these two components are combined to form the 'good degree' KPI, they cancel each other out - and construct a 'static' picture illustrated in the first graph of Figure 2.

In other words, whilst KPIs might focus on the (static) patterns relating to 'good degrees', White advantage has intensified at the higher threshold of 'first class' degrees –seemingly with little attention.

Layer 4: UK and non-UK domiciled students

Currently student equality analyses that focus on ethnicity are restricted to UK-domiciled students. When I queried this with AdvanceHE, the reason given was around complexity of classifying the ethnicity of non-UK domiciled students. Within this discussion, I reflected on my experiences with data from the European Social Survey (ESS⁸) and the measure 'ethnicity' across many European countries⁹. The ESS measure revolves around nationality of respondents and parents and is not something that could be considered as 'ethnicity'. This made the response from AdvanceHE seem reasonable and that, therefore, work needed to be done before non-UK domiciled students could be included into future equality analyses. However, this discussion took place before I had spent time looking at AdvanceHE equality analyses involving UK HE staff - in which both non-UK and UK staff are included in ethnicity analyses (using the defined classification¹⁰). Why is it that non-UK staff are included but non-UK students are excluded; if it is possible to measure the ethnicity of non-UK staff, why not non-UK students?

To examine the size of the UK / non-UK domiciled issue, equality analyses across other dimensions (I have selected gender) can be compared with equality analyses relating to ethnicity. Equality analyses relating to these dimensions cover all UK and non-UK domiciled graduates. On doing this comparison, the proportion of non-UK domiciled graduates across all UK universities is observed to increase from 17.9% (n=67.9K) in 2013 to 20.2% (n=79.8K) in 2020. In other

words, around a fifth of graduates are systematically excluded from student HE equality analyses involving ethnicity, and this hidden population is growing.

Further, from detail on total student numbers across HEI 'mission groups', the proportion of non-UK domiciled students at Russell Group HEIs is observed to increase from 29.2% in 2013 (n=165,680) to 35.2% in 2020 (n=238,800). In other words, over a third of students are systematically excluded from Russell Group student HE equality analyses involving ethnicity, and this hidden population is growing.

Whilst no ethnicity details on non-UK domiciled undergraduate student attainment is available, the overall degree attainment of non-UK students is. This highlights relatively lower rates of success of non-UK domiciled students. This is seen with % attaining a 'good degree' for non-UK domiciled students (increased from 54% in 2011 to 71% in 2019, lurching to 78% in 2020) compared with UK-domiciled students (increased from 66% in 2011 to 78% in 2019, surging to 83% in 2020). The lower rates of success are also seen with First Class degrees when non-UK domiciled students (increased from 14% in 2011 to 26% in 2019, surging to 32% in 2020) are compared with UK-domiciled students (increased from 16% in 2011 to 29% in 2019, surging to 36% in 2020).

Non-UK students are a lucrative market for UK HE, and one that will be expanding in many HEI's to help to address the financial impact of fixed undergraduate fees imposed by UK Government for the last decade. The lucrative nature of educational market for non-UK students may account for Russell Group HEIs having a larger share (percentage of all non-UK domiciled students at Russell Group HEIs increased from 36% in 2011 to 42% in 2020) when compared with the market for UK-domiciled students (percentage of all UK-domiciled students at Russell Group HEIs increased from 21% in 2011 to 23% in 2020). As noted above, whilst non-UK staff are included in ethnicity equality analyses, non-UK students are systematically excluded from ethnicity equality analyses. Another term for such systematic exclusion that has become popular parlance in the marketised world of UK education is 'off-rolled' (students/pupils who are systematically

excluded from statistics used to represent/evaluate an institution). So, currently non-UK domiciled students are off-rolled from equality analyses. This seems risky. This is a hidden population and a growing lucrative market. Groups that are 'off-rolled' are particularly vulnerable to experiences of segregation, marginalisation and discrimination - because they are hidden from scrutiny. Until non-UK students are included in equality analyses (as they are for gender, disability and age analyses for students and for ethnicity analyses for staff), the analyses will remain inaccurate in helping to understand the structural realities of White advantage in UK HE.

Discussion

The analyses presented under the four onion layers of White advantage in UK HE drew heavily on the second and third principle of QuantCrit:

- 2) Numbers are not neutral and should be interrogated for their role in promoting deficit analyses that serve White racial interests.
- 3) Categories are neither 'natural' nor given and so the units and forms of analysis must be critically evaluated.

The first two layers illustrated how post-hoc top-down measurement of ethnicity results in analyses that understate the extent of White advantage in UK degree attainment. This problem is compounded by the known problem of statistical inaccuracy ('Simpsons Paradox'¹¹) brought by aggregated data. The use of an aggregated 'White' category in UK HE rather than unpacking this to show the White British and other White groups (seen at all other levels) serves to cloud things further. The first two layers, therefore, reveal that current practice both serves to downplay White advantage in UK HE attainment and to provide researchers and policy makers with false / misleading statistical evidence. It seems likely that this statistical inaccuracy will lead into inaccurate / mistargeted policy and diminished potential for positive change. A diminished potential for positive change risks the perpetuation of an entrenched 'status quo'. In the context of UK HE, maintaining the 'status quo' means preserving White advantage in degree attainment.

The third layer illustrated how the focus on a narrowly defined outcome (good degrees) misses an interesting and important story - where White advantage in degree attainment has increased at first class with little / no attention. A decline in White advantage at upper second is also rarely commented on. Instead, the composite 'good degree' is used to show a largely static (entrenched) pattern of White advantage - constructed by widening differences at first class and decreases at upper second class. Once again, the practice of focusing on good degrees results in analyses that downplay the size/extent of White advantage in degree attainment.

The final layer considered the student population and systematic exclusion of a fifth (and over a third of Russell Group students) from equality analyses by focusing solely on UK-domiciled students. The reasons for excluding non-UK domiciled students are unclear. However, what is clear is that until these students are included, student equality analyses relating to ethnicity will be inaccurate/incomplete. Statistical inaccuracy is just one concern here. With between 20 and 35% of students 'off-rolled' in terms of equality scrutiny, there is a risk that these students will face greater levels of segregation, marginalisation and discrimination (i.e. racism) because they are not in the statistical spotlight.

Looking at the remaining three QuantCrit principles:

- 1) The centrality of racism as a complex and deeply rooted aspect of society that is not readily amenable to quantification.
- 4) Voice and insight are vital: data cannot 'speak for itself' and critical analyses should be informed by the experiential knowledge of marginalized groups.
- 5) Statistical analyses have no inherent value but can play a role in struggles for social justice.

The paper highlights the first and fifth of these principles - in how quantification can result in statistical obfuscation and inaccuracy that does seem to serve White racial interests (e.g. downplaying the extent of White advantage, diminished potential for positive change, maintaining the status quo).

The fourth principle, 'voice and insight' is admittedly largely absent in this paper - in which there is a single statistician's voice (who is a middle class state educated White British male). The 'voice and insight' QuantCrit principle encourages researchers to draw on both quantitative and qualitative research when researching issues of racism. This might be to enrich the sparse structural evidence that statistics can provide using qualitative details on individual lived experiences, attitudes and perceptions. Alternatively (or in addition), qualitative work might be used to provide critical input for planned statistical analyses or to help interpret the statistical findings through lenses of different ethnic groups that are included in analyses

As noted earlier, QuantCrit assumes a 'principled ambivalence to number'. This is to acknowledge that ethnicity and racism are not readily amenable to statistical enquiry and reject beliefs of quantitative 'objectivity'. In other words, numbers cannot speak for themselves. As with other dimensions of social inequity (sexism, ableism, ageism etc), statistical enquiry can be deployed to both illuminate and/or obscure understanding about structural racism; and therefore, to help or hinder attempts at 'progressive' change. Research does not have to support racist ideologies or theories to act as a hindrance, a lack of critical consideration within statistical enquiry can suffice. Whether the hindrance is ideologically driven or a result of naïve empiricism, it seems relatively easy for numerical evidence to politically 'out-shout' more subtle methodological concerns. In this paper I have used the QuantCrit critical framework to try to provide some theoretical transparency on how the analyses have been interpreted to try and avoid the pitfalls of naïve empiricism.

Policy aiming to address differences in UK HE access / success across student ethnic groups needs to focus on developing a robust and accurate evidence base. This paper has illustrated some sizable problems of measurement and group representation with current statistical practice in UK HE equality analyses. The evidence base needs to draw on a synthesis of quantitative and qualitative research if it is to provide an accurate and comprehensive perspective on current patterns and how they change over time (or not). Initial steps might critically review current statistical practice in UK HE and

how/if these could be developed to facilitate accurate comparisons with other educational levels in England, Scotland, Wales and Northern Ireland. Following the critical review of HE statistical practice, qualitative data will need to be gathered routinely to synthesise with the statistics. Analyses of this qualitative data could help to direct, enrich and/or interpret statistical analyses / findings whilst acknowledging the strengths and limitations of both paradigms. This could provide a post paradigm-war 21st century exemplar of a critical analytical framework for UK HE that could reliably and validly capture ‘change’ at UK, national, institutional, discipline and individual student levels (should change happen). However, at the time of writing in Autumn 2022, such a rich, accurate and synthesised evidence base seems a long way off for UK HE. Instead, UK HE equality analyses continue to be hindered by poor statistical practice with limited attempts to inter-relate quantitative and qualitative research paradigms.

References and Notes in the Text

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- 1.** Sean Demack; s.demack@shu.ac.uk
- 2.** Odds-ratio - the ratio of odds for one group to the odds of a second group
- 3.** In some cases, the White British group is also unpacked (e.g. White English; White Scottish etc) but the aggregated ‘White British’ group is more common.

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4. See <https://style.ons.gov.uk/house-style/race-and-ethnicity/>
 5. Statistical disclosure is when data can be used to identify an individual.
 6. Whilst it is common for the mixed ethnicity group to be aggregated, prior to 2017 the mixed ethnicity was unpacked in HE staff equality analyses.
 7. Goodharts Law: When a measure becomes a target, it ceases to be a useful measure.
 8. European Social Survey (ESS), <https://www.europeansocialsurvey.org/>
 9. These include at least one country where no ethnicity data is gathered because it is constitutionally illegal; France. “According to the French law which originated in the Revolution of 1789 and reaffirmed in the French Constitution of 1958, it makes it illegal for the government to collect data on ancestry and ethnicity of the citizens” see <https://www.worldatlas.com/articles/what-is-the-ethnic-composition-of-france.html>
 10. See Table 3.2 in AdvanceHE Staff Equality report <https://www.advance-he.ac.uk/guidance/equality-diversity-and-inclusion/using-data-and-evidence/statistics-reports> which shows UK and non-UK national staff numbers for seven defined ethnic groups (Black African, Black Caribbean, Indian, Pakistani, Bangladeshi, Chinese and Arab).
 11. Please email me for a worksheet that explains the statistical inaccuracy brought by analyses of aggregated data using the HE example - s.demack@shu.ac.uk