Breadth, 'National Needs', and Reimagining the Role of the University in Society: The early University of Warwick

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Abstract

A persistent critique of university histories is their lack of consideration for the influence of external forces. How did the political and societal pressures of the 1960s inform understandings of the contributions that students and universities should make to society? This article investigates how pressures that the universities contribute to the 'national need' informed the design of studies and the built environment at the University of Warwick.

Vice-Chancellor of Warwick 'Jack' Butterworth in 1970 found himself and his university criticised for permitting an 'oligarchy of industrialists,' to subjugate the university and force it to mass-produce 'capitalistic,' managers. For Butterworth this was no coup but a reorientation of the purpose of a university towards public needs. At Warwick, a new university was imagined. Its environment and teaching programme stressed 'breadth' and spontaneity so that it might produce students armed with 'pure' knowledge to be 'applied' to practical issues of the day, particularly those found in industry. The nation needed such broad-minded, productive graduates in order to engender the prosperous liberal society. This educational philosophy is identifiable in Butterworth's proposals for his business school, Warwick's foiled attempt to merge with the local college of technology, and its unsuccessful early designs for halls of residence.

Keywords: Higher Education; breadth; industry; Warwick; Butterworth; New Universities

Introduction: Butterworth verses Thompson

In November 1970, Colin Eaborn, Professor of Chemistry at the new University of Sussex (1961), authored an article commenting on the relationship between industry and the universities. Eaborn noted a recent survey conducted by the Committee of Vice-Chancellors and Principals (CVCP) had indicated that all British university Vice-Chancellors were in favour of increased collaboration with industry. However, he was not certain they would still publicly profess this opinion owing to events earlier in 1970 at another of the new universities, the University of Warwick (1965). In February 1970, the Vice-Chancellor at Warwick, John 'Jack' Butterworth, had been the target of harsh criticisms for what Eaborn reported as Butterworth's 'outstanding success in bringing industrial interests into his university.' For his similar efforts Eaborn had himself, he reported:

> *…been denounced as a "lackey of US imperialism and British finance, industry and state monopoly of capitalism, and as an enemy of the broad masses of the British people and the people of the whole world,"* (**Eaborn, 1970**).

Butterworth's primary critic was professor of social history at Warwick, E. P. Thompson. Thompson decried what he saw as a 'virtually self-perpetuating', 'oligarchy of industrialists,' who had 'subordinated the university to the demands of industry.' These industrialists had redirected the university away from its rightful mission in pursuit of truth and towards the production of 'capitalistic' managers (**Thompson, 1970; Thompson, 2014**). Local Midlands industrialists, including representatives from the aeronautics firm the Hawker Siddeley Group, Rootes Motors Limited and the man-made textiles company Courtaulds, did play commanding roles in the Universities' executive body, the university Council (**Thompson, 2014: 31-41**). Thompson's evidence of any of them exercising improper authority over academic matters was, however, thin. It was quite easy to caricature his anxieties as one of Thompson's fellow professor later did as 'vociferous opposition […] to the non-existent domination of the University by sinister businessmen,' (**Griffiths, 1991: 337**). Michael Shattock (who joined Warwick in 1968, and was registrar from 1983 to 1999), reflected that it was perfectly understandable that the business community would be involved in the university as part of the programme of 'the regeneration of Coventry,' after the Blitz (**Shattock, 2012**).

This article will not retell the now legendary story of the 'Warwick Files Affair' which triggered Thompson's objections (where student protesters uncovered a number of files which implied that students and staff were being spied on by the Warwick administration), even if the passing of its recent fiftieth anniversary was criminally unremarked.[i] Instead it

investigates the broader context of Warwick's early years. Why was Butterworth (like other university leaders) so keen to bring industry interests into his university? And how did this influence the pedagogies and built environment of the fledgling university? Robert Anderson (**2017: 38**) has identified that the general relationship between 'universities, technology and industry,' is understudied (**Sanderson, 1972**). There has been a persistent criticism that institutional university histories do not satisfactorily acknowledge the wider political or social contexts shaping university development (**Hayes, 2015**). Architectural histories have understood the designs of the new universities as attempting to create 'utopianist' 'communities', but avoid considering the wider educational and social purposes of building these communities (**Muthesius, 2000**). Due to the interest generated by the Warwick Files affair and the efforts Shattock, the published history of the University of Warwick is comparatively rich (**Rees 1989; Shattock 1991b; 1994: 73-97; 2015; Steedman 2020**). It is still helpful, however, to take an initially broad perspective of the context of the university during the 1960s, firstly to help contextualise some of the other contributions to this special issue, and secondly, an 'outsiders' view of Warwick's early years may be constructive.[ii] In doing so this article will show that the conflict at Warwick between Thompson and the industrialists was just one battle of a broader struggle to redetermine the role of higher education in post-war Britain.

During the 1950s and 1960s in Britain increasing public interest and investment in higher education meant universities found themselves having to demonstrate their contribution to society. From 1937 to 1961 actual public expenditure on higher education rose from £7 million to £146 million (**CHE, 1963a: 199**). For Butterworth and his industrialist allies, a university education in 'breadth' rather than narrow academic specialisation or vocationalism was necessary to ensure that the specialised knowledge students acquired at university was understood in the wider context of how it might be deployed to do productive work in society, particularly in industry. The nation needed such broad-minded, productive graduates in order to engender the prosperous liberal society and reverse perceived British decline (**Edgerton, 2006; 2018**). This article proceeds to explore how the teaching and built environment at Warwick were designed and promoted as providing this breadth. This educational philosophy is identifiable in Butterworth's proposals for his business school, Warwick's foiled attempt to merge with the local college of technology, and its unsuccessful early designs for halls of residence.

The Expansion of Higher Education (1954-1973)

Warwick was one of many new universities that appeared during this time of dramatic growth in British higher education: in 1938 there were twenty-four universities, by 1966 there were just shy of fifty university institutions. (**Davies, Walker, and Tupman, 1989: 272**). In 1939 the total university student population was 50,000. Its sustained rise began after 1954 from 81,700 to 239,400 in 1973. Even so in 1962 of the then twenty-eight universities only thirteen had more than 3,000 students (the largest, Oxford and Cambridge had 9000 students each and the federal University of London had around 23,000 students) (**CHE, 1963a: 22-23**)**.** Just 4% of British young people attended university and an even lower proportion (just 2.5%) of the total population of young women (**12-17**). The proportion of university income received from the state via the University Grants Committee (UGC) had been increasing since the 1920s: in 1938 it was 36% but by the mid-1960s it was as high as 80% (**Anderson, 2006: 135**).

Universities were both research and teaching institutions. Students studied courses in the arts including classics (arts subjects were taken by 28% of university students in 1962), 'pure' sciences (25%), 'applied' sciences and technology (15%), and social sciences (11%); as well as professional subjects: medicine (15%), education (4%) agriculture (2%) and law (**25**). In the early 1960s universities continued to hold a reputation as the premier sites of what was called a 'liberal education': an education in abstract or 'pure' principles of the basic disciplines of the sciences, mathematics, and particularly the arts, but most of all the classics. Such an education was fit for a small, leisured, elite governing class who had no need for 'applied knowledge' or to perform technical or manual labour (**Joyce, 2013: 230**). Before the 1950s employers rarely saw the university degree as preparation for working life; universities were the domain of certain privileged classes, medicine, and some teachers (**Schwarz, 2004**). Employers mainly recruited at ages 14-17 and trained their workers themselves (**Tribe, 2013**).

Universities were not the only institutions of higher education. The further education institutions, taking 2% of young people, included some three hundred institutions: local and regional Colleges of Technology, the Colleges of Advanced Technology (CATs), and after the late 1960s the polytechnics (**Perkin, 1969: 41**). This included, for example, the Lanchester College of Technology (1961) at Coventry, which following a series of mergers became the Lanchester Polytechnic (1970) (and eventually Coventry University in 1992) (**Stephens, 1969**). These institutions were characterised as having a more concrete role to provide technologically inclined and vocational training and were generally teaching-led rather

than research institutions. They additionally provided a large number of students outside of the higher education sector with education of below degree standard or part-time study (**Perkin, 1969: 42**).[iii] Students working at degree level at these institutions were examined for diplomas of technology or the University of London external degree; after 1964 further education institutions increasingly awarded nationally accredited degrees. Other institutions, taking 2.5% of young people, taught future schoolteachers, such as Coventry College of Education (which was integrated into the University of Warwick in 1978 and is now Warwick's Westwood campus). Carol Dyhouse (**2006, 87**) identifies that 70% of the training college population were female in 1960 (representing only 3.8% of the total age group).[iv] These 'public' institutions were often smaller than universities (in 1962 only twenty of 146 teacher training colleges had more than 500 students), and had lower entrance requirements (two A-level passes compared to a minimum three at universities) (**CHE, 1963a: 28-30**), and national and local authorities provided almost all their funding. These two sectors saw even greater expansion in student numbers than the universities. In 1938 there were only 6000 students in full-time advanced further education in the UK, by 1969 full-time numbers had exploded to 91,000. Teacher training also grew rapidly, increasing from 13,000 students in 1938, to a peak of 131,000 students by 1972 (**Cantor, 1989: 297-303**).

This huge expansion of student places and funding was the result of two main concerns. First, the wars of the first half of the twentieth century and the ongoing cold war had emphatically demonstrated the importance of technological and scientific knowledge and highly trained 'manpower' (and increasingly 'womanpower') to national security and prosperity. The Percy (1945) and Barlow (1946) reports made prominent calls for increased outputs of scientific manpower. However, many in Britain, concerned with perceived decline, remained anxious through the 1950s and 1960s that reserves of British scientific ability were lesser than that of the USA, the USSR, and of other European nations (**Tomlinson, 2001**). Second, the number of live births in the UK increased from a steady average of around 725,000 per year for the decade 1930-1940 to a peak in 1947 of over a million, producing the 'baby boom' and a 'bulge' of children coming of age towards the early 1960s. Compounding this was the 'trend' towards more of these children staying in education for longer as access to secondary education had been expanded to all up to the age of fifteen in 1944 (**Mandler, 2020; O'Hara, 2012: 153-75**). Between 1950 and 1962 the proportion of seventeen-year-olds remaining in school rose from 6.6% to 12% and showed no signs of stopping (**CHE, 1963b: 102-3**). Throughout the 1950s the availability of financial assistance to students in higher education grew, culminating in the introduction of the 'mandatory grant'

following the recommendations of the Anderson Report (1960) (**Malcom, 2014**). By 1963-64, 90% of students received grants 'almost wholly,' from public funds (**Davies, Walker, and Tupman, 1989: 272**). As the demand for the products of higher education rose with the proportion of public finance spent on it, so did its prominence in public affairs.

The Purpose of Higher Education

These pressures on higher education numbers and institutions did not just revolutionise the scale of higher education provision but also the purpose of higher education. There were two expansion programmes in higher education: the CATs, providing technological education, and the New Universities, providing a 'broad' education.

Expanding Vocational and Liberal Education

An expansion of technological education was initiated by Ministry of Education attempting to address the concern that Britain was not adequately producing the necessary number and quality of highly qualified scientific manpower. In the late 1940s and early 1950s the UGC and Conservative government did not believe the existing pattern of university provision was inadequate (**Shattock, 1994: 74; 1991a: 286**). Calls for a technological university (a 'MIT of the Midlands') in 1951 to be founded in Coventry were rejected in favour of expanding provision in existing universities such as Imperial College London. In 1956, the Ministry of Education published a white paper, *Technical Education*. It proposed eight further education colleges should be re-designated as CATs, and two further colleges followed in 1962. These new institutions distinguished themselves from the theoretical, 'pure' academic programmes of existing universities (**Ross 2002; Scott 1993**). The CATs were to focus on technological studies at an honours degree level, and with a close association with industry, including industrialist representation on their governing bodies. They became characterised by their 'sandwich courses' where students alternated between periods of study and periods of practical work: by 1962 there were 14,000 students in further education taking sandwich courses (**CHE, 1963a, 33: Matthews, 1981: 133-4**).

The only new university foundation in the immediate post-war period was the experimental University College of North Staffordshire (1949), which became the University of Keele (1963). The promoters of the new university college were concerned that increasing specialisation of university graduates, scientists and other specialists had undermined any sense of a unified common culture and values that the 'liberal education' once provided. Without these values students were unaware of their wider responsibilities to society, particularly to the local community (**Cragoe, 2015; 2020; Taylor, 2020**). Students would study for four years

instead of the usual three, including a broad foundation year dedicated to the absorption of the heritage of Western civilisation and the methods of the sciences, ranging 'From Plato to NATO,' (**Whyte, 2015: 223-4**). Keele was however limited by the austerity of the post-war period and did not reach 600 students until 1956-57, and had only 1681 students in 1967-68 (**Perkin, 1969: 57-60, 80**).

By the mid-1950s the consequences of the 'bulge' and 'trend' in for universities was increasingly evident (**Perkin, 1969: 62-3**). In 1956 the Director of Education for Brighton, W. G. Stone, in a memorandum re-appealing for a university in Brighton, convinced the UGC of the need for a new university institution based on national demographic concerns (**Shattock, 1994: 74-5; Perkin, 1969: 65**). In 1958 the Chancellor of the Exchequer made the announcement of a £60 million programme of new university construction until 1963. This trigged a wave of seven *de novo* universities: Sussex, opening in 1961 (at Brighton), East Anglia (at Norwich) and York in 1963, Lancaster and Essex in 1964, and Kent (at Canterbury) and Warwick (at Coventry) in 1965. Two subsequent institutions followed: Stirling in 1967 and the New University of Ulster in 1968. The planning for these new institutions, while originating from the initiative of local deputations, was closely vetted by the UGC and its full-time Chairman Keith Murray through the use of Academic Planning Boards populated with UGC-nominated persons of high academic standing. With a large proportion of Treasury funding directed towards technological institutions such as the new CATs, Murray intended the new universities to specialise in non-technological subjects and provide a distinctive national contribution to justify their funding (**Shattock, 1991a: 292**). The existing literature, including Shattock, has assumed a strict division of national responsibility for education of what Shattock (**1994: 78**) refers to as 'rounded and balanced men,' at these new institutions, in contrast to the highly technically qualified graduates from the CATs. Government targets for the number of university places continued to grow: the Robbins Report (**1963a**) recommended a threefold increase to 346,000 students by 1980.

The *appearance* of a strong distinction between vocational education in the further education sector and non-vocational broad, liberal education at the universities was reinforced by the implementation of the 'binary divide' between the two sectors by the Department of Education and Science (DES). Announcing this policy in his infamous speech at Woolwich Polytechnic in April 1965, Secretary of State for Education and Science Anthony Crosland criticised the universities as elitist, classist, expensive, and ill-suited to meet the scientific and technological manpower needs of the nation (**Kogan, 2006: 78-80**). This duty would fall to the further education sector, whose output of qualified manpower could be more closely aligned with government anticipated 'need' (**Crosland, 1965**). In

1966 Crosland announced that colleges of further education were to be rationalised into new institutions of university standard, the polytechnics. The first of these institutions appeared in 1969 (Hatfield, Sheffield, and Sunderland) and by 1973 there were thirty institutions of polytechnic status (**Robinson, 1968: 30**).

Rounded and Balanced Men for Industry

Such a sharp distinction between vocational and non-vocational 'liberal' educations was, however, not a distinction shared by university leaders and employers in the 1960s. For university leaders, the solution to national technological manpower needs was not to introduce a rival sector to the universities (which would struggle to achieve parity of social esteem) but to reconsider the role of the university (**Robbins, 1966: 138-57; Robinson, 1968: 46-54**). University Vice-Chancellors were particularly affronted when Crosland at his Woolwich speech clearly implied that the universities were incapable of responding to the national need (**CVCP, 1965**). Many Vice-Chancellors, particularly of the new universities including Butterworth, believed that a universities' 'liberal education' could, ironically, provide a better preparation for life in the world of practical affairs than specialised vocational training, especially for industry.

These vice-chancellors reclaimed the 'liberal education'. A university education and the 'character' it bestowed might be obtained through the study of any subject not just traditional 'basic disciplines'. Technological studies at universities, including engineering, had gained significant currency by the 1950s, advocated by vice-chancellor Eric Ashby (**Ashby, 1958; Silver, 2002**). Ashby redefined the idea of a liberal education by arguing that a liberal education was not equitable with any specific content but the habits of character and mind it promoted (**Rothblatt, 2006; 1993: 28-30; Kimball, 1986).** This 'character' was necessary for students and graduates to be able to deploy the specialised and technical knowledge they obtained in their degrees in the multidisciplinary context of the real world. The universities, the Vice-Chancellors argued, despite de-emphasising specific vocational techniques and with little direct equitability of student output with manpower planning categories, were no less responsive to national needs.

After 1950, a liberal education was increasingly considered by industrialists to provide students with the right character to succeed in industry. For instance, in 1961 in evidence to the Robbins Committee representatives of one of the largest employers' associations in Britain, the Federation of British Industries (FBI), identified two primary weaknesses in the sort of education that higher education institutions provided. Firstly, they argued that existing trained scientists were 'rather uncommunicative and […] handicapped by his inability to deal with relative judgements,' or

make decisions in the practical context of industry environments. Secondly, the FBI believed that higher education should do more to equip young people to 'adapt themselves to a continuously changing society and also to use the recurring opportunities for further training.' What was not needed in their opinion was more 'high calibre specialists,' trained in specific skills or vocational practices (which would quickly become obsolete due to the pace of technological change in industry). Instead, the FBI advocated 'breadth' in education. (**CHE, 1964: 572, 579**). The Robbins Report concurred this sentiment and indeed cautioned that it would not have advocated 'so large an expansion of universities […] unless we were confident that it would be accompanied by a big increase in the number of students taking broader first-degree courses,' (**CHE, 1963a: 296**).

This preference by industrialists for broadly educated university graduates was promoted by the CVCP as evidence of the capacity of universities to respond to the national need. Tellingly the label of a 'liberal education' appears to diminish in university parlance as the 1960s progressed. It was eclipsed by an emphasis in education in breadth or avoiding 'overspecialisation.' My thesis addresses this argument further and examines how some Vice-Chancellors and industrialists imagined a broad education prepared young people for life in industrial capitalist society. One interesting question that arises from this line of inquiry is: how far did an understanding of breadth as a practical virtue inform the built environment and course content at Warwick?

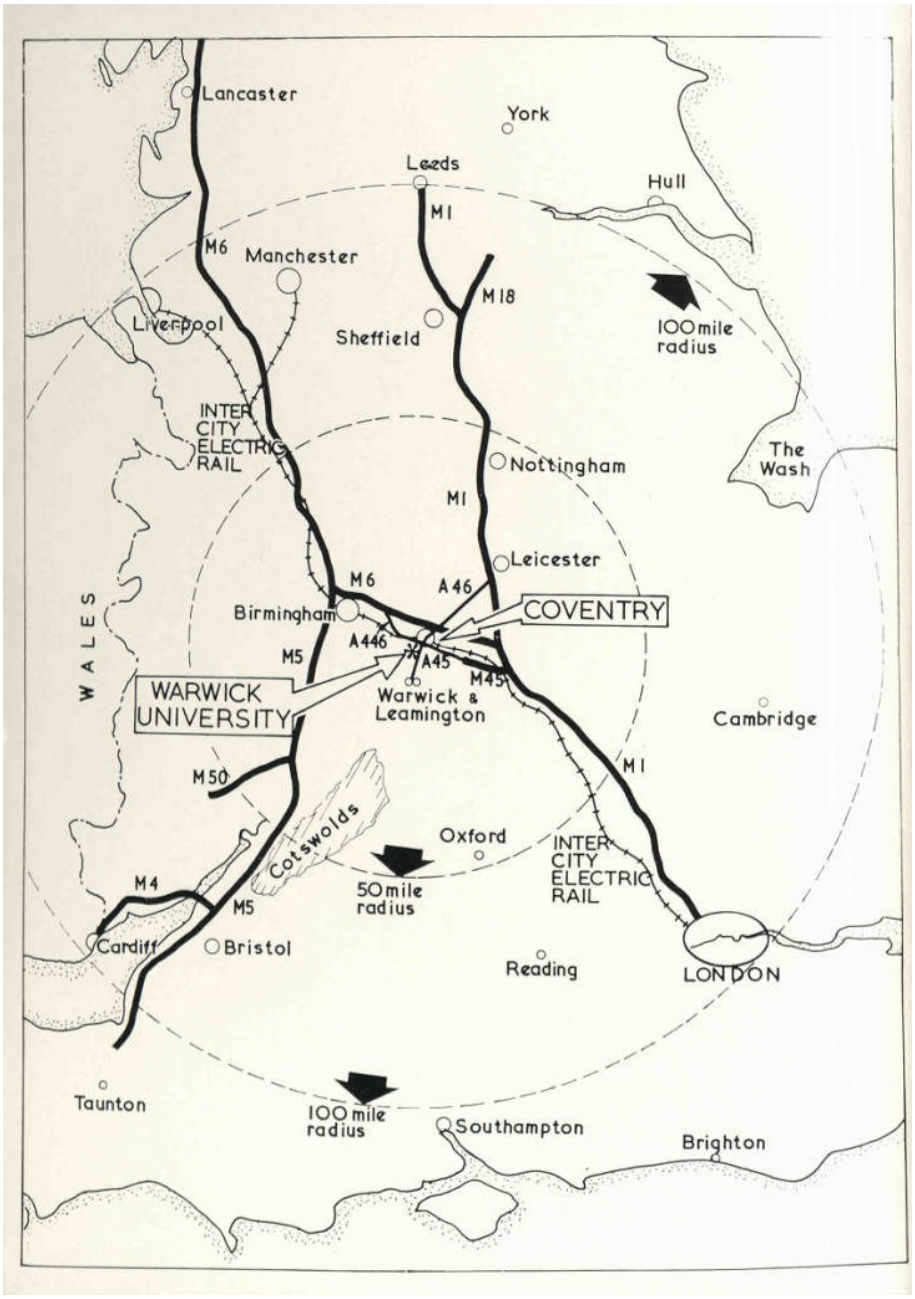

*Figure 1: 'Meriden, the traditional centre of England, is only five miles away, after all. More to the point, Coventry lies on the inter-city electric rail network and at the hub of the national motorway system […] London is a non-stop one-and-a-quarter hours away by train and most major cities are within two hours' motoring,' (**UoW, 1972: 2, 4**). Reproduced with permission.*

Utility and Breadth at Warwick

There are plenty of signs that importance of breadth as a practical virtue was a key determinant of the educational philosophy at Warwick. Firstly, Warwick considered its geographic location as perfect for responding to the 'national need' for broadly educated graduates. The 'national need' was equated with the 'need' of industry. Warwick was unique among the new universities in its close proximity to urgent problems of industry: Coventry's aeronautical and motorcar industries. Its location in the centre of England also allowed it to present itself (**figure 1**) as a national node

with excellent connections to the South-East and London via the developing motorway system and 'British Rail's new Inter-City electric service,' (**UoW, 1964: 11-2**). The high number of industrialists in Warwick's University Council bought expertise to the university and aligned industry and university plans. Private donations further cemented this link. Jill Pellew (**2020: 232**) has calculated that by 1967 Warwick had raised £2.75 million from private donations in its appeal, over half a million more than any other new university. Much of this money was earmarked for particular items such a chair of Industrial Relations. The university claimed that the interests of business were reflected in its 'special emphasis placed on Science, Engineering and Social Studies (e.g. Economics and Business Studies)' (**UoW, 1968: 13**).

Secondly, breadth was understood as part of a preparation for working life necessary for more and more young people, no longer just for an elite. Warwick anticipated high national demand for its broadly educated students. Warwick's 400 acre site straddling the boundary of Warwickshire and Coventry (claimed by the university in 1968 to be the 'largest site in Britain designated entirely for university development'), enabled expansionist plans (**UoW, 1968: 12**). It was envisaged the university might grow to 20,000 students (**UoW, 1964: 26**). Beginning in 1965, with 436 students, the university reached 1689 students by 1972; and at that stage expected to reach 5000 students by 1976.[v] In 1966 men outnumbered women nearly 2:1, but as Dyhouse has identified the New Universities, Warwick included, were attractive to women: broad degree courses were thought to be more suitable to their aspirations, particularly for careers in teaching. (**Dyhouse, 2006: 101-3; Steedman, 2017**).

Studies in Breadth

Breadth also informed Warwick's teaching programme. Following Keele and Sussex's lead, Warwick's academic structure avoided faculties or departments and organised itself into large Boards of Study, initially, science (including natural sciences, computer science, engineering science, and pure and applied maths) and arts (English, European languages, and history) with social studies following later (economics, education, industrial and business studies, law, philosophy, politics, and sociology). Beneath the boards would be the Schools of Study which provided tuition. This was intended to provide 'maximum flexibility in arrangement of courses, and to enable students to delay a decision on the subjects which they are to study in depth as late as possible'. Students could pursue broad combined courses and take general courses shared by multiple degree courses within the same Boards of Study (**UoW, 1964: 13**; **1965**). Arts students for example were not finally committed to a particular subject in their first year, and research methods were incorporated at the

early stages for science students, in order to show the relationships between 'contemporary problems and issues,' (**UoW, 1968: 35**).

There was however little prescriptive academic planning at Warwick, with no set teaching or assessment methods. The first professors were selected based on 'fresh and constructive ideas on how studies in their areas should be organised and developed.' It appears this autonomy was intended to ensure that by working together without constraints these professors would produce organic interdisciplinary cooperation (**UoW, 1969-70: 3**) – somehow more genuine than that achieved artificially through deliberate social engineering at other New Universities. For example, Thompson's graduate Centre for Social History (**Steedman, 2020**), was initially imagined to provide a complementary historical perspective for the research at the proposed Centre for Industrial Studies (**Hale, 1964**) (which after its realisation would eventually become part of what since 1988 is Warwick Business School).

Warwick's Academic Planning Board proposed a first-year compulsory course taken by all undergraduates in 'language, logic, and ethics,' to 'ensure all students could 'think and write clearly and to examine one's relation to society,' (**APB, 1963: 3**). A course, 'Enquiry and Criticism', eventually appeared, with one lecture and one seminar a week. Through the critical examination of the methods of 'various branches of knowledge such as mathematics, the natural and social sciences, literary criticism, ethics and politics,' outside a students' chosen subject, the course was intended to 'give the student a critical sense of the basis and limits of his own discipline,' (**UoW, 1966a: 15**). The hope was such study might provide a 'common language,' throughout the student body in an attempt to facilitate cross-school discussion and breadth (**Griffiths, 1991: 338**).[vi] It was hoped this would better arm students to tackle professional and personal problems in later life as a member of society. However, the course was poorly attended by students and faced opposition from professors: it was difficult to teach, and its objectives were unclear (**Griffiths, 1966**). 'Enquiry and Criticism' was terminated by 1967/68, replaced by a series of open lectures in the autumn term to 'liberalise students' intellectual approach and interests.' Additionally, lectures in all courses considered of general interest were open to all students again 'to promote inter-disciplinary understanding,' (notices of these lectures also vanished from later prospectuses) (**UoW, 1968: 28**).

The emphasis on the utility of breadth is most apparent in the plans for the study of business. Butterworth was particularly keen to develop a postgraduate business school and took inspiration from his visits in April 1963 to the American business schools at Harvard, MIT, Chicago, and Carnegie. Butterworth proposed a graduate school of business which

spent half of its time on research to 'solve business problems and to provide a better basis for business education in the future,' and immediately produce valuable 'changes in operating practice in industry.' Alongside the teaching of analytical concepts and fundamental theory the programme would make use of pioneering teaching techniques such as business case studies. These programmes found support in industry and the school was initially privately funded. Two masters courses were launched from 1967. Both courses were intended to develop skills necessary for careers in industry: analytical skills, capacity to make judgments, understandings of considerations of cost, the limits of practical possibilities, and 'allowance for the fact that human beings are involved,' requiring the study of 'economics, sociology, psychology and engineering.' The course would conclude with a research project in industry or commerce to encourage students to apply abstract methods in practical contexts and 'not only evaluate evidence but act with responsibility,' (**Butterworth, 1963: 1-4; UoW, 1966a**).

The binary divide frustrated Warwick's attempt to incorporate the full range of applied studies into the university when the DES blocked a proposed merger with Lanchester College of Technology in 1965 (**Shattock, 2015: 33-34**). Warwick initially planned to teach 'pure' 'Engineering Science', and in the future absorb the applied facilities and teaching at Lanchester as a faculty of engineering (to avoid unnecessary duplication of facilities). The proposal had been articulated as early as March 1960 (**Shattock, 2015: 27-28**). Its failure was a bitter frustration of the university. The resulting rump engineering department at Warwick was headed by Arthur Shercliff. Shercliff was, according to Shattock, 'almost as much an Applied Mathematician as he was an Engineer, and of course he had very little to say to the [local] motorcar industry which barely had any graduates working for it,' (**Shattock, 2013a**). Despite this perceived disconnect, Shercliff maintained the aim of his engineering department was the application and contextualisation of the unifying influence of mathematics to real world problems. The university promoted the undergraduate course as developing the ability to use 'fundamental scientific ideas creatively, rather than the mere acquisition of specialized knowledge,' (**UoW, 1965**), and enabling study across mathematics, physics, engineering, computer science, and eventually business. Shercliff was active in promoting industrial links, including the appointment of visiting 'associate professors' from industry, to lecture and direct industry-oriented research projects (**Moffatt, 1985: 531-2**). While the full range of applied studies was curtailed by the binary divide, Warwick maintained the principle that a broad education was the foundation of practical skills.

Social and Academic Mixing on Campus

Warwick's campus was designed as a living academic community where students and staff spent time beyond their studies socialising and mixing as a way of further integrating breadth into their education. Unlike the nineteenth-century and early twentieth-century civic universities whose sites were normally within cities, this was not the case for the New Universities. Warwick opted for a residential site three miles from the centre of Coventry (and seven miles from Warwick town).[vii] This choice was partly due to pragmatic concerns such as the availability of land, the possibility of expansion, and development costs. It was also, as Warwick's promotion committee argued as early as 1961, a repudiation of the limited nine-to-five ethos of the civic universities and the desire to foster this sense of community by encouraging students and staff to remain on campus throughout the day by providing leisure and social facilities. Like other New Universities, Warwick aimed to have two-thirds of students in residence (**Anderson, 2006: 137; Darley, 1991: 356**). It was not often explicitly stated in plans that socialisation would contribute to creating a student of the right character to have a productive career in the cross-disciplinary world of industry, but these values were implicit, and such efforts were often supported by industry finance.

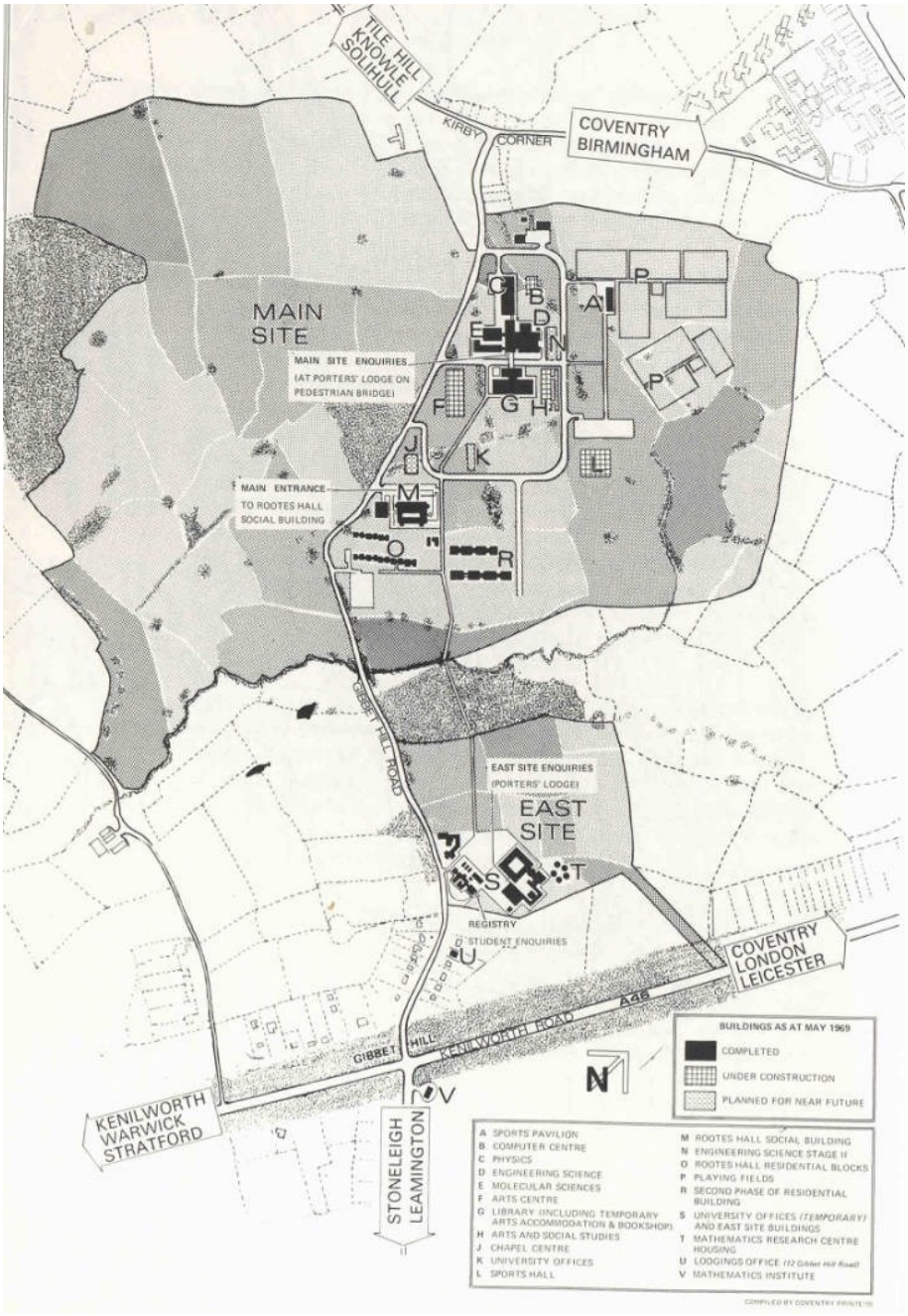

*Figure 2: Warwick Campus Map in 1970, showing the construction of the arts building and the space between the concentric circle rings (**UoW 1970, 120**). See also the access gallery in the centre of the map, running vertically up from the library (G) all the way through physics (C). Reproduced with permission.*

The first university buildings on the 'East Site' on Gibbet Hill acted as an initial 'nursery campus' for subjects before they moved into permanent accommodation on the main central campus, fifteen minutes' walk through Tocil Woods. The main campus was initially designed as a series of concentric rings blossoming out from the library at the centre (**figure 2**).[viii] The first buildings on the main site opened in 1966 (**UoW, 1968: 13**). In the closest rings were to be built the communal buildings: initially the board of science building, placed adjacent and directly opposite to the library. The library was intended to serve a student population of 5000 (the

arts were initially housed in the top two floors of the library, and the arts building, eventually the humanities building, followed in October 1970). This placement (rather than the distribution of communal buildings amongst residential 'colleges' such as at York, Kent and Lancaster) was intended to 'reflect the inter- dependence of scientific subjects.' Architecturally this 'interdependence' was realised by 'internal access galleries providing continuous links between all parts of the complex.' A main central access gallery extended out and bridged over the main access road to the library (which today forms the science concourse) providing a central artery through which ideas and people might flow and mix (**UoW, 1966b: 4**). There remain a remarkable number of these elevated pedestrian ways on campus, bridging the spatial and academic spaces between disciplines and facilitating the sort of organic academic mixing and innovation Warwick desired (**Perkin, 1969: 29**).[ix]

*Figure 3: The then brand-new swimming pool, apparently in 1974. See, outside the window on the left, the site of the new Arts building which is currently under construction. (**Sargent, 1974**: 13:04).*

Broadening influences were also intended to be inculcated through the provision of auxiliary cultural facilities. The sports centre featuring squash courts and a 25 metre six lane swimming pool (**figure 3**) opened in 1972, and the arts centre followed in 1974. The arts centre was one of a series of projects funded anonymously by the charitable trust of Helen Martin (whose family-owned Smirnoff Vodka), including an American exchange programme and the halls of residence Benefactors (1966) to house American exchange students (**UoW, 1972: 72-74; Shattock and Warman,**

2010). The culturalization these spaces provided was part of the duty of a university to transmit a 'common culture', broadening the education of students so they might better understand the place of their specialism in society.

One failure in this regard was Warwick's attempt to socialise students in its proposed halls of residence. The 1964 development plan imagined fourteen halls of residence: communities providing living, workspace and social buildings, and catering for around 1000-1500 students of different genders and disciplines, intended to encourage 'real and contrived mixing,' (**UoW, 1964: 17, 33; 1966b: 6**; **Darley, 1991: 359**). The first of what was intended to be many of such residences, a four-story residential building and separate social building known collectively as Rootes Hall (named for the late local industrialist Lord Rootes), opened in 1966. This social engineering conflicted with the expectations of many students and staff, who desired a centralised independent student union with its own separate building (**Griffiths, 1991: 337; Thompson, 1970**). The university administration, and particularly Butterworth, forcefully opposed the possibility of a centralised students' union building; the university had already received UGC funding for a mixed social building (**Shattock, 2012**). Anecdotally, Butterworth is supposed to have proclaimed that 'there will never be a Union building in my lifetime,' (**Woodman, 2016**); and many students attributed the opposition to a centralised student union as evidence of industrialist opposition to united organised student labour movements. Following the student unrest of 1970, the administration relented: a centralised students' union building was opened in 1975. No further buildings like Rootes social building were built. Like most of the new universities Warwick found catering in halls of residence failed to achieve satisfactory economies and student preferences gravitated towards independent study bedrooms and flats over halls (**Muthesius, 2000: 77**).

Conclusion: Breadth, Space, and Pedagogies

This article has begun an initial exploration of how far the new liberal education of the universities and association of breath with practicality informed the pedagogy and built environment of universities in the 1960s. It refocuses historical attention on the historical context and role of ideas in university education during a time of increasing public demands. The case of Warwick shows there was potential to carry forwards the traditional values of a liberal education but reorient them towards the demands of modern society. The 'common culture' transmitted through universities was no longer the exclusive property of a societal elite but necessary for a much wider portion of the population to participate in modern society. Only through the broader understanding of the world that

a university could provide in its interdisciplinary teaching and through residence might students be best placed to use their specialised knowledge in their careers.

This recharacterization of the liberal education as a dynamic pedagogy in the post-war period points towards a number of further directions of inquiry. Firstly, it raises the question of whether or not these values were internalised by teaching staff or students. The universities' oral history project, *Voices of the University*, begun for Warwick's 50th anniversary celebrations, and the *Then & Now* project, tell a story which is a necessary augmentation to this history of ideas. For example, the campus architects initially designed a road system and infrastructure capable of supporting sustained expansion in the future, but this had the unfortunate effect of spreading facilities out. Thompson described the campus felt as if it had been 'set out with a divider and a ruler,' with 'student residences and social buildings segregated,' and no functioning centre of campus 'where the staff and students can easily intermingle,' (**Thompson, 2014: 25-6; 1970**). Early students and staff recalled encountering a large, open site with brutalist, white, square buildings sparsely distributed across the campus, and separated by building sites, cranes, and seas of thick red mud.[x] Shattock himself described the university site in the 1960s as 'pretty disgraceful,' (**Shattock, 2013b**). Student Union president from 1968-69 Alan Philips remembered the path between central campus and Gibbet Hill was not initially illuminated which made it 'difficult then for women […] one or two people were attacked,' (**Phillips, 2014**). The modern white tiling affixed to the first buildings was falling off by 1969 (**Kemp, 2014; Hall, ND**). These failures led, understandably, to student discontent; however interestingly many early memories of the university emphasise comradery, adventure, and opportunity. What kind of outcomes did students derive from navigating the hidden curriculum of the growing pains of the new university?

Secondly, how far were other New Universities, older university institutions, or other non-university higher education institutions influenced by association of breadth with practicality? Warwick is something of an outlier of the New Universities (**Muthesius, 2000: 122**). Breadth as a practical virtue was far from the only factor influencing their design: a broad education for the elite of a meritocracy was a major determinant of York's commitment to breadth. At Stirling, commitment to breadth as a practical virtue appears perhaps stronger than at Warwick. The CATs became universities after 1965 and notably underwent 'academic drift', reportedly losing some of their vocational character, a charge also made against the polytechnics. How much was this drift an attempt to liberalise their teaching in order that this might increase their students' capacity to contribute to society?

Thirdly it raises some intriguing questions about the social purpose of broad (interdisciplinary) study, research and undergraduate education provided by universities today, at a time when 'national needs' are measured by proliferating metrics: of impact, engagement and concepts like 'student satisfaction' (**Collini, 2012**). Considerations of spatial interactions are particularly pertinent in the coronavirus pandemic. Social distancing measures restrict the possibility of valuable informal pedagogies of extracurricular interactions in spaces such as societies and sports but perhaps also offers up alternative possibilities for new forms of connection. Perhaps not uncoincidentally, 'breadth' is a virtue which appears to be alive and well at Warwick, as the *Then & Now* project shows.

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Josh Patel is a PhD student at the University of Warwick, supervised Claudia Stein and Mathew Thomson. His thesis explores the roles leaders of higher education imagined their students would play in society in Britain during the long 1960s. His research nuances widespread narratives of a 'rise-and-fall' of social democracy. Josh's wider interests include historiography and interdisciplinarity historical method. He is also a Head Swimming Coach at UWSWP and interested in how sport can improve learning outcomes and student wellbeing in higher education.

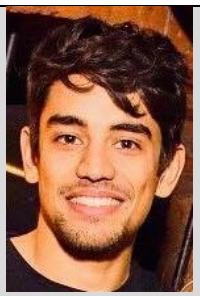

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Figure 1: 'Meriden, the traditional centre of England, is only five miles away, after all. More to the point, Coventry lies on the inter-city electric rail network and at the hub of the national motorway system […] London is a non-stop one-and-a-quarter hours away by train and most major cities are within two hours' motoring,' (**UoW, 1972: 2, 4**). Reproduced with permission.

Figure 2: Warwick Campus Map in 1970, showing the construction of the arts building and the space between the concentric circle rings (**UoW, 1970: 120**). See also the access gallery in the centre of the map, running vertically up from the library (G) all the way through physics (C). Reproduced with permission.

Figure 3: The then brand-new swimming pool, apparently in 1974. See, outside the window on the left, the site of the new Arts building which is currently under construction. (**Sargent, 1974: 13:04**).

References

Ashby, E. 1958. *Technology and the Academics: An Essay on Universities and the Scientific Revolution.* London: Macmillan.

Anderson, R. 2006. *British Universities Past and Present*. London: Hambledon continuum.

Anderson, R. 2017. Writing University History in Great Britain, from the 1960s to the Present. *CIAN-Revista de Historia de las Universidades* 20, pp. 17-40.

Butterworth, J. B. 'A School of Business and Organisation', July 1963. Modern Records Centre, University of Warwick (UWA/F/PP/4/2).

Cantor, L. 1989. Public Sector Higher Education, 1945-1986. In: *Higher Education in Postwar Britain*, edited by Stewart, W. A. C. London: Macmillian Press Ltd, pp. 296-314.

Collini, S. .2012. *What are universities for?* London: Penguin Books.

Committee of Vice-Chancellors and Principals. 1965. Minutes 21 May. Modern Records Centre, University of Warwick (MSS.299/1/1/22).

Committee on Higher Education. 1963a. *Higher Education Report of the Committee appointed by the Prime Minister under the Chairmanship of Lord Robbins 1961-63: Presented to Parliament by the Prime Minister by Command of Her Majesty October 1963*. London: HMSO.

Committee on Higher Education. 1963b. *Higher Education: Appendix One to the Report of the Committee appointed by the Prime Minister under the Chairmanship of Lord Robbins 1961-63: The Demand for Places in Higher Education.* London: HMSO.

Committee on Higher Education. 1964. *Higher Education: Written and oral evidence received by the committee appointed by the Prime Minister under the chairmanship of Lord Robbins, 1961-1963. Volume 2*. London: HMSO.

Cragoe, Matthew. 2015. 'Asa Briggs and the University of Sussex, 1961–1976', in The Age of Asa: Lord Briggs, Public Life and History in Britain since 1945 ed. by Taylor, Miles. London: Palgrave Macmillan.

Cragoe, Matthew. 2020. 'Sussex: Cold War Campus', in *Utopian Universities: a Global History of the New Campuses of the 1960s*, ed. by Pellew, Jill and Taylor, Miles. London: Bloomsbury Academic.

Crosland, A. 1965. *Woolwich Polytechnic Speech*. Available at: http://www.hepi.ac.uk/wp-content/uploads/2016/08/Scan-158.pdf [Accessed: 12 May 2018].

Darley, G. 1991. Visions, Prospects and Compromises. *Higher Education Quarterly,* 45 (4), pp. 354-66. doi: 10.1111/j.1468-2273.1991.tb01578.x [Accessed: 10 January 2020].

Davies, K. S., Walker, P., and Tupman, D. 1989. Universities, Numbers, Money, Policies, 1945-85. In: *Higher Education in Postwar Britain*, edited by Stewart, W. A. C. London: Macmillian Press Ltd.

Dyhouse, C. 2006. *Students: A Gendered History*. London: Routledge.

Eaborn, C. 1970. The Industry University Interface. *Chemistry in Britain*, November 1970.

Edgerton, David. 2018. *The Rise and Fall of the British Nation*. London: Penguin Books Ltd.

Edgerton, David. 2006. *Warfare State: Britain, 1920-1970*. Cambridge: Cambridge University Press.

Griffiths, A. P. 1966, 'The Common First Year Course', 19 April (UWA/M/S/3).

Griffiths, A. P. 1991. The New Universities: The Humanities. *Higher Education Quarterly* 45 (4), pp. 333-45. doi: 10.1111/j.1468-2273.1991.tb01576.x. [Accessed: 10 January 2020].

Hale, J.. 1964. 'Centre for the study of the history of labour' (UWA/F/PE/1/3).

Hall, C. ND. Staff Memories, 40th Anniversary. Available at: https://warwick.ac.uk/about/40/memories/staff/christopherhall/ [Accessed: 10 January 2020].

Hayes, D. 2015. The Hard Task of Writing a University History. Available at: https://www.universityaffairs.ca/features/feature-article/hard-task-writing-university-history [Accessed: 06 September 2020]

Joyce, P. 2013. *The State of Freedom: A Social History of the British State since 1800*. Cambridge: Cambridge University Press.

Kemp, T. 2014. Interviewed by Wallace, R., Voices of the University, 20 January 2014. Available at: https://cdm21047.contentdm.oclc.org/digital/collection/warwick/id/157/rec/1 [Accessed: 10 January 2020].

Kimball, B. A. 1986. Liberal verses Useful Education: Reconsidering the Contrast and Its Lineage. *Teachers College Record* 87.

Kogan, M. 2006. Anthony Crosland: Intellectual and Politician. *Oxford Review of Education* 32 (1), pp. 71-86.

Malcom, D. 2014. "Anderson appreciated." Available at: https://wonkhe.com/blogs/anderson-appreciated/ [Accessed: 01 September 2020].

Mandler, P. 2020. *The Crisis of Meritocracy: Britain's Transition to Mass Education since the Second World War*. Oxford: Oxford University Press.

Matthews, G. F. 1981. The College of Advanced Technology Experiment: an Historical Review of Loughborough's Experience, 1957-1966. *History of Education* 10 (2), pp. 133-46. doi: 10.1080/0046760810100205 [Accessed: 01 September 2020].

Moffatt, H. K. 1985. John Arthur Shercliff. 10 September 1927-6 December 1983. *Biographical Memoirs of Fellows of the Royal Society* 31, pp. 525-41.

Muthesius, S. 2000. *The Postwar University: Utopianist campus and College.* London: Yale University Press.

O'Hara, G. 2012. "Planning the Education System in the Post-War Era." In *Governing Post-War Britain: The Paradoxes of Progress, 1951–1973*, edited by O'Hara, G. London: Palgrave Macmillan UK, pp. 153-75.

Pellew, Jill 2020. The new British campus universities of the 1960s and their localities: the culture of support and the role of philanthropy. In *Utopian Universities: a global history of the new campuses of the 1960s*, edited by Pellew Jill. and Taylor, Miles.

Perkin, H. J. 1969. *New universities in the United Kingdom: Case studies on innovation in higher education*. Paris: OECD.

Phillips, A. 2014. Interviewed by Wallace, R., Voices of the University, 16 January 2014. Available at: https://cdm21047.contentdm.oclc.org/digital/collection/warwick/id/174/rec/2 [Accessed: 10 January 2020].

Rees, H. 1989. *A University is Born: The Story of the Foundation of The University of Warwick*. Birmingham: The Scribes, Studley, Warwickshire.

Robbins, L. 1966. *The University in the Modern World and other papers on higher education*. London: Macmillan.

Robinson, E. E. 1968. *The New Polytechnics*. London: Cornmarket Press Limited.

Ross, A. 2002. Higher education and social access: To the Robins Report. In *Higher Education and Social Class : Issues of Exclusion and Inclusion*, edited by Archer L., Hutchings, M. and Ross, A., London: Routledge, pp. 21-44.

Rothblatt, S. 1993. The limbs of Osiris: liberal education in the English-speaking world. In *The European and American University since 1800*, edited by Wittrock, B. and Rothblatt, S. Cambridge: Cambridge University Press, pp 19-73.

Rothblatt, S. 2006. How Élite?. *Oxford Review of Education* 32 (1), pp. 127-45.

Sanderson M. 1972, *The Universities and British Industry 1850-1970*. London: Routledge & Kegan Paul.

Schwarz, L. 2004. Professions, elites, and universities in England, 1870-1970. *The Historical Journal* 47 (4), pp. 941-962.

Scott, P. 1993. The Idea of the University in the 21st Century: A British Perspective. *British Journal of Educational Studies* 41 (1), pp. 4-25. doi: 10.2307/3122430 [Accessed: 06 September 2020].

Shattock, M. 1991a. Introduction. *Higher Education Quarterly* 45 (4), pp. 285-93.

Shattock, M. 1991b. *Making a University: A Celebration of Warwick's First 25 Years*. Coventry: The University of Warwick.

Shattock, M. 1994. *The UGC and the Management of British Universities*. Buckingham: Open University Press.

Shattock, M. 2012. Interviewed by Gallwey A., Voices of the University, 29 November 2012. Available at: https://cdm21047.contentdm.oclc.org/digital/collection/warwick/id/21 [Accessed: 08 January 2020].

Shattock, M. 2013a. Interviewed by Gallwey A., Voices of the University, 28 January 2013. Available at: https://cdm21047.contentdm.oclc.org/digital/collection/warwick/id/24 [Accessed: 09 January 2020].

Shattock, M. 2013b. Interviewed by Gallwey A., Voices of the University, 14 March 2013. Available at: https://cdm21047.contentdm.oclc.org/digital/collection/warwick/id/26 [Accessed: 10 January 2020].

Shattock, M. 2015. *The Impact of a University on its Environment: the University of Warwick and its Community after Fifty Years*. Coventry, England: University of Warwick.

Shattock, M. and Warman, R. 2010. *The Martin Family and the University of Warwick: The contribution of private giving to a University's success*. 2 ed: University of Warwick.

Silver, H. 2002. The making of a missionary: Eric Ashby and technology. *History of Education* 31 (6), pp. 557-70. doi: 10.1080/00467600210167082 [Accessed: 06 September 2020].

Steedman, C. 2017. Middle-Class Hair. *London Review of Books* 39 (20):31-2.

Steedman, C. 2020. 'Social History Comes to Warwick', in *Utopian Universities: A Global History of the New Campuses of the 1960s*, ed. by Pellew, Jill and Taylor, Miles: London: Bloomsbury Academic.

Stephens, W. B. 1969. The City of Coventry: Public education. In *A History of the County of Warwick*, edited by Stephens, W. B. London: Victoria County History.

Taylor, M. 2020. 'Keele: Post-War Pioneer', in *Utopian Universities: A Global History of the New Campuses of the 1960s*, edited by Pellew, Jill, and Taylor, Miles. London: Bloomsbury Academic.

Thompson, E. P. 1970. The Business University. In *New Society*, 19 February.

Thompson, E. P. 2014. *Warwick University Ltd: Industry, Management and the Universities*. Nottingham: Spokesman.

Tomlinson, J. 2001. *The Politics of Decline: Understanding Post-War Britain*. London: Longman.

Tribe, K. 2013. The 'form' of 'reform'. The postwar university in Britain, 1945–1992. In *Leadership and Cooperation in Academia: Reflecting on the Roles and Responsibilities of University Faculty and Management*, edited by Sugden, R., Valania, M, and Wilson, J. R. Cheltenham: Edward Elgar Pub. Ltd.

University of Warwick Academic Planning Board. 1963. Draft Report of the Academic Planning Board, January, 1963. Modern Records Centre, University of Warwick (UWA/F/APB/1/1).

University of Warwick. 1964. *University of Warwick Development Plan*. 1964. Coventry: University of Warwick Promotion Committee.

University of Warwick. 1965. Foundation Fund Appeal, 1965 May. Modern Records Centre, University of Warwick (UWA/F/M/4/1).

University of Warwick. 1966a. Prospectus, 1966/67. Coventry: W. W. Curtis. Modern Records Centre, University of Warwick (UWA/PUB/4/3/1).

University of Warwick. 1966b. *University of Warwick: Development Plan 1966*. 1966. University of Warwick.

University of Warwick. 1968. Prospectus: 1968/69. Coventry: W. W. Curtis. Modern Records Centre, University of Warwick (UWA/PUB/4/5/1).

University of Warwick. 1969. Prospectus of First Degree Courses: 1969-70. Coventry: Coventry Printers. Modern Records Centre, University of Warwick (UWA/PUB/4/6/1).

University of Warwick. 1970. Prospectus, 1970-1971. Modern Records Centre, University of Warwick (UWA/PUB/4/7/1).

University of Warwick. 1972. Guide to First Degree Courses: 1972-73. Coventry: Edwards the Printers. Modern Records Centre, University of Warwick (UWA/PUB/4/9/1).

Whyte, W. H. 2015. *Redbrick: A Social and Architectural History of Britain's Civic Universities*. Oxford: Oxford University Press.

Woodman, C. 2016. "Red Warwick": A Hidden History. Available at: https://theboar.org/2016/02/red-warwick-a-hidden-history/ [Accessed: 16 September 2020].

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Endnotes

i February 2020 saw no acknowledgement by the university, students union, and, more surprisingly, Warwick student publications such as the *Boar*.

ii I joined the University of Warwick in 2013 as an undergraduate and stayed to complete my masters and PhD. While I do not consider myself an outsider to Warwick's student community, I am certainly an outsider to most of Warwick's institutional history and to the social democratic programme of higher education expansion of the 1950s and 1960s.

iii Perkin states there were altogether 'over 8,000 State-aided establishments in Great Britain, with 2.6 million students,' including evening institutions training young people alongside the institutions of advanced further education. Of this number 787,000 students were under eighteen.

iv Only 1% of the total population of young women entered further education institutions. These proportions included overseas students but excluded a number of training courses such as nursing and secretarial work (**CHE, 1963: 33**)

v The number of students at the University of Warwick reached 20,000 in 2000, and was just over 27,000 in 2018 (**Shattock and Warman**, **2010**).

vi Warwick's founding professor of philosophy Allen Phillips Griffiths remembers the course as titled 'Logic and Language' and joked that the common language of the university should be English (**Griffiths, 1991**).

vii The university was named after the town of Warwick as part of a political manoeuvre to secure support from Warwickshire County Council. The university before this decision had been promoted as the University of Coventry. (**Shattock, 2015: 27-8**)

viii Some of these rings survive today on central campus, for example, University Road, and the later Academic Loop Road, and in the propensity for student residences to be constructed further away from central campus.

ix Including connecting sections of the social science building, between Rootes Social Building and the Students Union Building, between the International Manufacturing Centre and International Automotive Research Centre and the engineering building across University Road, between the Zeeman Building and the computer science building, and in what is in effect an extension of the central access gallery which connects the library to the library extension to the south.

x Mud which could, at the time of writing, still be seen around the new Sports Hub, completed in 2019.