Disciplines divided: an exploration of the condition of taught UK social science

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Introduction

A recent advert for a special issue of the journal *Sociology*[1] described the discipline as under attack.[2] The title and theme of the special issue resonates with a general sense within academic circles that there is a crisis, in the UK at least, concerning the role and value of social science disciplines both as producers of scientific knowledge and as a worthwhile academic pursuit. There is a notable history to such concerns. In fact, the history of social science may, in large part, be seen as the history of engaging with this concern.

From Alvin Gouldner's (1970) landmark work, *The Coming Crisis of Western Sociology*, through the more recent assessments of the Gulbenkian Commission (Wallerstein et al., 1996), the *ESRC International Benchmarking Review of UK Sociology* (BSA, HaPS and ESRC, 2011), Holmwood's (2010) warning of the loss of disciplinary integrity and identity in the face of the 'audit culture', and Savage and Burrows's (2007) prophetic assessment of the *coming crisis of empirical sociology* posed by Big Data and the sidelining of sociology as expert analysts of empirical social data, social science – particularly sociology and those disciplines that either parallel sociology or take it as a foundational discipline – is, it seems, always under attack and in need of mounting a defence of its scientific credibility and its social relevance.

Disciplinary crises have frequently – perhaps typically – centred around questions of methodology and the capabilities of social science to achieve and accrue scientifically credible data about the social world (e.g. Savage and Burrows, 2007, 2009). The *ESRC International Benchmarking Review of UK Sociology* (BSA, HaPS and ESRC, 2011) specifically highlighted a lack of use and study of empirical research methods (quantitative and statistical methods in particular) as a weakness and a barrier to the discipline's relevance. As an activity, science is explicitly a systematic approach to empirical knowledge, and questions of methodology are inseparable from both the practice of science and its history. So too with social science. And it is imperative that any discipline that seeks to justify its social value by claiming credibility as a science be capable of defending its claim. The founders of modern social science took methodological concerns as the central ground which needed to be covered to establish social science as a credible scientific discipline;[3] and it was equally on methodological grounds that later social scientists (such as Blumer, Gadamer, and Schutz) sought to *redefine* the

[1] First issued in 1967, this is the flagship journal of the British Sociological Association, and a reasonable bellwether of the state of (British) academic sociology.
[2] Themelis, S., Bhattacharyya, G. and Rostas, I. (eds.) Call for Papers: *Sociology* Special Issue: 'Sociology Under Attack: Challenges, Debates and Possibilities' BSA (https://www.britsoc.co.uk/media/26061/soc_si_soc_under_attack_cfp230723.pdf)
[3] See, for instance, classic treatments in Durkheim (1982, 2006), as well as Mill (1987), Weber (1978: 3-62), and Spencer (1961: 1-67).

disciplinary foundations of social science – again, to protect the discipline from internal crises and external hostility. Disciplinary crises that centre on such methodological debates are not necessarily indicative of 'crisis' (in the sense of a catastrophic failing) within a scientific discipline but are arguably intrinsic to its health. Such events may be understood as critical engagements that test and strengthen a discipline's scientific veracity, or perhaps even as the kind of 'paradigm testing' that Kuhn (1996: 145) suggested 'occurs after a persistent failure to solve a noteworthy problem has given rise to a crisis,' which can invigorate and advance thinking, and have the potential to restructure and refine the parameters and focal points of disciplines. The conclusions of the ESRC Benchmarking Review, for instance, inspired a range of debates and responses (e.g. Byrne, 2012; and *The Sociological Review*'s 'Symposium on the BSA, HaPS and ESRC International Benchmarking Review of UK Sociology', 2011) informed by a desire to strengthen the methodological grounds of social science.

The social merit, and particularly, the educational value of a discipline, however, rests not only on its claim to scientific practice – to method and methodology – but to its ability to generate from this practice information, of either intrinsic or instrumental value, that has significance for social life, which can be cumulated and passed on to students of the discipline. In other words, an ability to produce a core of disciplinary knowledge or theory that is dependent on, and in turn informs, the understanding of the methodological foundations of the discipline and its practice as science. These issues have been central to the disciplines of social science from their inception; they constitute the foundation of social science as a definitively *scientific* activity, and the justification of their social value as educational disciplines.

Disciplinary crises, however, not only have very tangible relevance for the condition of social science as a scientific and academic activity, but also have broader repercussions in relation to public perception. In a now infamous Presidential Address to the American Sociological Association, Michael Burawoy made an appeal for 'public sociology', which brings sociology (or social science more broadly) 'into a conversation with publics, who are themselves involved in conversation' (2005: 7). Such a 'public sociology' must be concerned with the relevance of social science for publics outside the academy, and in engaging with the social concerns of the day. Burawoy identifies students as a particular 'public' with which social science is in conversation. 'Education,' as he sees it, 'becomes a series of dialogues on the terrain of sociology that we foster – a dialogue between ourselves and students, between students and their own experiences, among students themselves, and finally a dialogue of students with publics beyond the university' (2005: 9). The mutual accountability implicated in Burawoy's vision of public sociology suggests that not only is academic social science beholden to its potential for 'applied' concerns beyond the confines of the academy, but also (at least

in part) answerable for the capabilities for and, it might be assumed, the consequences of, social science graduates' engagements with 'publics beyond the university.' The disciplines, in other words, are, in some sense, responsible for the actions of those who have graduated from its programmes.[4]

We may well disagree with Burawoy's prescriptions, and indeed his vision of the character and purpose of social science, but his recognition of the fact that social science, no less than, and perhaps in a particular sense, rather more than many other disciplines, is tethered to a raft of 'publics', means that disciplinary crises are never simply internal (or, to use the adjective correctly, *academic*) concerns, but also public relations crises. They raise questions about the relevance of social science qualifications and degree programmes – of social science education in general – as being value-for-money, as effective producers of graduates equipped with worthwhile and employable skills, and capable of meaningful engagement with issues of genuinely *public* interest. The perception of social science, in this regard, is of considerable importance.

From this point of view, there is certainly some truth to the suggestion that social science is beleaguered by hostile forces - although the nature of these forces and their hostility is perhaps not what it is often understood to be. There is, however, good reason to see the conditions of UK social science as hostile, or at least fraught. The now infamous declaration by Michael Gove, the then Justice Secretary, during the Brexit campaign in 2016, in response to the predicted negative economic and social consequences of the UK's departure from the European Union, that the UK 'had had enough of experts',[5] spoke to an increasingly broad public distrust of technocratic (and, more often, bureaucratic) governance and a political and intellectual sphere seen, by many, to have grown increasingly detached and irrelevant. Within the academy, the climate in which academic social science operates is also beleaguered by the micro-management of Higher Education through the Office for Students and the increasingly metric-driven approach to HE (see, for instance, discussions in Kelly and Burrows, 2012, and Nash, 2018). Where this anti-intellectualism recedes, it does so typically in ways – for instance, with the emphasis on STEM subjects, and the proposed plans to make the study of mathematics a

[4] Burawoy does not make this argument explicitly, but it is implied. While an uncritical acceptance of the suggestion that the disciplines of social science are *answerable* for the actions of graduates is obviously unsupportable (no one would reasonably suggest that an anthropology graduate who robbed a bank did so directly as a result of their 'introduction to social anthropology' module), if we consider this argument in terms of the 'employability' or skillsets of graduates (compared, say, with other sciences such as marine biology, pharmacy, or engineering), or, more broadly, with the capability of social science graduates to engage with and contribute to social and political culture and debate (compared with those of other degrees, whether sciences or humanities), then the suggestion that the state of the discipline as it is institutionalized in universities is in some sense answerable is not at all outrageous.

[5] Lowe, J. (2016) 'Michael Gove: I'm "glad" economic bodies don't back Brexit', *Newsweek* (3rd June 2023) https://www.newsweek.com/michael-gove-sky-news-brexit-economics-imf-466365

compulsory part of education up to age 18 – that are often seen to promote the 'hard' or natural sciences at the expense of social sciences and humanities.

To this end, there is a pressing need for information about the condition of taught social science in UK HEIs, and particularly regarding the structure and content of social science degrees around research methods and core theory. This report offers an empirical contribution to enquiries of this kind. It reports on the findings of an exploration of 'social science'[6] undergraduate degree programmes offered through the UCAS website for entry into the 2022/23 academic year, explored via a range of key metric and course content, to provide a snapshot picture of UK undergraduate social science provision with particular attention paid to the centrality of core theory and research methods. While this is a limited picture that represents a particular moment in time and therefore cannot speak to prevailing trends in undergraduate social science as they relate to changes of provision over time, it nevertheless gives relevant insight into the current condition of UK social science as a taught discipline. Specifically, it casts light on what may be an emerging disparity regarding the core content of social research methods and social theory in undergraduate social science provision.

Our findings suggest that there is a broad and varied landscape of undergraduate social science programmes taught in the UK. Social science courses are offered across the country at both research- and teaching-intensive universities and are offered at a range of entry requirements. However, the findings also indicate that there are two distinct clusters – or types – of courses across the provision: a 'higher' provision, which scores highly on key metrics (specifically course rankings and REF scores), and which is typically offered at more traditional universities with higher entry requirements, which contain a great proportion of research methods and core theory; and a 'lower' provision, which typically scores lower on the same metrics, is associated particularly with post-92 universities, and which contain on average less research methods and core theory.

We present here the findings of the analysis followed by a brief reflection on the headline issues. We conclude with some recommendations for developing the exploration of the 'condition of social science.'

What is social science?

A note must be made concerning the way in which the term 'social science' is being used in this study. The term today refers – and quite rightly – to a host of disciplines or branches of science, which include,

[6] A contentious and problematic term which is used here only in a very narrow sense, see next section.

non-exhaustively, anthropology, economics, geography, political science, sociology, and numerous allied and sub-disciplines.[7] No doubt there is a commonality to all these disciplines insofar as they share a common object, or set of objects (to wit: human society, social arrangements, practices, institutions, etc.), and that they approach the study of these in a manner which is recognizably scientific, in that they are concerned, in some sense, with the more-or-less systematic and structured collection and examination of empirical evidence in order to gain knowledge. At the same time, there is a great deal of difference and contention between many of these disciplines, which often concern the nature of the objects of inquiry, or the methodological approach, or approaches, appropriate to their study. The complementary but also at times conflicting relationships between different social science disciplines make fertile ground for debate and scientific criticism and development, but also make it difficult to capture the heterogeneity of the whole range of social science meaningfully; and particularly to do justice to the very real and significant differences in these disciplines in relation to method and to theory. In this study, we restrict the use of the term 'social science' to those programmes with titles that include sociology or social sciences, or derivatives. This decision is in equal parts conceptual and practical. Conceptual insofar as we are concerned with courses in which they key theoretical and methodological arguments that follow from the Enlightenment and the rise of modern social theory play a significant role. While these debates are of importance to disciplines such as geography, anthropology, and political science, in others they feature less – and, in economics, typically almost not at all – which makes their inclusion in the population problematic. We have also excluded those closely related subjects that have evolved from this core terrain of sociology throughout the later decades of the 20th century (e.g. cultural studies, media studies, gender studies, etc.). The decision to exclude them was largely practical owing to the time and resource limitations on data collection for the study. Despite a similar ancestry, there can be significant differences in terms of the core theoretical and methodological debates in these disciplines, which would have warranted more attention to case selection than could be afforded. It is presumably very likely that the data would be quite different if these and other more recent derivations from traditional sociology and social science programmes were included, and this variation would be very salient. Future research should consider including these disciplines, and possibly viewing these specifically as a point of comparison with the kinds of courses included in this study.

[7] The Academy of Social Science lists 16 major disciplines and numerous subdisciplines (see https://acss.org.uk/what-is-social-science/#social-science-disciplines).

Methodology

Between October 2021 and July 2022, data were gathered from the UCAS website for undergraduate social sciences courses recruiting for the 2022/23 academic year. An initial search, taken in October 2021, using the search term 'social science', returned 1,341 courses over 140 UK HEIs. The search term 'social science' in UCAS returns courses with sociology, criminology, or social sciences in the name.[8] This initial course population was filtered down to a core of 236 'social science' programmes. These were identified as those programmes named 'Sociology', 'Social Science' (or derivatives), or combined programmes in which one element was either 'Sociology' or 'Social Science' (or derivatives), and the other was a cognate social science discipline (so 'Sociology and Anthropology' and 'Criminology and Sociology' are included, but 'Sociology and English' is not). This reduction was necessary because the core content of combined studies in which both disciplines share a dependence on social science research methods, and (at least in part) a shared, or related, social-theoretical terrain, can be reasonably compared with single-honours programmes, whereas those combining other unrelated, or only distantly related disciplines, cannot necessarily be expected to devote as much course content to these areas along with covering the essential requirements of the other discipline, meaning comparison would be unreasonable.[9]

Data from the UCAS website concerning these programmes were then harvested. This included the HEI, UCAS entry points,[10] the degree title (BA, BSc, etc.), course length (in years), and course options including placements and study abroad options.

Further information about course content was then sourced from university websites and, where they be found, course documentation. Particularly, the number and HE credit values for core theory – which we take here to be modules dealing with classical and modern social theory, and those concerned with

[8] This, of course, is problematic – the field of social science as it would fit our understanding here is far larger. However, this search return also reflects public perception: disciplines that may well be considered within the social science paradigm (e.g. anthropology, psychology, human geography) have a public perception that is quite different to that of the (prevailing) view of 'social science' disciplines like sociology and criminology. We do not necessarily agree with this, however. This search strategy also excludes those degree programmes that absolutely are social science as it is understood here, but which, for myriad reasons, trade under different names. Perhaps most notably this search strategy excludes the very highly rated social science degrees of both Oxford and Cambridge, where sociology, along with other social science disciplines, are taught under the mantle of Human Sciences (Oxford) and Human, Social and Political Science (Cambridge).

[9] It is fair that in many cases combined studies programmes that do cross a large difference in their combined disciplines may well include just as much of this 'core' social science content and would be reasonably comparatives, but identifying these courses would require more detail of exploration at the case level than was practical for this exploratory piece of research. A more thorough investigation, however, should consider combing through combined programmes in greater detail.

[10] Where a programme offers a range of UCAS entry points, the mid-point in the range was used (e.g. a programme offering an entry point range of 120-136 was scored at 128).

the elucidation and interrogation of foundational social scientific concepts in their own right[11] – research methods, and dissertation modules on the programmes. Whether research methods were taught in all years of study (inclusive and exclusive of dissertations), and whether qualitative and quantitative research methods were taught separately, were also noted. In most cases research methods modules were core and the number of modules therefore fixed, but in a handful of cases there were some options. Where optional methods modules were available, the score recorded includes the count of all possible modules. Complete data on all these factors were not always available. Where reliable information could not be found on websites or in available course documentation, these were considered missing data.

To these data were added further descriptive data on the HEIs, e.g. their regional location, their status as Russell Group, or post-92 Universities, as well as broader HE metrics, including the GuardianUK University rankings (2022)[12] for the HEI overall, and for the course specifically,[13] and the mean average 'overall' REF score for the sociology unit of assessment in the 2021 REF assessment.[14] The standard REF unit of assessment is Unit 21: Sociology, but in many institutions, often for practical rather than disciplinary reasons, social science scholars contribute to other units and no submission is made to the named 'Sociology' Unit. The most related Unit of Assessment is Unit 20: Social Work and Social Policy, and so where no submission was made by an institution to Unit 21, the scores for Unit 20 have been presented instead. Where no submission was made to either Unit 20 or 21, the University was coded

[11] It is also acknowledged that core theory is often taught as part of other modules, and so the absence of dedicated theory modules does not necessarily imply that these theories and theorists are not taught, or that a central canon of sociological knowledge is not covered over the degree programme. However, when they are taught in substantive topical modules, it is a reasonable assumption that they are taught for their contribution to that issue and not, or at least not to any great degree, explicitly for their contribution to the broader debate within classical or modern theory in-and-of-itself, or in terms of the nature and purpose of social science. Given that these things cannot be ascertained through a search of content synopsis, we have simply had to accept the limitations of the data and count these programmes as not teaching core theory in-and-of-itself in the sense we mean it here, albeit with the aforementioned caveat.

[12] The Times Higher Education World and UK University rankings were also collected, but the specific scores are not available for all institutions, so only the Guardian UK was used in this analysis. It is acknowledged, however, that different rankings follow different criteria and capture different strengths. Further research should consider alternative rankings, either to be used separately or possibly combined into a meta-ranking.

[13] The GuardianUK course rankings are derived from a score (out of a maximum of 100), in turn derived from nine measures: the 'satisfied with course', 'satisfied with teaching', and 'satisfied with feedback' results from the latest National Student Survey results; the staff to student ratio, the 'spend per student' (discounting academic staff costs) (given as a score out of 10), a value-added score (also out of 10) comparing students' entry qualifications with their degree classifications, the percentage of graduates in graduate-level jobs or further study 15 months after graduating, and the percentage of students continuing from first to second year of their studies. It is, therefore, a reasonably balanced and comprehensive measure of the calibre of a programme.

[14] The 'Overall' measure refers to the overall quality of the submission to the Unit of Assessment; it is presented in the REF results as percentages of star ratings (0 – 4) aggregated from the sub-categories of assessment and weighted as follows: 60% outputs, 25% impact, and 15% environment.

as No submission/Unavailable.[15] It is readily accepted that these, like all such metrics, present limited and partial pictures, and cannot be taken as fully indicative of either the quality of the programmes of study, or the particular departments or universities in which they are taught, or of research outputs, environments, culture, or anything else. They do, however, give an indication – albeit limited – of the quality of HE experience overall, and in the case of the REF, of the extent to which a department complies with the assessment exercise itself, and to which it orients itself and its staff towards research production. For these reasons they are useful variables but must be recognized and treated as limited and therefore with caution.

Findings

As might be expected of programmes dealing with such a broad subject matter as social science, there is considerable variety across social science undergraduate courses in the UK. Given the equally socio-economically and geographically varied landscape of the UK higher education sector, and the comparative precarity of social science in relation to the physical sciences, the professional-vocational disciplines (e.g. law and medicine), and, to some extent, the classical humanities (e.g. classics, literature, and history), social science disciplines inhabit a perhaps rather pragmatic and survivalist position in many universities, adapting to their environment rather than staking out strong disciplinary positions. This is by no means a criticism; it is, rather, a recognition of the strength and the applicability that comes from being a field that stretches into and assimilates the knowledge of many cognate disciplines. Nevertheless, the analysis of the data showed that there are striking characteristics of taught social science in the UK, not least what might be indications of an established, or perhaps

[15] This is taken to be a very rough measure. There is no guarantee, where no submission to Unit 21 was made, that social science scholars would necessarily have contributed to the REF at all, or that, if they did, they would contribute to Unit 20 rather than another related field, e.g. Unit 14: Geography and Environmental Studies, or Unit 19: Politics and International Studies. The assumption has been made that where a social science degree programme is being taught, some research activity will be taking place within the programme team and that it would have been submitted. The decision to take Unit 20 and not any other as the substitute Unit of Assessment is based on two points: (i) the fact that historically there exists a close disciplinary crossover between sociology and social policy, which would more likely make Unit 20 a closer match for most social science research not submitted to Unit 21; and (ii) that, while those contributing to social science programmes may instead have contributed to other units, e.g. Geography or Politics, that, in such cases, the contribution of social scientists (as understood in the limited sense used here) to that submission would likely have been swamped by other work potentially very different in disciplinary and research focus, and unlikely to contribute to the taught content of social science programmes; the result being that the REF measure would cast little light on the social science programmes themselves. Because of these assumptions, these data should be looked on only as indicative of any trends regarding REF submissions and absolutely not as a definitive statement of social science REF outputs.

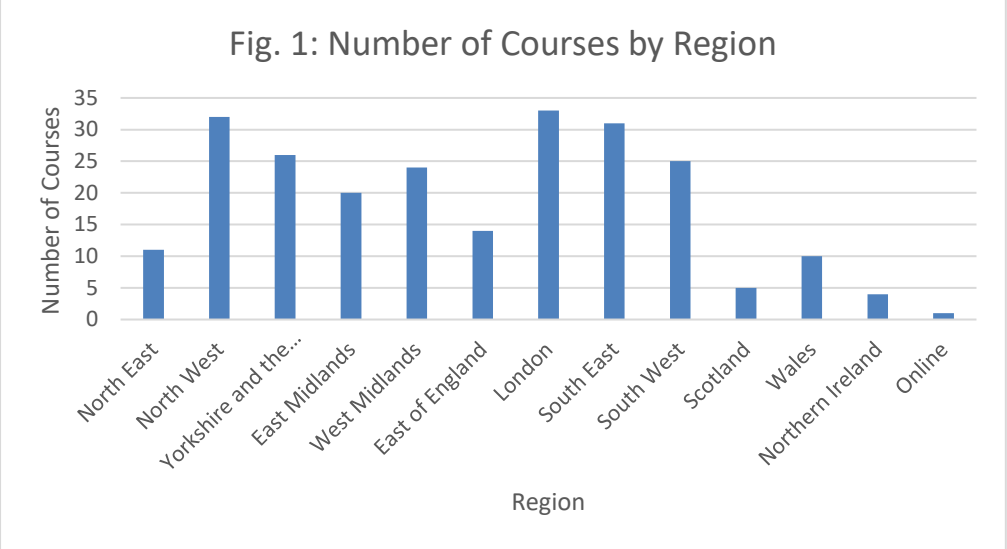
developing, bipartite system of courses, in which the centrality of the 'core' concerns of the discipline – *viz*. core theory and, especially, research methods – plays a significant role.

We divide the key findings here into two sections. The first deals with descriptive statistics describing the landscape of social science degrees, while the second explores a cluster analysis of social sciences courses to indicate emergent patterns within the social science terrain. This cluster analysis reveals an evident, and noticeable, if not entirely clear, distinction between two 'forms' of social science courses and the HEIs in which they are taught.

Descriptives

Region

Social science degrees were available at HEIs across all regions of the UK, including Scotland, Wales, and Northern Ireland (see Fig. 1). The region with the most courses was London (14% of courses, n=33), closely followed by the North West (13.6%, n=32), and the South East (13.1%, n=31). Not including the single course only offered for study online, Northern Ireland (1.7%, n=4) and Scotland (2.1%, n=5) have the lowest number of courses,[16] but it should be remembered that the search terms employed here only captured undergraduate (Bachelor's) degrees, and so do not include others – such as Scottish Masters' degrees.



[16] Discounting the single HEI (the Open University) providing a social science degree only as an online course.

Of the 236 courses included, 44 (18.6%) were courses at Russell Group universities,[17] and 126 (53.4%) were from post-92 institutions.[18] The remaining 66 (28.0%) therefore being courses at universities established before 1992 but not in the Russell Group. As a shorthand, we label these here as Redbrick/Civic Universities.[19] The distribution of courses over the different types of institutions indicates that social science degrees have currency in both research- and teaching-intensive universities, as well as appeal for students, and market-value, across the HE sector. Nevertheless, the fact that more than half of the course population are courses at post-92 institutions suggests a propensity for social science degrees to be taught at teaching intensive and vocationally oriented universities.[20]

Degree Type

Table 1: Degree Types		
Degree Type	**Frequency**	**Percent**
BA (Hons)	147	62.3
BSc (Hons)	82	34.7
BA	1	0.4
BA (Hons) or BSc (Hons)	2	1.7
TOTAL	232	100

[17] The Russell Group are a collective of 24 research-intensive, and typically older HEIs (the youngest, University of Warwick, est.1965). They are often seen as especially elite institutions, degrees from which enjoy special prestige. Unlike university rankings, which can change quite quickly, membership of the group is fairly stable (the last universities to join – Durham, Exeter, Queen Mary, University of London, and York – did so in 2012), and so while Russell Group membership is a strong marker of prestige and research intensity of an institution, it is not simply synonymous with high ranking, or, indeed, with the highest REF scores.

[18] HEIs that obtained University status after 1992, including the former Polytechnics and Central Institutions that became universities following the *Further and Higher Education Act (1992)*. These HEIs are typically seen, because of their history as Polytechnic institutions, to focus more on applied and vocational courses, and to be more teaching-focused than their older counterparts. The reality is now far more complex, however, and a number of post-92 institutions are leading centres of research.

[19] This is a convenient analytical shorthand to describe HEIs that belong neither to the research-intensive (and typically, but not exclusively, older, or ancient) Russell Group universities (see note 17 above), nor the typically teaching-focused 'new' universities created as a result of the *Further and Higher Education Act (1992)* (see note 18 above). These universities typically belong to the categories of 'Redbrick' (or 'Civic') universities created by Royal Charter in the later 19th and early 20th centuries, and the 'Plate Glass' universities created following the *Robbins Report (1963)*.

[20] Although see the caveats in notes 17 and 18.

The majority (62.3%, *n*=147) of social science courses included in the sample are offered as Bachelor of Arts (BA) degrees, although over one third (34%, *n*=82) are Bachelor of Science (BSc) degrees (see Table 1). One course was offered as an Ordinary (that is, a non-honours) degree, and two courses were offered with the options of either BA (Hons) or BSc (Hons) routes.[21]

UCAS Entry Points

The mean value of UCAS points required for entry to social science programmes is 113.99 (SD 13.786; minimum 48, maximum 144, n=230). Welch's ANOVA[22] revealed a statistically significant difference of average UCAS entry points between regions (Welch's $F(11, 41.775)=2.072$, $p=0.045$, $Eta^2=.083$), but *post-hoc* tests (Games-Howell) indicated that a significant difference only existed between the North West (*Mean* = 116.26) and the East of England (*Mean* = 102.46) ($p=0.27$). Combined with the very low Eta^2 effect size (.083), there is reason enough to assume that there is very little significant different between the UCAS entry point requirements for social science courses in different regions.

No significant difference was found between the average UCAS entry points required for BA degree course (*Mdn* = 112) and BSc degree courses (*Mdn* = 112) $U=6228.000$, $p=.609$.[23]

Statistically significant differences were found in the average UCAS entry points between Russell Group (mean 132.00, *SD* 6.294, *n*=43), Redbrick/Civic (mean 117.68, *SD* 9.728, n=60) and post-92 (mean 107.12, *SD* 8.139, *n*=123) universities (Welch's $F(2, 107.020)=211.157$, $p=<.001$, $Eta^2=.572$). Games-Howell *post-hoc* tests shows all pairwise comparisons to be significant at $p=<.001$.

REF Scores

The mean REF overall score for the social science departments submitted was 2.94 (*SD* 0.424, n=201), the minimum REF score was 1.81, and the maximum 3.56 (out of a possible 4.0), which suggests that, overall, departments running social sciences degree programmes are quite strongly research active.

[21] None of these 3 'outlier' courses contained sufficient data to be included in the cluster analysis and so they are not included in the analysis. They are, however, part of the overall landscape of UK social science undergraduate provision, and so are included here in the descriptives.
[22] Welch's ANOVA is reported as the assumption of homogeneity of variances between regions is violated.
[23] The single non-honours degree course and the two courses where either BA or BSc degree types could be selected were removed for this analysis.

No significant difference in average REF scores was found when the data were distributed by Region or by Degree type.

Welch's ANOVA shows that there are statistically-significant differences in REF scores when distributed by HEI Class ($W(2, 124.827)=109.795$, $p=<.001$, $Eta^2=.502$). Games-Howell *Post-hoc* tests show that the average REF score for post-92 HEIs (*Mean* = 2.646, *SD* .3702) is significantly lower than the average scores for both Redbrick/Civic HEIs (*Mean* = 3.209, *SD* .2315) and Russell Group (*Mean* = 3.288, *SD* .1639), but that there is no significant difference between the average REF scores for Redbrick/Civic and Russell Group institutions.

University Ranking

GuardianUK scores were available for 199 (84.3%) of social science courses, and the scores across the sample are approximately normally distributed (Shapiro-Wilk: $W(199)=0.985$, $p=0.034$). The mean GuardianUK score for social science departments overall is 67.636 (*SD* 11.519, ranging from a minimum of 36.8 to a maximum of 100).

The mean GuardianUK score is influenced by degree title. Degrees with the title Bachelor of Arts (BA) have a mean score of 65.3128 (*SD* 10.287), while those with the title Bachelor of Science (BSc) have a mean score of 71.620 (SD 12.550). The differences between average GuardianUK scores for the different degree titles were tested with Independent samples Mann-Whitney *U* and found to be statistically significant ($U=5660.500$, $z=3.150$, $p=.002$, $r=.224$), with a small effect size, suggesting that while there is a significant difference between scores of degrees with different titles, degree titles are not strongly correlated with differences in university rankings.

No statistically significant difference in GuardianUK scores was found between courses attached to different REF Units of Assessment.

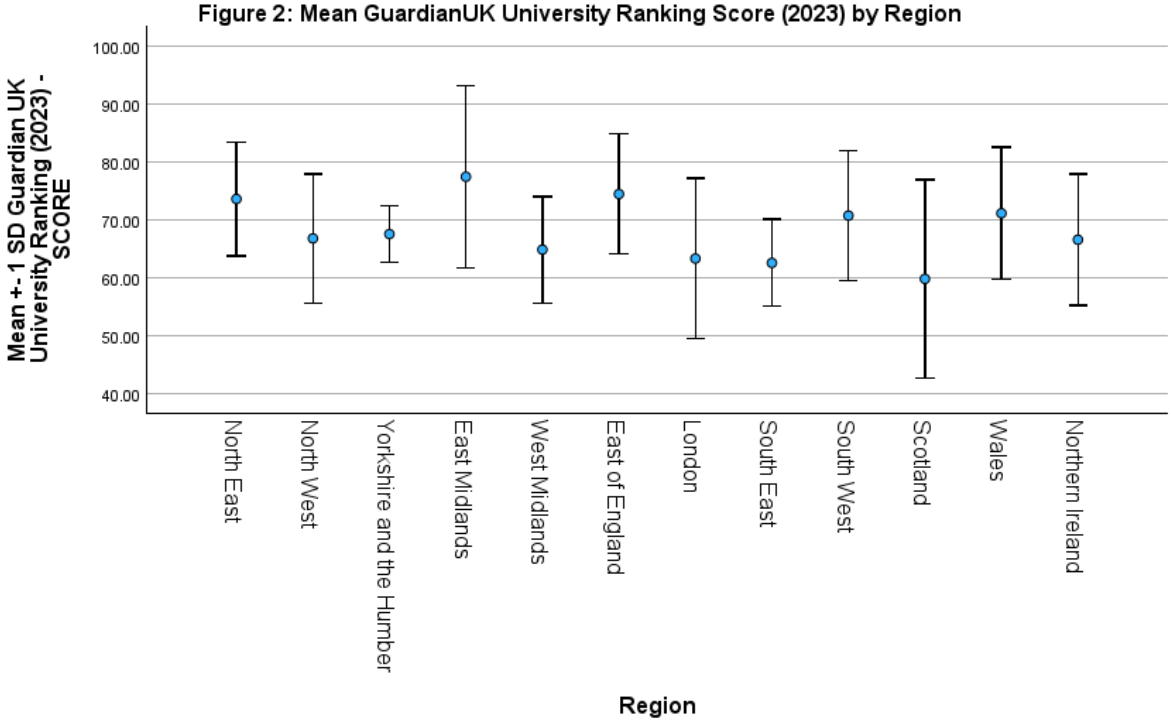
Statistically significant differences between the GuardianUK scores for courses at HEIs in different regions, however, was found (see Figure 2). The highest mean average score being East Midlands (77.4, *SD*=15.71), followed by East of England (74.422, *SD*=10.369) and the North East (73.567, *SD*=9.823), with the South East (62.546, *SD*=7.501), London (63.3, *SD*=13.841) and the West Midlands (64.839, *SD*=9.163) having the lowest mean scores.

ANOVA showed statistically-significant difference in GuardianUK scores across regions, but with a low effect size ($F(11, 187)=3.199$, $p=<0.001$, $Eta^2=.158$), suggesting that while university rankings do vary across regions there is little consistency to that variation and region is a very poor indicator of course

ranking. *Post-hoc* tests (Games-Howell) revealed no statistically significant pairwise comparisons, which reinforces the argument that while scores differ between regions, they do not differ in any way that suggests a statistically-significant pattern.

ANOVA showed statistically significant differences between GuardianUK scores in relation to HEI Class, but with a very low effect size ($F(2, 196)=10.002$, $p=<.001$, $Eta^2=.093$). *Post-hoc* tests (Games-Howell) revealed that, just like with REF scores, only the differences between Russell Group (*Mean* = 72.9651, *SD*=9.81481) and Redbrick/Civic (*Mean* = 69.5698, *SD*=14.28125) and post-92 institutions (*Mean* = 64.4680, *SD*=9.49165) were statistically significant, while no statistically significant difference was found between Redbrick/Civic and post-92 institutions.

Figure 2: Mean GuardianUK University Ranking Score (2023) by Region



Research Methods

Data for the number and the HE credits value of research methods modules on social science programmes were readily available for many courses but not, at the time of the data gathering, obtainable for others. In some cases, the number of modules was available but not the credit values, and so the counts in the following are not always consistent.

The number of research methods modules (not including dissertations) on social science degree programmes ranged from 0 to 9, with 2 being the most common (for 25.0% of cases, n=59). In terms of HE credits, the mean number of credits for research methods modules (not including dissertations) was 42.56 (40 credits being the mode). With dissertations included this becomes 81.34 credits over the course of a programme (80 being the mode). Dissertations themselves account for a mean average of 38.40 credits (40 being the mode).

44.1% (n=104) of social science programmes contained research methods modules in every year when the dissertation module is counted as a research methods module, 47.9% (*n*=113) did not. When the dissertation module is discounted, only 1.7% (*n*=4) courses had research methods modules in every year, 89.8% (*n*=212) did not. Only 24.2% (*n*=57) of courses had independent qualitative and quantitative research methods modules.

There is a statistically-significant difference between the mean UCAS entry points for a programme and whether or not research methods are taught in every year of the programme (including dissertation), with those programmes that do include research methods at every level having a mean value for UCAS scores of 117.11 (*SD*=12.902, *n*=102), and those that don't having a mean value of 110.18 (*SD*=14.084, *n*=110) ($F(1, 210)=13.872$, $p=<0.001$, $Eta^2=.062$) suggesting that those courses may be considered more challenging, belong to more prestigious universities that having higher requirements as standard, or are in higher demand and places offered on a more competitive basis. The difference, however, although statistically significant, is very small (7.07 points, or almost equivalent to a single grade difference at A Level),[24] and the effect size (.062) extremely small; so, despite being meaningful, this difference should be seen as a significant factor only within what is a broadly homogenous landscape in terms of entry point requirements.

Core Theory Module Credits

There is a broad range in the amount of core theory (as it is being measured for the purposes of this study) across UK undergraduate social science programmes. Of those programmes about which information could be found, the majority (73.0%, *n*=157) had either 1 or 2 core theory modules. 22.8% (*n*=49) of courses had either 3 or 4 core theory modules, and 4.2% (*n*=9) had none. More variation is observable in terms of HE credits, which ranged from 0 to 105 credits. However, 61.2% (*n*=79) of programmes had between 20 and 40 HE credits given over to core theory, while 18.7% (*n*=24) had 45-

[24] The difference between A level grades in UCAS points is 8: a single 'A' grade at A Level is worth 48, a 'B' 40, and a 'C' 32, etc.

60. At the ends of the distribution, 4.7% (*n*=6) courses had 15 core theory credits, and 7.8% (*n*=10) had none. A further 7.8% (*n*=10) had over 60 credits given over to core theory. While there is some variation, the majority of programmes contain approximately 20-40 credits over 1 or 2 modules, with a smaller, but significant number of programmes having approximately 60 credits over 3 or 4 modules.

The variation in core theory credits was found to vary significantly between courses in different regions (Kruskal-Wallis $H(10)=19.520$, $p=.034$). No statistically significant patterns were found between core theory credits and other variables.

Exploratory cluster analysis

The foregoing descriptive statistics indicate several statistically significant variations among UK social science undergraduate programmes. To explore whether such differences contribute to broader divisions in the landscape of UK social science, cluster analyses were generated to see whether there were notable groupings of programmes along the lines indicated.

Cluster analyses are statistical techniques that seek to categorize data by the similarity of cases: to take a range of data points and 'partition them into a set of groups which are as similar as possible' (Aggarwhal, 2014: 2) based on the numerical values pertaining to relevant variables (see Everitt et al., 2011; Aggarwhal and Reddy, 2014). Cluster analyses have been a feature of statistical analysis for many years, and are regularly deployed within the social sciences, as well as other disciplines, for instance, health psychology (Clatworthy et al., 2005), biology and medicine (Zhao et al., 2014), and marketing (Tuma et al., 2011). Cluster analysis is a technique of classification that seeks to identify latent patterns within a dataset. Rather than fitting data to previously defined categories, 'in clustering methods, previously *unknown* clusters emerge out [of] the assortment of configurations of attributes associated with the whole case' (Uprichard, 2009: 133). To an extent then, cluster analysis is a highly inductive method of analysis, relying not on research designs that test pre-figured hypotheses, but simply proceed from the similarity of data points to identify existing, but perhaps obscured, categories of phenomena. In the context of this data, the cluster analysis is used to explore social science courses to see whether there are latent patterns regarding key measures and the extent to which courses are built around a social scientific core of research methods and 'core' theory. Like any other statistical procedure, however, cluster analysis can only consider the data which are included in the model; the scope of the analysis to identify salient groupings depends on the theoretical coherence of the variables that are included in the analysis. Importantly, the more variables that are included in the model, the more overall variation will be introduced, which increases the likelihood that relatively

straightforward classification based on clear similarities between a small number of key variables will be obscured by the 'noise' of the variation of extraneous variables. At the same time the value of cluster analysis as a method of uncovering latent categories within data depends on the possibility of the analysis drawing on a range of different dimensions (and not simply repeating already known, or predictable groups concerning one or two closely related variables).[25] It is important, then, when deciding which variables to include in a cluster analysis, to include only those for which there is a strong theoretical justification for considering relevant, and not just throwing in any and all available variables.

This analysis included the variables for UCAS Entry Points (averaged), the GuardianUK ranking score, the HEI REF2021 score, the total number of programme credits devoted to research methods, and total number of programme credits devoted to core theory. Region has not been included as the foregoing exploration suggests that there is little meaningful variation on key metrics for social science degrees between regions. Combined with the relatively large number of categories (regions), and the frequently small and uneven number of cases per category, it was felt there would likely be very little to be gained by including Region as a factor in the clustering. As cluster analyses work better when all included variables are of the same level of measurement (either continuous or categorical), other variables measured at a categorical level (e.g. Degree Type, and various course options) were not included.[26]

Only courses for which data existed on all five factors can be included in the cluster analysis. Consequently, the cluster analysis is based on only 41.5% (n=98) of the total number of social science courses identified (n=236). A between-groups agglomeration-method hierarchical cluster analysis (using Euclidean squared distance) was carried out on the variables to explore regular associations between the courses. As the cluster analysis involved interval level variables using very different scales, the data were standardized (using z-scores).

The initial analysis returned five clusters. Of which the last three contained only one or two outlier cases, which were highly dissimilar both from each other and from the first two clusters. These outlier cases were removed after the initial analysis to focus the analysis on the clear distinction between the

[25] For instance, a cluster analysis exploring the similarity of scores regarding 'height' and 'weight', would be unlikely to offer any new insights and instead merely reiterate the linear relationship between these two closely related variables.

[26] These variables typically showed minimal variation and no indication of being significant factors in the landscape of social science programmes. Where there is notable variation, this is explored in relation to the clusters produced by the cluster analysis and are reported below.

initial two clusters comprising 94.9% of the included cases, which left 39% (n=93) of total cases in the final cluster analysis (see Appendix 1 for Dendrogram of clustering).[27]

The robustness of the two clusters generated by the hierarchical analysis was then tested by running a Ward's method cluster analysis, specifying two clusters.[28] The clusters generated using Ward's method replicated those of the initial analysis, suggesting that the analysis is robust and the two clusters do represent genuinely distinct group containing similar cases.

The two clusters generated showed a clear pattern of similarity between the cases, in which on all variables included, courses with higher scores groups together in one cluster and lower scores grouped together in the other (see Table 2).

Table 2: Descriptive statistics for variables included in cluster analysis by cluster

Factor	Course Cluster	*N*	*Mean*	*SD*	*SE*	Confidence Interval of Mean	
						Lower Bound	Upper Bound
UCAS Entry Points (averaged)	**Higher**	49	126.20	7.441	1.063	124.07	128.34
	Lower	44	107.27	7.283	1.098	105.06	109.49
Guardian UK Score	**Higher**	49	68.8122	9.9120	1.4160	65.9652	71.6593
	Lower	44	63.9114	11.2416	1.69474	60.4936	67.3291
REF2021 Score	**Higher**	49	3.2457	.17828	.02547	3.1945	3.2969
	Lower	44	2.5943	.28707	.04328	2.5070	2.6816
Total Methods Credits (inc. dissertation)	**Higher**	49	82.86	17.440	2.491	77.85	87.87
	Lower	44	73.07	18.653	2.812	67.40	78.74
Total Core Theory Credits	**Higher**	49	44.39	24.359	3.480	37.39	51.38
	Lower	44	36.93	18.622	2.807	31.27	42.59

[27] The reduced number of cases included in the analysis on account of missing data and the removal of the outliers following the initial hierarchical analysis do reduce the generalizability of the cluster analysis itself as well as the statistical power of the subsequent tests of association.

[28] Ward's Method of cluster analysis assigns new cases to existing clusters by comparing new cases to the average scores of the cases already in the cluster rather than using the single most closely matched case (nearest neighbour), and so ensures that clusters have greater internal similarity amongst cases than normal (pairwise) agglomeration clustering (see Landau and Ster, 2010). For this reason, it is more reliable for ensuring robust clusters once the likely number of clusters is known.

To confirm that the clustering captured meaningful and distinct groups of cases, the scores of all variables were then tested for significant differences between the clusters. Only GuardianUK Score was normally distributed (Shapiro Wilk: Higher: $W(49)=.972$, $p=.281$, Lower: $W(44)=.975$, $p=.434$), and was therefore tested using an independent-sample *t*-test. The other factors were tested with Mann-Whitney *U*. The results are displayed in Tables 3 and 4.

Table 3: *Independent-samples t-test*

		n	*Mean*	*SD*	*T*	*df*	*Sig. (one-tailed)*	*r*
GuardianUK Score	Higher	49	68.8122	9.912	-2.234	91	0.014	0.228
	Lower	44	63.9114	11.2416				

Table 4: Mann-Whitney *U tests*

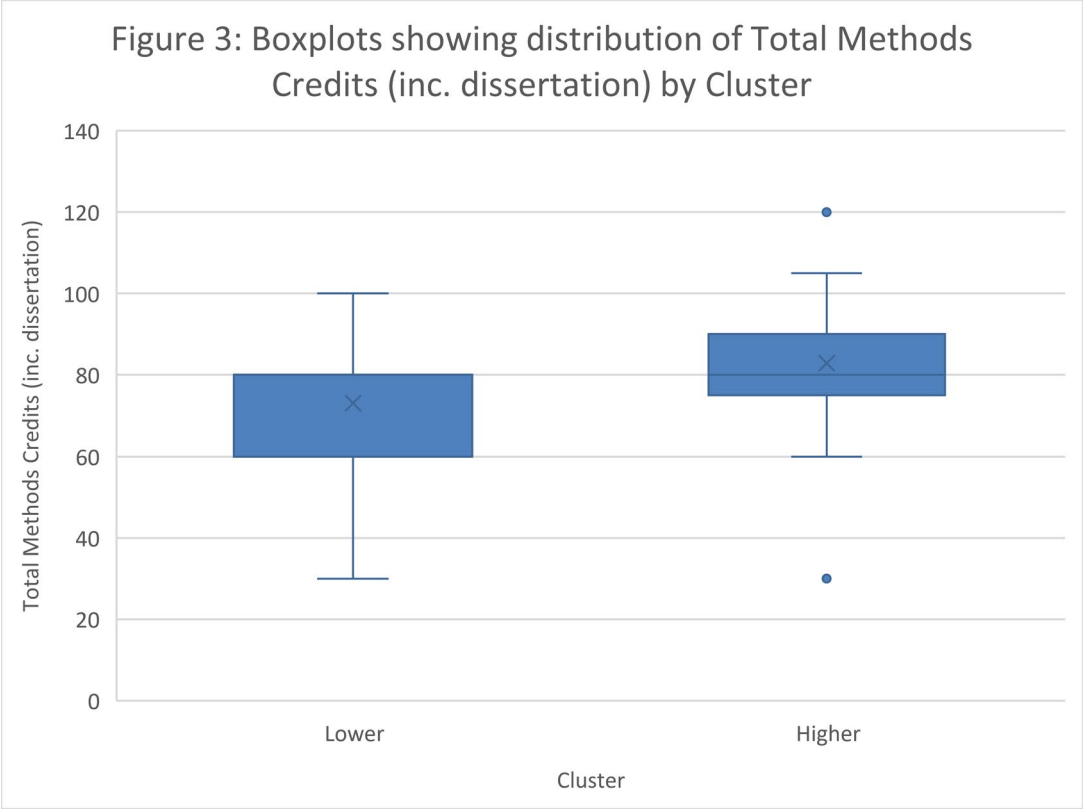
		n	*Mdn*	*U*	*z*	*Sig.*	*r*[29]
UCAS Entry points	**Higher**	49	124	2086.5	7.846	<.001	0.814
	Lower	44	110				
REF2021 Score	**Higher**	49	3.28	2117	8.001	<.001	0.83
	Lower	44	2.69				
Total Methods Credits (inc. Dissertation)	**Higher**	49	80	1372	2.332	0.02	0.242
	Lower	44	80				
Core Theory Credits	**Higher**	49	40	1245.5	1.315	1.88	
	Lower	44	40				

Total Methods Credits (including dissertation)

There is a statistically significant difference between the average number of HE credits devoted to research methods on courses in the higher and lower clusters. Courses in the higher cluster contain on average, a higher proportion of HE credits given over to research methods (*Mean*=82.86, *Mdn*=80.0) than those in the lower cluster (*Mean*=73.07, *Mdn*=80.0) – an average difference of approximately 10 HE credits. The difference here is statistically significant (Mann-Whitney $U=1372.000$, $z=2.332$, $p=.020$, $r=.242$), but the relationship is weak. While the difference – in terms of mean values – is notable, it describes, on average, a difference of the equivalent of half a typical undergraduate module's worth

[29] Effect size (*r*) for Mann-Whitney *U* calculated from the *z*-score, following Rosenthal (1991).

of programme content. Moreover, the median values for both clusters are identical (*Mdn*=80), which reinforces the idea that, while significantly different, distributions may only vary at the extremes of their distributions. When the data are visualized (see Figure 3), the patterns is clearer. While the distributions share a median, the distributions are clearly different. For the lower cluster, the values of the median and the upper quartile are the same, which means that only 25% of courses in the lower cluster have a score above the median. Those in the higher cluster, however, show a far greater proportion of vales above the median. Moreover, excluding the outliers, the distribution in the higher cluster is clearly narrower than that for the lower cluster, suggesting that there is a greater consistency of (proportionately higher) numbers of credits in the higher cluster, while the lower cluster is far less consistent.



Core Theory Credits

While there is a statistically significant difference between the average amount of course credits given over to research methods, the difference between the number of course credits devoted to core theory, although this is on average a greater number in the higher cluster (*Mean*=44.39, *Mdn*=40.0) than in the lower cluster (*Mean*=36.93, *Mdn*=40.0), the difference is less stark, and the association is not statistically significant (Mann-Whitney *U*=1245.500, *z*=1.315, *p*=1.88).

Exploring the clusters

Having appeared robust both in terms of their internal coherence and in terms of the significance of the differences between them, the two clusters (higher- and lower-scoring) revealed by the cluster analysis can be considered – within the limitations of the data from which they are derived – to accurately represent a distinct dichotomy of undergraduate social science programmes in the UK. It remains to be seen, however, whether this dichotomy (which derives from the UCAS entry points, the Guardian UK university rankings, the REF2021 scores for the associated REF Unit of Assessment, and the number of HE credits given over to research methods and to core theory) is associated with any other aspects of the UK HE landscape. This was assessed through a series of chi-square tests to see whether any statistically significant differences between programmes in the 'higher' and 'lower' clusters could be found in relation to HEI class, degree type, REF Unit of Assessment, or region.

Table 5

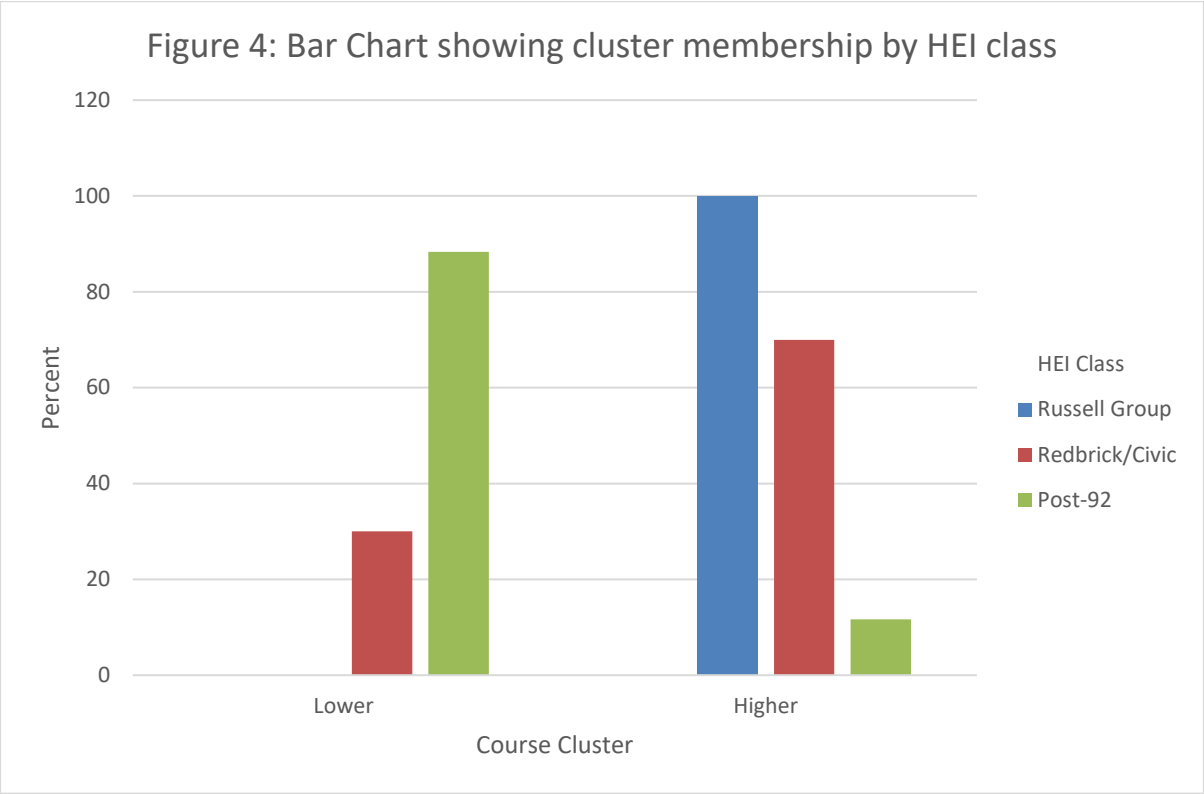
Factor		**Cluster 1 (Higher)**		**Cluster 2 (Lower)**		**TOTAL**	
		N	**%**	**N**	**%**	**N**	**%**
HEI Class	**Russell Group**	30	100.0%	0	0.0%	30	31.58%
	Redbrick/Civic	16	72.73%	6	27.27%	22	23.16%
	Post-92	5	11.63%	38	88.37%	43	45.26%
	Total	51	53.68%	44	46.32%	95	100%
Degree Type	**BA (Hons)**	31	48.44%	33	51.56%	64	68.82%
	BSc (Hons)	18	62.07%	11	37.93%	29	31.18%
	Total	49	52.69%	44	47.31%	93	100%
REF Unit of Assessment	**Unit 20 (Social Work and Social Policy)**	12	25.0%	36	75.0%	48	51.61%
	Unit 21 (Sociology)	37	82.22%	8	17.78	45	48.39%
	Total	49	52.69%	44	47.31%	93	100%

Table 5 shows the distribution of courses between the higher and lower clusters for HEI Class, Degree Type, and REF Unit of Assessment.

HEI Class

A clear difference can be observed between the clusters regarding HEI Class (see Figure 4). 100% of all programmes at Russell Group universities are in the higher-scoring cluster, as are 72.73% of programmes at Redbrick/Civic HEIs, while 88.37% of programmes at post-92 HEIs are in the lower-scoring cluster. There is a statistically-significant difference between the distribution of programmes at

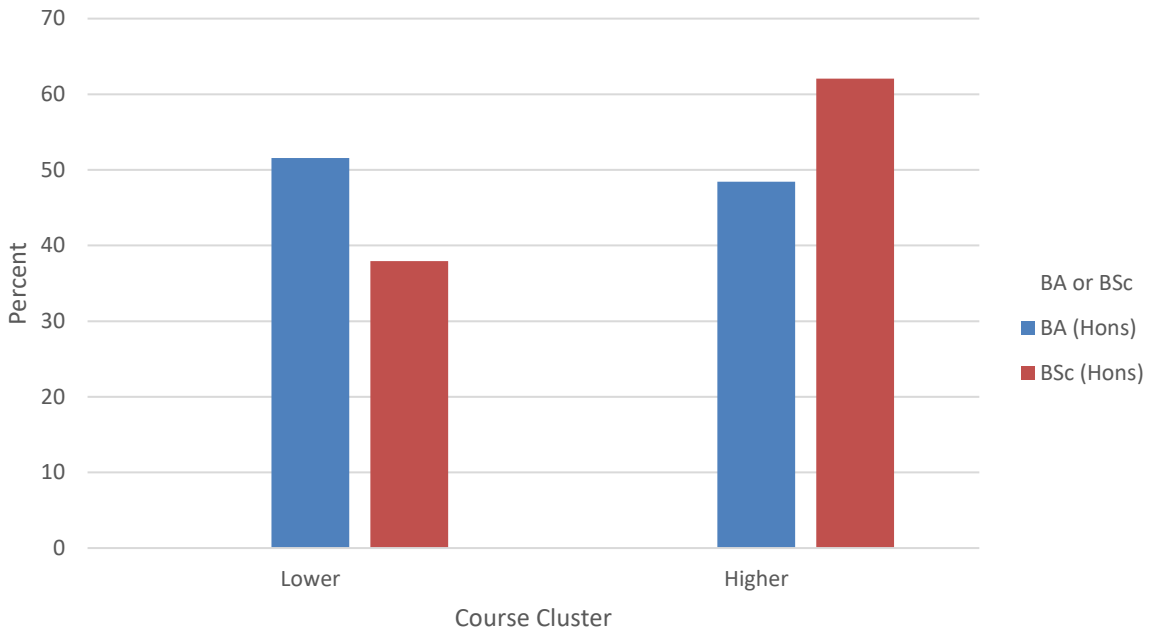
different HEI classes in the two clusters $X^2(2)=58.426$, $p=<.001$, Cramer's $V=.793$ indicating a very strong effect size.



Degree Type

For all courses included in the cluster analysis, a broadly similar distribution is observable between different degree types as exists for courses overall: 68.82% of courses are BA (Hons) and 31.18% are BSc (Hons) (compared with 64.19% and 35.81% of courses overall). The picture is a little more obscured when the clusters are compared (see Figure 5).

Figure 5: Bar Chart showing cluster membership by degree type (BA/BSc)

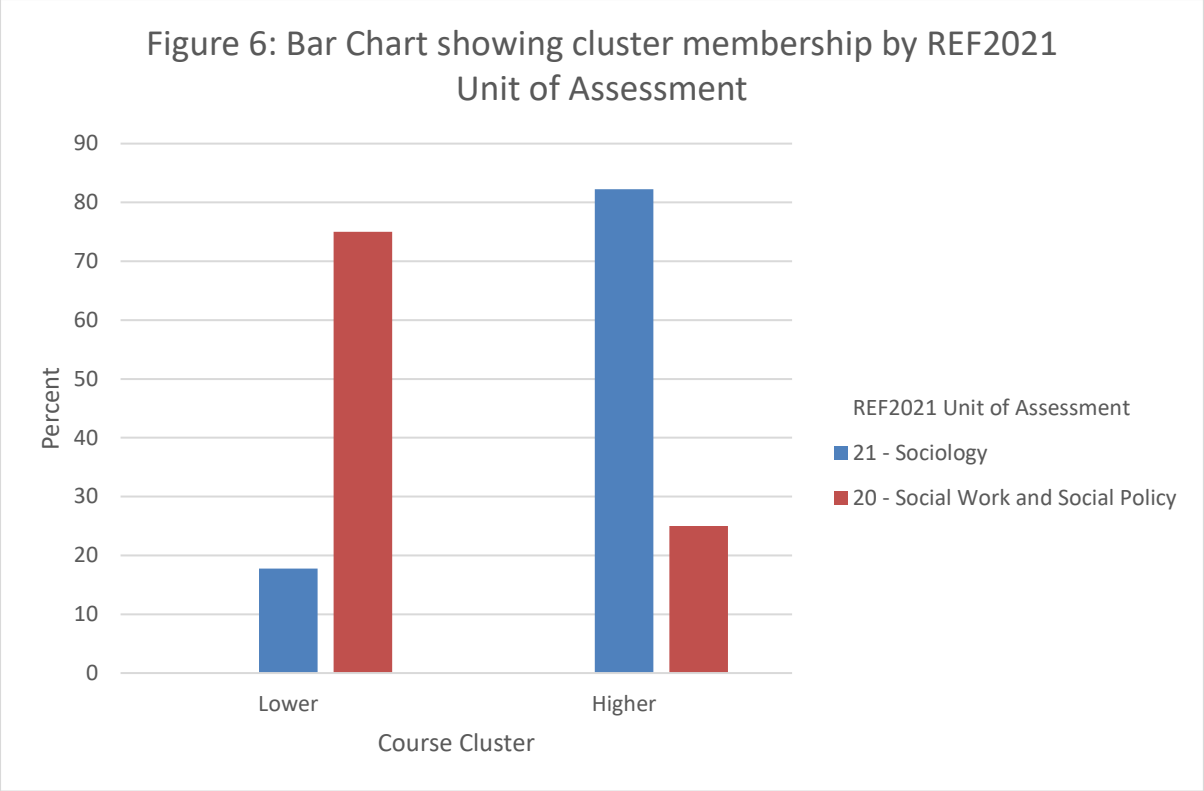


BA courses are approximately evenly divided between the higher (48.4%) and lower (51.6%) clusters, but a higher proportion (62.1%) of BSc courses are in the higher cluster than in the lower cluster (37.9%). Analysis with chi-square test, however, indicates that the difference here is not statistically-significant ($X^2(1)=1.488$, $p=.266$).[30] There is, therefore, no significant correlation between degree types and the higher or lower clusters.

REF Unit of Assessment

For those included in the cluster analysis, courses distributed approximately equally between those at institutions making submissions to Unit 20: Social Work and Social Policy (51.6%, n=48), and those making submissions to Unit 21: Sociology (48.4%, n=45). Separated out by cluster, this balance shifts markedly (see Figure 6).

[30] Fisher's Exact Test was computed for 2x2 contingency table and is reported here.



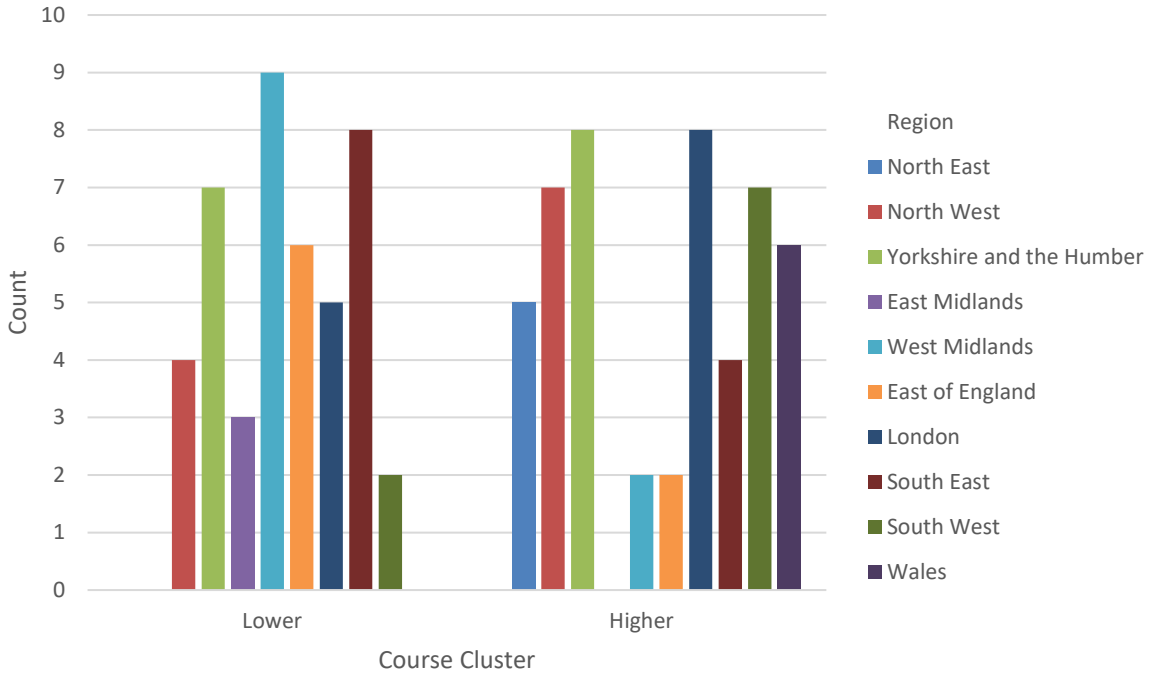
Chi-square test indicates that there is a statistically-significant connection between cluster membership and REF Unit of Assessment ($X^2(1)=30.508$, $p=<.001$, $Phi=-.573$).[31] There is a strong association between courses at HEIs making submissions to Unit 21: Sociology and membership of the higher cluster.

Region

Figure 7 shows the distribution of courses in each cluster disaggregated by region. There are some notable data, for instance both the North East and Wales only have courses in the higher cluster, while the East Midlands has only courses in the lower cluster, but most regions have courses in both clusters.

[31] Fisher's Exact Test was computed for 2x2 contingency table and is reported here.

Figure 7: Bar Chart showing cluster membership by region



A *chi-square* test of association was carried out to ascertain whether any statistically significant association between region and cluster membership was present. The results show a statistically significant relationship between cluster membership and region (Fisher's Exact $X^2(9)=25.121$, $p=.001$, Cramer's $V=.528$).[32] The results of the chi-square analysis suggest region exerts a strong effect on cluster membership, but this should be taken with caution due to the small numbers of cases in half the cells of the contingency table. When the standardized residuals were explored, however, there were none that showed significance at the level of .05, which suggests that while cluster membership appear not to be evenly distributed between regions, the data are insufficient to provide a reliable indication of any distinct pattern.

Research Methods

A statistically significant difference was found between the higher and lower clusters regarding the average number of HE credits given over to research methods. This was true both when dissertation

[32] Due to the small numbers of courses in several regions, 50% of cells in the contingency table had expected counts less than 5. Fisher's Exact Test was computed and is reported here, but this result should still be interpreted with caution.

credits were included (which was the variable included in the cluster analysis) and when they were excluded (Mann-Whitney U=1499.500, z=3.362, p=<.001, r=.349). The relationship between cluster membership and research methods was not just evident in proportion of HE credits but in other data on research methods provision. While no statistically significant difference was found between cluster membership and whether research methods (either including or excluding dissertations) are taught every year, there was a marked difference in whether or not qualitative and quantitative research methods are taught separately (Fisher's Exact X^2(1)=21.525, p=<.001, Phi=-.481), with independent research methods modules far more likely to be found on courses in the higher cluster than in the lower cluster.

Discussion

The foregoing results indicate a complex landscape of UK undergraduate social science provision. In general terms the landscape appears healthy and robust. Social science programmes are available across the UK, with a relatively even distribution between Scotland, England, Wales, and Northern Ireland, and within the regions of England. A roughly even distribution is present between the different HEI classes, with post-92, Russell Group and Redbrick and Civic universities all providing social science programmes, which suggests a buoyant and diverse field for social science research and teaching. The breadth of provision indicates a recognized demand for the skills and competencies social science graduates acquire in a range of employment markets across the UK, and that social science degrees are much sought after by university entrants.[33] The GuardianUK university rankings and REF21 results suggest that, in general, social science undergraduate programmes are of high quality,[34] highly regarded by the students who take them, and are taught in departments producing significant and high-quality research outputs.

The results of the exploratory cluster analysis, however, suggest that within this landscape social science provision is noticeably and perhaps drastically divided. It points to two distinct clusters of social science programmes – one 'higher' and one 'lower' – which contain quite consistent internal homogeneity and display statistically significant difference on four of the key factors included in the analysis. The 'higher' group scoring, on average, higher on GuardianUK Rankings and REF2021 Scores,

[33] The Complete University Guide lists social science degrees as the third most popular choice for students enrolling in September 2023 (https://www.thecompleteuniversityguide.co.uk/student-advice/what-to-study/top-ten-most-popular-courses-in-uk)

[34] Based on the GuardianUK rankings, which includes NSS results, graduate outcomes, and resources (see note 13). Although the available data was not comprehensive enough to be included in the analysis here, a similar picture was indicated by the (limited) data from the THE rankings.

and have higher UCAS Entry Point requirements, but also have, again, on average, a greater proportion of their credits given over to research methods (including dissertations), than programmes in the lower-scoring cluster. While the programmes in these clusters are not so far removed from one another as to suggest a clear and unambiguous existing separation, they may, perhaps, indicate a subtle, or perhaps an emerging, two-tier system of UK social science provision.

Cluster analysis is a method to uncover associations between cases (in this context, between social science programmes) and to reveal latent groups (clusters) of cases rather than to identify factors that explain or predict membership of those groups. The apparent indication that social science programmes 'cluster' around higher or lower scores on these variables, does not imply that it is these factors, or these factors alone, that *determine* whether a course belongs to what we have bluntly named here either the 'higher' or the 'lower' band. Nor can it be taken to suggest that changing any one of these factors would have any effect on the others (for instance, by increasing the amount of teaching of research methods on a programme would increase the associated REF scores). It suggests only that similar scores on all these factors tend to be found together. The purpose of the cluster analysis is to uncover the meaningful distinctions between evident clusters of courses that exist. Its primary aim, therefore, Landau and Ster (2010: 72) suggest, 'is not to infer anything about population parameters … but rather to suggest groupings that might form the basis of future hypotheses to be investigated.' With that in mind, the following discussion offers some reflections on the latent clusters indicated by the analysis, assuming only the existence of these meaningful groupings of cases and not any causal linkage. We also consider some of the limitations of the study and make some remarks regarding future research to pick up where this small, and limited, exploratory study leaves off.

In the methodology we highlighted several limitations regarding some of the measures included in this study. In particular, aligning REF Scores with the programmes (see note 15). It is also acknowledged that the classification of credits with 'core theory' based solely on course synopses is a blunt instrument that will inevitably have failed to capture an accurate image of the provision of core disciplinary theory. These limitations should be borne in mind, and we are keen to emphasize the provisional nature of our findings here.

More than this, however, is the possibility of the cluster membership being merely an artefact of HEI Class. As mentioned, cluster analyses group cases based on their similarity, or proximity, in terms of the values of the included variables;[35] like other statistical tests, they are vulnerable to the influence

[35] In this case, Ward's method, which assigns new cases to existing clusters based on the minimum resulting adjustment in the sum of squared errors in the new clusters – that is, new cases are added to clusters based on how little they will disrupt the existing internal consistency of the clusters to preserve, as far as possible, the homogeneity of the clusters.

of confounding variables. Given the importance of HEI Class, and Russell Group membership in particular, in the picture produced by the cluster analysis, the possibility that HEI Class has a confounding effect on the analysis warrants consideration.

Russell Group universities are more research intensive and so likely to have higher REF scores; they are also typically older and more prestigious – and, in many cases, much wealthier – which can influence university rankings (which include spending per student, as well as students' assessments of their institutions resources as well as teaching and course material).[36] It is possible that other variables included in the analysis (e.g. UCAS Entry Points and GuardianUK rankings), are in fact merely echoing the HEI Class (that is, favouring Russell Group universities *because they are Russell Group* rather than because those other variables are independently connected). While this cannot be dismissed out of hand, there is reason enough not to abandon our findings because of it. Firstly, although statistically significant differences were found between HEI Class and REF Scores, UCAS Entry Points, and GuardianUK Scores, and on all three variables Russell Group universities distinguished themselves, the pattern was not consistent. While all three classes of universities were distinct regarding UCAS Entry requirements, there was no statistically significant difference in average REF Scores between Russell Group universities and Redbrick/Civic universities. For GuardianUK Scores, although Russell Group universities again stood apart, there was no clear separation between Post-92 and Redbrick/Civic universities. While it is fair to say that Russell Group status is a powerful indicator of higher scores on all these metrics, the relationship between the different HEI classes, and the correlations between HEI Class and these metrics are at least somewhat messy, and there is more going on than a straightforward self-fulfilling mechanism by which certain (established, and especially Russell Group) HEIs, by virtue of embedded privilege, are able to achieve higher REF scores, secure higher university rankings, make more demanding entry offers, and so on. More importantly for our purposes here, however, is that even if HEI Class were an unambiguous predictor of all these metrics, there is no immediately obvious reason why a feedback loop of this kind should have any association with patterns in course content, unless there is something else about different kinds of institutions, or that has bearing upon the metrics, that is at work.

The fact that there is a significant difference between the average amount of HE credits given over to research methods on programmes in the two clusters is particularly noteworthy. While it was not a clear separation, the average number of HE credits (inc. dissertation) in the higher cluster (82.86) was significantly higher than that of those in the lower cluster (73.07), and the distributions suggest a

[36] Students themselves may well be, perhaps unconsciously, influenced into ladling high praise on their institution by its prestige.

greater consistency of (typically higher) number of HE credits in the higher cluster. Perhaps more tellingly, however, is that the difference was starker when the credits attached to dissertations were removed.[37] The decision to include the dissertation credits in the cluster analysis was taken to represent the fact that the dissertation (as traditionally the most significant piece of research an undergraduate carries out during their degree) represented a significant component of the research provision on the course and should be recognized. However, it is also the case that there is usually no stipulation that empirical research, or research methods beyond those involved in literature searching, be part of a dissertation, meaning that such credits *may* be misleading.[38] That the distinction between courses in the higher and lower clusters becomes more apparent when dissertation credits are discounted, perhaps suggests that it is the way in which teaching of research methods is organized on courses that is associated with cluster membership. This is supported by the fact that courses in the higher cluster are much more likely to have separate modules dealing with qualitative and quantitative methods.

It may also be considered, however, that the greater emphasis on research methods on courses in the 'higher' cluster may represent a continuation of a long-standing and persistent issue (and, perhaps, a divide) within UK social science identified by, amongst others, the UK Benchmarking Review (BSA, HaPS and ESRC, 2010), that research methods in general, and quantitative methods in particular, are underdeveloped in UK social science. Particularly, does the possibility of a two-tier system suggest that *some* social sciences programmes are letting the side down and failing to carry the weight of robust and relevant social science of the kind demanded by Byrne (2011)?

This, like the suggestion of a disciplinary crisis in the field of social science, is not just an academic point concerned with what the fashions of an academic field might favour at any given time, but is quite significantly connected to the broader social legitimacy and value of that field within its social context. Research methods are typically considered to be less glamorous – and often among the more challenging – aspects of social science degrees, and evidence suggests that the study of research methods provokes anxiety among social science students (Earley, 2014; Slocum-Schaffer and Bohrer, 2021). This is typically a reflection of the quantitative elements of research methods. Along with anxiety, however, both relevance and lack of interest have been found to feature in social science

[37] As indicated by the corresponding *r*-values: .242 HE credits inc. dissertations; .349 HE credits excl. dissertations.

[38] This is not to undermine the value of literature searching, or of 'desk-based' dissertations, as crucial aspects of research, only to acknowledge that these skills, while related, are also of a different character to those involved in e.g. interviewing, surveying, or ethnography; not least because they require far less engagement with questions of methodology and the justification of different epistemological claims and empirical practices. Moreover, It is also our own, albeit anecdotal, evidence from teaching social science undergraduate programmes, that empirical research projects are increasingly the exception rather than the rule.

students' negative attitudes toward research methods (Earley, 2014; Wishkoski et al., 2022).[39] If we accept, as we do here, that research methods are foundational to social science disciplines, for students to be negatively disposed toward them on account of their perceived relevance can only mean one of the following: (i) that the students are for some reason unaware of the significance of methodological debates in the history of social science; (ii) that they consider research methods (and their debates) irrelevant to what social science is now about; or (iii) that research methods have no relevance for their prospects or intentions following their degree. The latter may indeed by true for many students but given that research skills are by some margin the most widely employable skills social science graduates acquire, this would perhaps be a shortsighted view to take. For reason (i) to be true, we would have to consider the implications of students being unaware of the significance of methodological concerns for social science and would surely have to question the credibility of a social science course that had not conveyed this. Given that there were no courses in our dataset that failed to teach research methods in some form (if dissertations are included), let us assume that such egregious neglect has not taken place – at least not entirely. It would seem then most likely that lack of relevance must relate to students' perceptions of what contemporary social science is (or perhaps *ought*) to be about. Whatever this might be, it must be somewhat removed from the historical orthodoxy of social science. Again, this would seem to raise a question of what kind of understanding of social science is being taught and whether there is a genuine separation between social science as historically understood and what currently prevails in undergraduate programmes labelling themselves as social science. Perhaps more concerningly, it may also suggest a departure between social science as taught and what undergraduate students themselves are interested in or consider important. If research methods, intrinsic as they are to the scientific credibility of social science, and, to a considerable extent, the skills base upon which social science graduates are valuable in the labour market, are *unimportant* to social science students, then it raises the question of what exactly it is about these social science programmes that students *are* interested in and *do* consider relevant. As Burawoy's insistence on public sociologies implied, the value and relevance of social science disciplines are, at least in part, a public good, and their legitimacy depends – again, at least in part – on how they are perceived. A crisis in the (perceived) legitimacy of social science may stem from, and certainly be exacerbated by, a significant disjuncture between the perceived nature, role, and value of social science by different publics – which would include undergraduate social science students themselves.

While the number of credits given over to the teaching of research methods was found to be a significant feature of cluster membership, no significant pattern regarding the number of credits

[39] Although it is worth nothing that, at least for some, lack of interest in *studying* research methods does not necessarily equate to lack of *appreciation* of research (see McConnell, Kaal and Marton, 2013).

devoted to core theory was identified. Whie the average number of credits was higher in the 'higher' cluster, there was no clear distinction between the clusters. The measurements used here for 'core theory' are far from perfect, and to achieve more accurate indications of whether there are any differences in core theory content would require more nuanced data collection and classification methods. If, however, as the imperfect data here suggest, programmes in the higher cluster contain typically more research methods but do not differ from the lower cluster in terms of core theory, this would seem to reinforce the association of research methods (or perhaps some aspect thereof) with cluster membership rather than other aspects of the programme content.

Given that there appears to be no notable difference between the core theory content between clusters, this raises the question of what constitutes the remainder of programme material – that is neither core theory nor research methods – which necessarily makes up a significant part of all degree programmes, but typically more of those in the lower cluster. Is this content similar in all social science degrees, or are there differences? If so, are these variations associated with either of the clusters here identified, or with other characteristics of UK HEIs? Is this content – or some variations of it – associated particularly with either higher or lower scores on relevant metrics, such as UCAS Entry Points, REF Scores, or University rankings? If so, is it this content – rather than the traditional core terrain of theory and research methods – a factor in either student choice, student understandings of the role and value of social science, or those of wider society?

It is an assumption of social science that it seeks to provide a (more-or-less) scientifically justified approach to understanding the conditions of life in contemporary society, and therefore it must necessarily evolve along with the social world if it is to remain relevant. A central aspect of what makes scientific endeavour a particular - and a particularly successful – way of gaining knowledge, however, is that it is structured, empirical, and cumulative: its relevance is tied to its typically gradual, critical, and – intellectually-speaking – cautious approach to knowledge production. Evolution is a slow process, even if one which occasionally makes great leaps; if UK social science is in crisis, perhaps it is because it has been drawn away from these foundations of scientific practice (and the critical study of research and methodology that anchor theory to these concerns) by various demands to defend its relevance by appeal to more immediate, but superficial, concerns: to political expediency, consumer popularity, or to being 'on trend', 'progressive', or to otherwise court contemporary appeal.

Such demands are manifold: the pressures of marketing and the competition for recruitment; the political climate of what Holmwood (2010) saw as the metric-driven 'audit culture', and the demand for 'impact'; or the eagerness of social scientists themselves, recognizing the career opportunities in such a climate, to ally their work to fashionable issues or movements. These, and other pressures, may

all play a part in reducing the attention given over to research methods in social science programmes, detaching much social science from the far less voguish business of normal science, and drawing social science away from what gave it its relevance and provided its genuine social value and legitimacy. More concerning, if the clusters identified here are, as they seem to be, accurate indicators of an existing, and perhaps growing, division between two tiers of social science programmes in which the emphasis on research methods may be a significant factor, is this crisis – if such it is – affecting social science programmes developing in certain universities – perhaps those most vulnerable to the marketizing pressures, or the volatility of student recruitment, or periods of economic instability – more than others, and what would be the consequences of this for social science and for social and pedagogical value of these programmes?

How is UK social science to protect itself, protect the rigour of its institutions, and its programmes, and retain its social value and relevance in the face of these issues, and a variety of interested publics?

Conclusion

This research aimed to contribute to current and ongoing discussions of disciplinary crises in UK social science[40] concerning the provision, and the nature, of academic social science in the UK, and the role of academic social science within and without the academy, through a preliminary exploration and cluster analysis of social science undergraduate provision. The intention was always to make an empirical contribution that would provide fuel for debate rather than answers, and the approach to analysis and discussion reflects this intention. Cluster analyses are descriptive methods that seek to illuminate meaningful patterns that exist in the distribution of cases rather than constructing inferential or causal models that aim to predict outcomes or quantify the effect of a given variable upon others. They are intended the indicate directions for further investigation, rather than provide answers to specific tests. With this in mind, in place of conclusions, we offer reflections and what we consider to be informed recommendations for further investigation. We hope that future contributions will likewise employ an empirical – rather than a simply rhetorical – approach to engaging with debates about the condition of UK social science, and that further debates may build on this research, and address some of its deficits.

Our findings suggest, with reasonably compelling statistical evidence, that there exists within the UK social science landscape two broad, but clearly distinct clusters of courses: a ‘higher’ cluster, defined

[40] As described above and in Footnote 8.

by higher average scores in the REF, university rankings, and UCAS entry points, as well as a greater proportion of HE programme credits given over to research methods; and a 'lower' cluster, with lower average scores across the same metrics and containing, on average, fewer HE credits given over to research methods. The number of 'core theory' credits, although typically higher in the 'higher' cluster, were not significantly higher than those in the 'lower' cluster, and so are not considered robust indicators of cluster membership. The analysis undertaken here has been carried out on a restricted sub-population of UK social science programmes. While this does not render the results invalid, it does mean that they should be recognized as not being the result of a comprehensive survey, and so should be seen as suggestive of a trend that requires more precise exploration and measurement. Future research should aim for more comprehensive data gathering around the distribution of HE credits on programmes across the broader population of programmes to make the analysis more robust.[41]

The approach to the analysis taken here follows from the understanding that social sciences (particularly those emerging from and intertwined with sociology) are largely defined by the centrality of research methods and methodological justification on the one hand and a core of related theoretical concerns and debates on the other. It has, therefore, focused on the variables that relate to these concerns at the expense of many other criteria on which social science programmes could be classified. To capture broad trends, we have had to rely on rather blunt measurements to speak to the emphasis on research methods and the provision of core theory (see Methodology and related notes). Testing the arguments suggested by our analysis here requires more precise – and more qualitative – investigation of course content to provide the necessary detail to further explore the extent to which core research methods and theory feature in social science degree programmes and the extent to which such content is indicative of distinct clusters of social science programmes. Perhaps more significantly, more detailed exploration of the theoretical (or non-methodological) content of different degrees might cast light on how different degree programmes may differ, not only in terms of distribution of HE credits, but in relation to other measures. Clear distinctions in this regard may also speak volumes regarding the interests of students and the public value of social science programmes.

This research arose, in part, as an attempt to respond to the claim that there is a crisis of UK social science. It is not an attempt to confirm or deny that claim, only to contribute to the understanding of

[41] The omission, as a result of sampling approach, of the social science programmes of Oxbridge is significant, particularly since HEI Class (largely around the Russell Group universities) appears to be a significant factor. The Universities of Oxford and Cambridge, while distinct in many respects (not least in terms of prestige and wealth) from other UK HEIs, also exert a significant influence of UK Higher Education, particularly on metrics which while they themselves need not be overly concerned about, are susceptible to their effects as outliers. Although it may have no impact, their inclusion could potentially bolster, or entirely change, the results of the analysis here, and effort should be made in future research to bring them into the analysis.

the condition in which social science finds itself, and the broader field in which it is situated. The position of research methods, and the way in which social science is understood as a scientific endeavour, is central to this understanding. Social scientific methodology and its disputes have been at the foundation of the project of social science since its inception. The canon of social-scientific work, if there can be said to be one, is fundamentally methodological - at least as much as it is theoretical. Historically, the project of social science may be understood as a critical engagement with the tenets of scientific knowledge and investigation, and the social value thereof. The current conditions of social science, whether or not such conditions may constitute a crisis, in which the social and educational value of social science may be perceived as being questioned, perhaps challenged, and even undermined, cannot be conceived of as 'merely political', but must be seen as part of an historical trend, which stems from the nature of social science as an intellectual and scientific practice, and, at least in part, from the entirely reasonable expectation that activities that claim scientific legitimacy continue to justify that claim. It must be acknowledged that research methods, and the scientific credibility of the project of social science is a central dimension to this, and if it be true that there is a political and public perception of social science as *failing* in some regard, then we should, if we are at all concerned with the future of social science as a credible scientific endeavour, take this to heart. Moreover, if social science is lacking, then, while there may well be good cause to look to external forces in shaping the context of the world in which social science operates and which it properly understood, also takes as its object, we should also cast our much-vaunted criticality inwards: to our practices, our research, our teaching, our programmes, and the connection between what we do, and what we allow to be carried out, or declared, in the name of social science. When we abandon the core concerns of social science - and with them the foundational work of setting out, elaborating, testing, and accumulating the core knowledge of the discipline in order that it might meaningfully progress – in favour of easily marketable, voguish, and, most damagingly, politically and socially-expedient topics without giving them proper grounding, we weaken and degrade the disciplines, their social and educational value, and social science's claim on public confidence.

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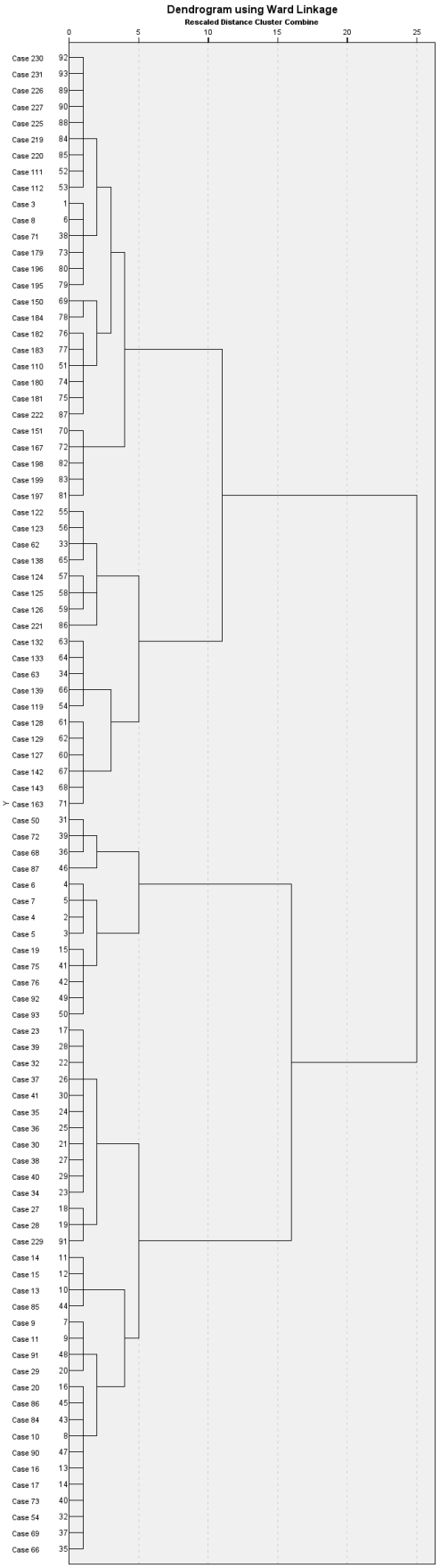
Appendix 1


Dendrogram using Ward Linkage
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Case 222 87
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