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POSTMODERNITY AND THE UNIVERSITY

Posmodernidad y la Universidad

Peter Scott[*]

ABSTRACT

The utility of post-modernism as an interpretative framework for understanding the development of contemporary higher education systems is sharply contested. Critics argue that post-modernism is, at best, a set of ideas in aesthetics, literature and critical theory with limited relevance outside these domains and, at worst, a passing intellectual fashion that is now out-of-date. However, post-modernity —or, as some would prefer, late modernity or 'fluid' modernity — is perhaps a more useful idea. In 21st-century society there are a number of trends, some structural such as the growth of a knowledge-based economy and development of new patterns of knowledge production; and some conceptual such as the reconfiguration of time and space and the recognition of 'difference' (and risk?) as key factor in the constitution of social life (and individual identity), which have a direct impact on the university. This impact is felt in two ways — first, the university is a primary engine of these transformations. Secondly, the university is shaped by these transformations (both normatively and

* Institute of Education, University of London.

cognitively in terms of teaching and research and structurally in terms of its organisational characteristics, governance and management).

KEY WORDS: Post-Modernism, Post-Modernity, Risk, Difference, Knowledge Society, Knowledge Production, Teaching, Research.

RESUMEN

La utilidad del postmodernismo como marco interpretativo para comprender el desarrollo de los sistemas contemporáneos de educación superior ha sido severamente contestada. Los críticos argumentan que el postmodernismo es, como mucho, un conjunto de ideas en los ámbitos de la estética, literatura y teoría crítica con relevancia limitada fuera de esos campos y, a lo peor, una moda intelectual pasajera que actualmente está caducada. No obstante, la postmodernidad —o, como algunos preferirían, la modernidad tardía o modernidad «fluida»— es quizá una idea más útil. En la sociedad del siglo XXI hay un cúmulo de tendencias, algunas estructurales, como el crecimiento de la economía basada en el conocimiento y el desarrollo de nuevos modos de producción de conocimiento, y algunas conceptuales, como la reconfiguración del tiempo y el espacio y el reconocimiento de la «diferencia» (¿y el riesgo?) como un factor clave en la constitución de la vida social (y la identidad individual), que revelan un impacto directo en la universidad. Este impacto se ha dejado sentir de dos maneras. En primer lugar, la universidad es un motor primordial de estas transformaciones. En segundo lugar, la universidad está siendo moldeada por estas transformaciones (tanto normativamente como cognitivamente, en términos de la docencia y la investigación, y estructuralmente en términos de sus características organizativas, gobierno y gestión).

PALABRAS CLAVE: Post-Modernismo, Post-Modernidad, Riesgo, Diferencia, Sociedad Del Conocimiento, Producción Del Conocimiento, Docencia, Investigación.

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INTRODUCTION

Postmodernity or post-modernism, Po-Mo for short, is a bundle of trends in academic (and, more broadly, intellectual and cultural) life. As such it has been contested and often dismissed as merely an ideological fashion. Outside some specialised domains within the humanities and social sciences

—notably critical theory, literary studies, philosophy, sociology— post-modernism has barely touched the wider academic enterprise. Its extension beyond the academy into theatre, literature and architecture, has also had ephemeral and generally unimpressive effects. Moreover the age of Po-Mo appears to be at an end, a reaction to the angular and arrogant modernism that had come to dominate 20th-century thought (and art). Seen in this light post-modernism has little traction over the trajectory of the 21st-century university.

However, Po-Mo was always more than an intellectual or aesthetic phenomenon. In the shape of its *alter ego*, post-modernity, it has helped to explain key changes in the constitution (and production) of knowledge, even in scientific fields innocent of any taint of post-modernism, and also in wider society and culture. These changes are best seen in terms of the opening-up of previously (relatively) closed systems. This process of opening-up has been accompanied by a growth in ambiguity, an accumulation of uncertainties and 'risks', the emergence of disconnections (which have clear affinities with the relativism of which post-modernism has been accused in the intellectual domain). While other theoretical frameworks have been used to describe the structural dimensions of these changes, the idea of post-modernity has been influential in two senses. First, it has usefully reinforced critiques of modernity emphasising rupture rather than continuity of social forms. Secondly, it has been able to capture the fleeting changes in the cultural 'tone' of society much better than more structural and deterministic explanations. Seen in this light post-modernity is plainly a significant factor in shaping the contemporary university, itself an institution in rapid and at times destabilising transition.

This article is divided into two main sections. The first section will discuss these two dimensions of post-modernism/ity —first, in the guise of post-modernism as an influential trend in the humanities and social sciences (the influence of which is sometimes mediated through other intellectual modes and, therefore, is not always expressly acknowledged); and, secondly, in the shape of post-modernity as a description of major trends in social, political and economic structures that have emerged since the passing of modernity's high tide, and also as critique and commentary on cultural change. Finally in the first section important changes in the forms of knowledge production will be considered which, although not post-modern,

nevertheless have contributed to the breakdown of traditional disciplinary (and professional) structures. The second section will focus more directly on the contemporary university— in three distinct contexts: first, the research domain with its open frontiers to innovation, enterprise and activism; next the university 'curriculum' in an age of mass higher education (new patterns of learning and teaching, assessment, standards and quality and, more broadly, academic organisation); and finally, the university as an organisation (and higher education as systems) under conditions of globalisation.

1. POSTMODERNISM

In its essence post-modernism was a critique of (or backlash to) modernism —and seeks to cast doubt on the notions of 'objective' truth and 'progress' embedded in the thought of the Enlightenment. Instead it emphasised that many apparently 'objective' truths were, in fact, social constructions— although post-modernism always remained deeply ambivalent about the relativistic logic of this position. While modernism focused on authority, integrity and coherence, post-modernism celebrated contingency, plurality and (above all) difference. In a revealing metaphor David Harvey has compared modernism to late-19th and early 20th-century department stores, with their regularly ordered sequence of discrete departments, and post-modernism to 21st-century shopping malls, with their plethora of independent retail shops and leisure facilities (which have much in common with arcades of the early modern city celebrated by Walter Benjamin in his great but unfinished work on the arcades of 19th-century Paris) (HARVEY, 1989; BENJAMIN, 1999).

However, it is important to recognise the limited context within which post-modern thought developed. Although the term was first used as far back as the 19th century, it was strictly confined to painting. Until the middle of the 20th century its application was largely contained within the domains of aesthetics and literature. That restricted focus endured, with the most practical and widespread use of the term being in architecture (and usually in terms of the playful subversion of the rigid lines and shapes, and explicit functionality, of 'modern' architecture). Only from the 1960s onwards did

post-modern thought transcend these limits and flood into the wider academy. There are two main reasons for its success:

1) The first was the 'break-out' from the traditional humanities, and the formation of wider intellectual configurations embracing art, the arts (humanities) and the social sciences as powerful rivals to the positivistic physical and engineering sciences and to the entrenched professional disciplines such as medicine and law (some of which, in due course, came to be deeply influenced by post-modernism). The ideas of the German philosopher Martin Heidegger which could fairly be described as at any rate 'proto' post-modern with his espousal of pre-Socratic hermeneutics and rejection of rationalist distinctions between 'subject' and 'object' had little impact outside academic philosophy —whatever their larger political resonances. In contrast the writings of Jacques Derrida, Michel Foucault, Jean Baudrillard and Jean-François Lyotard reached mass academic audiences; indeed their influence tended to be greater outside than inside their 'home' disciplines (LYOTARD, 1984). Not only did the combined art-humanities-social science 'project' acquire a much greater prominence in the university, their constituent disciplines developed new connectivities up to and including novel inter-disciplinary combinations that accelerated the flow, and magnified the influence, of post-modern ideas. Yet there remained limits that were difficult to transcend. Attempts to export these ideas, even in a highly diluted form, into the natural sciences met with little success. The writing of Thomas Kuhn with his theory of 'normal' science punctuated by 'paradigm shifts' was —and is— much more highly regarded by social scientists than natural scientists (KUHN, 1962; 1996). Revealingly the one scientific community that was most open to Kuhn's ideas were theoretical physicists and cosmologists whose work depended on imaginative, and often speculative, 'jumps'.

2) The second reason was that post-modernism acquired powerful reinforcements. The development of mass higher education systems was closely aligned with the growth of the humanities and, in particular, of the social sciences. These disciplines had a market appeal which the natural sciences and engineering often lacked —and moreover were cheaper to teach (and research). It is significant that as

late as the 1990s when higher education systems were expanded in central and eastern Europe after the fall of Communism the most rapid growth was in the social sciences (and especially business and management) and the number of students in science and engineering (outside information and communication technologies) actually declined. So it was inevitable that the intellectual culture characteristic of the art-humanities-social sciences bloc, within which post-modernism had acquired an influential place, should become more pervasive in mass higher education systems. However, post-modernism acquired even more potent reinforcements in the form of explicit links to critiques of late-capitalism. A key figure in brokering this academic— political connection was Fredric Jameson (JAMESON, 1991). Political evolutions, from the *evènèments* on the streets of Paris and other cities in the 1960s through to the new social movements emerging on the cusp of the 20th and 21st centuries, appeared to validate post-modern analyses. In true post-modern style, of course, it never became clear whether post-modernism provided intellectual 'cover' for late-capitalism, which in the form of neo-liberalism became a hegemonic political culture as well as the dominant mode of economic and cultural production in the course of the 1980s and 1990s (and has endured); or whether it offered a radical critique of this hegemony and dominance (Callinicos. But this massive ambiguity did not seem to matter. Either way, post-modernism appeared to have established a vital connection with socio-economic and cultural change reminiscent of the impact of Romanticism almost two centuries earlier. It touched the *zeitgeist*. (ANDERSON, 1998)

2. POSTMODERNITY

Post-modernity is used to describe the social, economic and political conditions that characterise contemporary society. For some it is the twin of post-modernism in the cultural and aesthetic domains. Others, however, prefer to distinguish between the two. For Anthony Giddens 'late' or 'high modernity' is a more accurate label (GIDDENS, 1990; 1991). David Harvey has used the term 'late capitalism' (HARVEY, 1989). Zymunt Baumann's favourite phrase is 'liquid' modernity (Bauman 2000). The force of such

labels is to play down the playful and deconstructive characteristics of post-modernism and emphasise instead the continuities with, if not modernism in an aesthetic context, at any rate modernity and modernisation.

Nevertheless it is perhaps a mistake to split post-modernism and post-modernity too far apart —for three reasons. The first is that the shift from modernity to Giddens' 'high modernity' and, in particular, to Baumann's 'fluid modernity' has been accompanied by a growing fuzziness between the grand systemic categories developed in the 19th and 20th centuries (such as the State, civil society, the market— or culture and economy) and also by an increasing scepticism about established institutions and ordered hierarchies. This fuzziness and scepticism have clear links back to post-modern ideas. Secondly, and closely linked, has been the transformation of notions of 'risk', as a primary driver of socio-economic change, in sharp contrast with notions of organisation, planning and strategy characteristic of modernity (Beck 1992). Finally, a key component of post-modernity is the explosive growth of information and communication technologies that have had far-reaching consequences on settled conceptions of time and space (including the alleged 'abolition' of distance and the idea of the 'extended present') (NOWOTNY, 1994); on communicative behaviour, particularly among the young (for example, the rise of social messaging such as Facebook and Twitter); on political cultures (the impact of both instantaneity and ephemerality); and on the whole locus of the media in contemporary society. This fascination with the media is also characteristic of post-modern thought.

Perhaps a better way to describe the tension, or synergy, between post-modernity and post-modernism is to say that the former emphasises the economic effects of new technologies, their productive and organising potential —hence the dominant ideas of the 'knowledge society' (or, in a more reductionist form, the 'knowledge economy') and 'audit culture'—while the latter emphasises the cultural consequences of the same technologies, their fluid and disintegrative potential — hence notions of 'risk society' and the like (Power 1999).

More concretely a number of key trends, phenomena and forms can be clustered under the broad heading of post-modernity. These, of course, include those already mentioned —the knowledge society / economy, produced by the shift from industrial and bureaucratic production to the

production of 'knowledge' (and other intangible) goods; audit culture, with its emphasis on assessment (often using metrics) and accountability tools; and risk society, with its generation of uncertainties that existing forecasting techniques struggle to manage. But they also include the shift from the welfare state (the equivalent of the department store in Harvey's comparison) to the so-called 'market state' (the equivalent perhaps of the shopping mall); the hollowing-out of all organisations as a result of out-sourcing, privatisation and other 'market' reforms; and, crucially, the growing impact of globalisation (especially in finance and the media— but also in the context of new social, even resistance, movements).

It is important to work out the dynamic between post-modernity and post-modernism in order to describe the role of the university. Clearly the university has been a key agent of modernity and modernisation. But is it now an agent of post-modernity and what Giddens has called 'reflexive modernisation'? Despite its antique disguise the university was a core and quintessential institution of modernity, producing scientific and other forms of 'expert' knowledge and at the same time promoting (and servicing) professional and bureaucratic structures. After 1945 its links with social development, through mass participation, and economic development, by producing the core science and enabling technologies on which the emerging post-industrial society depended, became even more explicit. By the early 21st century in almost every country the university has come to be justified predominantly in terms of its modernising potential, largely in the context of its contribution to economic growth. To the extent that post-modernity is defined in terms of continuity from modernity the university's position remains unchallenged. However, if post-modernity is defined in terms of rupture from modernity, the role of the university appears in a different and more problematical light. As has already been discussed, modern higher education systems may have provided the habitat in which the art-humanities-social sciences bloc has flourished (which in turn has offered a fertile breeding ground for post-modern ideas). But the university's instrumental orientation as an agent of modernisation marks it out as a solid (stolid?) institution arguably at odds with the fluid floating world of post-modernity.

3. NEW FORMS OF KNOWLEDGE PRODUCTION

Under conditions of post-modernity notions of reflexivity, ambivalence transgression and ambiguity have increasingly invaded the practices of established institutions. The State, Market, Culture and the other great 'systems' of modernity have become porous and permeable. Something similar is happening to science and research. This poses particular challenges to the university that is pre-eminently a scientific, or 'knowledge,' institution. It not only produces new knowledge and refines existing knowledge through research and scholarship; it disseminates knowledge by means of its teaching programmes transmuting knowledge into skills and technologies; and, most important of all, the university codifies knowledge in both research and teaching modes — in the research domain through its sponsorship of disciplinary communities (what Tony Becher has called 'academic tribes' [BECHER, 1989]) and its legitimation of new specialisms; and in the domain of teaching by accrediting courses of study and awarding academic qualifications. So changing perceptions of knowledge and new patterns of knowledge production vitally affect the university.

Two over-arching changes can be observed. The first is that knowledge production is no longer regarded as a largely linear process whereby advances in fundamental science are 'applied' or technology is 'transferred'. Of course, this was always an incomplete and inaccurate account of knowledge production. But, as a heroic myth, it has been very influential. Nations have calibrated their prestige in terms of scientific prowess, as measured by the incidence of Nobel prizes or proportions of world-wide scientific publications. Also, the myth of linear science has been associated with the belief in a progressive science. Scientific methodologies, as a result, were not only efficient mechanisms but also validated the predominance of theoretical frameworks as determinants of experimental techniques and empirical inquiry. Now knowledge production is likely to be seen as a much more pervasive, distributed and multi-dimensional activity in which the roles of diverse actors and agents are confused, and hierarchies of intention and effect are much more difficult to establish.

The second key change is 'knowledge' is no longer owned —or not to the same extent— by particular scientific communities which define valid knowledge in terms of specific disciplines, rooted in cognitive affinities or

professional allegiances, and which act as both gate-keepers and quality-assessors. Although such communities remain strong, they have been diluted —first, by reductionism, the splintering of disciplines into narrower and narrower specialisms; next, by multi— and inter-disciplinarity, the result both of the recombination of these specialisms into new (and looser?) disciplines and of a desire to reassert broader and more holistic scientific perspectives; and finally, by the increasing intrusion of 'users' into the once-autonomous domain of scientific decision-making. As a result new definitions of scientific communities have emerged which are inclusive rather than exclusive. For example, in medicine patient-groups have been embraced within once-specialist communities; the influence of AIDS-sufferers is perhaps the most eloquent example. Opponents of nuclear energy as well as nuclear scientists and engineers, it can be argued, now form part of a more comprehensive, and more controversial, 'nuclear community'. These new 'knowledge' communities are characterised by contestation rather than consensus, which puts new strains on how 'reliable knowledge' and progressive science are defined.

These important changes in knowledge production have been conceptualised as a shift from Mode-1 science to Mode-2 knowledge production (GIBBONS, *et al* 1994). The latter has four distinguishing features:

- First, it is produced within 'the context of application', by which is meant not that new knowledge is discovered and subsequently applied but that the context in which it is applied shapes it from the start. So demarcations between 'pure' and 'applied' science, or between science and technology (and, obliquely but intriguingly, between science and the arts) have become anachronistic.

- Second, Mode-2 knowledge is transdisciplinary. Although existing disciplinary perspectives are used, the aim (and also the effect) is not to produce a new discipline, sub-discipline or specialism. Instead the process of Mode-2 knowledge production is 'problem-solving on the move'. Research teams move on to the next problem, again making an eclectic selection of the most effective disciplinary perspectives.

- Third, Mode-2 knowledge is highly distributed, in the sense that it is produced by many research agents (in universities, government,

industry, professions, even the community) who may collaborate on a global basis thanks to new communication and information technologies, and also heterogeneous (in the sense that not only knowledge-producers, i.e. researchers, but also knowledge-users and knowledge-brokers play key creative roles).

- Fourth, Mode-2 knowledge is subject to different forms of quality control. In Mode-1 science quality is determined by a process of peer-review policed by the relevant disciplinary communities. The quality of Mode-2 knowledge must be judged according to more pluralistic criteria; such knowledge must not only be 'reliable' in the narrow scientific sense that it is replicable (indeed, that may not always be an essential quality) but must also be 'socially robust'.

- Fifth, and last, the context of implication is now as important as the context of application. In the complex articulations between more open knowledge-producing systems and more open and less deterministic social forms, research begins to go beyond anticipating the context of application. In a sense it ceases to be, in any sense, merely «applied research». Instead, to be successful, research must reach out, and anticipate reflexively, further entanglements — which remain inherent uncertain. In this uncertainty resides their potentiality. It is through this context of implication that people enter the research process, not as passive objects or recipients of its beneficial results, but as actors.

The argument is not that Mode-1 science is being superseded by Mode-2 knowledge production, but rather than the former is being overlaid by the latter and that the two must now cohabit in ways that explain both the dynamism but also the instability of contemporary research.

Three aspects of this shift are especially relevant to any discussion of the post-modern university:

i) The first is that all knowledge production is now contextualised — and not simply in the shallow sense that scientific research is subordinated to existing social hierarchies and power relationships (because it is the work of research groups and teams of individuals embedded in society and because, to be realised, it must secure

adequate resources); but in the deeper sense that its values, methods, substantive content and the interpretation of its results are decisively shaped by its context. Indeed, distinctions between the subjects and objects of research, between science and its context, have become increasingly problematical. In the humanities and (some) social sciences this transgressivity is hardly a novel experience; even in engineering and technology it is not unfamiliar; but in the natural sciences it is a new —and disturbing idea. However, there are degrees of contextualisation. Paradoxically perhaps grand national science and technology policies which seek to use Technology Foresight-type exercises to shape scientific priorities, or research council programmes which try to factor-in 'user' perspectives and preferences, can be regarded as examples of weak contextualisation— because the context remains 'external' to the research. Stronger forms of contextualisation arise when the context has been internalised (NOWOTNY, SCOTT AND GIBBONS, 2001).

ii) The second aspect is that traditional epistemologies are being attenuated. One —dramatic— way to describe what is happening is to say that the epistemological core is empty. There is no longer an irreducible core of norms and practices, Mertonian or otherwise, and methodologies which lies at the heart of scientific research (if not knowledge production). Another, less controversial, way to describe it is to say that the epistemological core is not such empty as crowded with competing cognitive norms and social practices. There is an obvious affinity here with the debate about the relationship between modernity, the secular rationality associated with the Enlightenment, and modernisation, the processes of social and economic change associated with industrialisation and urbanisation (and which have traditionally relied heavily on the advance of technology). Just as people in the West have been disconcerted to observe the ability of non-western societies to develop economically and, less certainly, socially without adopting the cultural apparatus of individualism, secularism, democracy and so on, so there is evidence that good science can be done without recourse to, or dependence on, what we may regard as core epistemologies and methodologies. In Africa and elsewhere there

have been intriguing attempts to combine the maintenance of traditional value-systems with the production of cutting-edge science and front-line scholarship. These attempts go beyond the legitimation of non-elite knowledge tradition in western societies.

iii) The third aspect has already been alluded to —the fragmentation, fracturing (and fractiousness?) of modern 'knowledge' communities. Consensus has become difficult; closure impossible. Of course, science has always been provisional— in the sense that one problem leads to another, and current solutions are displaced by better ones. Nevertheless, comparatively stable consensuses have been able to emerge. But the (post?) modern knowledge production system is becoming more and more unstable. There are too many voices, too much dissonance. Generally this is seen in negative terms; it is becoming more and more difficult to do good science. But these trends can be interpreted in a much more positive light. Contestation, however painful, is potentially creative, producing more socially robust science and stimulating the growth of new scientific fields. This is most obvious in the environmental sciences. Old-style scientific communities, enclosed and elitist, are being superseded by what has been described as a new *agora*, where market, political, social, cultural and scientific perspectives jostle and combine. Certainly this account of new patterns of knowledge production is consistent with the over —arching account of social change offered in the previous section of this presentation— and both together pose radical challenges to the university.

4. THE TRANSFORMATION OF HIGHER EDUCATION

Some of the implications of post-modernism and post-modernity for higher education systems, and the contemporary university, have already been discussed. The question that will addressed in the second section of this paper is whether a similar periodization can be justified —in other words, a (paradigm?) shift from the modern to the post-modern university. This question will be considered under three main headings— higher education (or teaching); research; and systems and institutions (and how they are governed, managed and organised).

4.1. Teaching

The early modern university, as it developed in the 19th and early 20th centuries, was predominantly a professional institution. Even in classical universities the 'liberal arts' had a strong vocational focus. History, philosophy, mathematics, philology and law were studied by those who hoped to pursue careers in the service of rapidly developing State bureaucracies (and, of course, in many universities system professors were also in State service). The 'new' humanities such as literature, which were only introduced into the university curriculum towards the end of the 19th century, were largely studied by those who aimed at careers as teachers in the school systems established by these same bureaucratic (and liberal-secular and democratic) nation states. Political economy broadened into political science; economics spawned business and management. Both were joined by other social sciences as new professions linked to the growing welfare state proliferated. Many universities, of course, were established as technical institutes or higher professional schools in which the vocational orientation was even more pronounced.

The late modern university, which emerged after 1945 (and, most decisively, after 1960), was superficially a more academic institution — as the link between the humanities and school teaching became weaker (and the humanities took on a wider intellectual, and social, role in ways that have already been described); the dominant role of the 'pure' sciences was acknowledged as a source of national power and prestige (as well as the ultimate source of innovation in an increasingly 'expert' society); and as the social sciences coalesced into a powerful coalition of socially-oriented disciplines in the rapidly expanding higher education systems of the second half of the 20th century. These systems also embraced technical institutions and higher vocational schools that became increasingly difficult to distinguish from classical universities. Polytechnics in England became 'new' universities after 1991. *Fachhochschulen* in Germany and *HBÖ* schools in the Netherlands re-branded themselves as 'universities of professional education'.

If there is a post-modern university, it is more aligned with post-modernity —in other words, new social forms and economic structures— than with post-modernism, that important but still minority strand within contemporary intellectual culture. For example, the development of a

knowledge society is reflected in various ways in 21ˢᵗ-century higher education. The most conspicuous, which has already been briefly discussed, is the ever tighter alignment between research in particular, but also high-level skills, and the generation of knowledge resources that directly impact on wealth generation. But in this respect the 21ˢᵗ-century university is little different from the late modern university that developed after 1945 (and 1960) — or even, it can be argued, from the early modern university with its strong bureaucratic and professional orientation.

However, some important changes have occurred in the articulations between higher education and a dynamic knowledge-based society (and global knowledge economy). For example, there has been a 'hollowing-out' of the higher education curriculum. The teaching of expert technical knowledge, to a significant extent, has given way to training in generic and transferable employability skills. One reason for this shift is the acceleration of innovation that has sharply reduced the relevance of specific technical knowledge (apart from foundational principles). But another, and perhaps more interesting, reason is that in post-industrial economies an important distinction has grown up between 'knowledge workers' and technical experts. The former congregate in finance, marketing, media, political communications and other areas in which symbolic goods are traded; and it is these areas that dominate advanced 21ˢᵗ-century economies (a trend that has been further stimulated by the shift from the welfare state, which relied heavily on professional expertise, to the market state, in which these new — and generally highly rewarded— jobs have become more prominent). The result is a higher education curriculum that is skills heavy but often knowledge light.

A second trend that can also be associated with, if not attributed, to post-modernity, is the increasing impact of globalisation (SCOTT, 1998). This takes several forms. One is the intensification of efforts to recruit international students. These efforts are often regarded as essentially a market phenomenon. But international student recruitment on an unparalleled scale has important academic and cultural consequences. A second form is the growth of other forms of internationalisation. These include the proliferation of global networks, and alliances between universities of similar national status, and also the development of global 'brands' as a result of the proliferation of international league tables of universities. A third form is a

heightened awareness of 'otherness' (and 'difference, a key post-modern concept although initially in a different context) at the same time as the apparently inexorable spread of 'Western' science and enlightenment as the dominant global knowledge tradition. The very success of that tradition has combined with acknowledgment of other knowledge traditions (and the deconstructive effects of critiques from 'within' that tradition) to encourage an intellectual plurality that is reflected in the breadth of the higher education curriculum.

A third trend relates the changing configurations of time and space characteristic of post-modernity. Often these effects are dismissed as largely functional as online discussion boards replace (or supplement) traditional tutorials, and we-based learning systems substitute for lectures. They are seen as changing the rules of engagement between students and their teachers in higher education — but not as changing the rules of the game. This limited interpretation of the impact of new technologies on the higher education curriculum typically is justified by two arguments. The first argument is that these technologies have largely been supplementary to rather than substitutes for traditional pedagogies; 'enrichment' is a favourite description. The second argument is that the changes they have commanded are best seen as adjustments to the learning habits of younger people, a perspective that is often supported by a (trivialising?) concentration of Facebook and Twitter. However, if the emphasis is not on the new information and communication technologies themselves or even the social networking and messaging systems they have enabled but on a fundamental revision of concepts of time and space, the potential exists for a much more radical revision of the learning economy in 21st-century universities.

This more ambitious interpretation tends to be supported by the wider impact on the higher education curriculum of 'reflexivity', characteristic of both post-modernity and late / high / 'fluid' modernity. Again it is possible to regard the growth of work (or community) based learning, the substitution of problem-solving for more content-prescribed programmes, the increasing emphasis on 'feedback' and the growth of formal measures of student 'satisfaction' as discrete phenomena —or to link each to different external forms (massification in the work-based learning, innovation in the case of problem-solving or marketisation in the cases of student 'feedback' and satisfaction). But it is also possible to regard them as examples of an

overarching reflexivity that has contributed to the dis-arrangement of traditional relationships between students and teachers. Instead learning communities may be evolving— which are at the same time more intense but also more diffuse.

The overall impact of post-modernity (and, to a reduced extent, post-modernism) on higher education and learning and teaching in universities is difficult to assess. As a result the label of the 'post-modern university' remains problematical. However, there are intriguing tendencies and trends that may appear at first sight prosaic, especially if judged in isolation but which on reflection and in aggregate suggest that larger forces are at work, forces that can be attributed to the major characteristics of post-modernity.

4.2. Research

In research there are also important trends that can be interpreted in similar terms. Once again caution must be exercised in making claims of novelty with regard to some of these trends (and so asserting arguments about their connection with new social forms, economic structures and intellectual cultures). Many have been well established for half a century or longer. Some indeed go back to the earliest days of experimental science and evidenced scholarship. Nevertheless these trends do appear to align with some of the major characteristics of post-modernity, as has already been suggested in the discussion of new patterns of knowledge production in the first section of this article.

One of these trends is a sustained shift away from determining research priorities, and judging the quality of research outputs, almost entirely with reference to the opinions of 'peers'. Although peer-review remains the most important judgmental tool, it is by no means the only one. Efforts to assess relevance are long-standing. In the forthcoming Research Excellence Framework in the United Kingdom, which has replaced earlier peer-dominated Research Assessment Exercises, a sustained attempt will be made to measure 'impact' (even in the humanities and social sciences). Of course, this shift is a complex phenomenon, with several strands. One strand is the increasing difficulty of defining 'peers' in a scientific system splintered in ever more specialist sub-disciplines; in other words it is a recognition of, and

response to, scientific reductionism. Another strand is the stretching of the concept, and extent, of research as new, often more applied and practical, academic disciplines have been incorporated into the contemporary university. However, the growing emphasis on 'impact' (or relevance or utility) is also a reflection of the proliferation of stakeholders in extended, but also mire reflexive, research systems.

A second trend is closely related to the first. National research funding agencies, such as research councils, Foundations that support research and supra-national agencies such as the European Commission have always has to balance the potential of science and the needs of society. Half a century ago the mission of the (former) Science Research Council in the UK was to fund projects of 'timeliness and promise' — the former as a measure of its social utility and the latter as a measure of its scientific potential. More recently the notion of a 'customer-contractor' principle has been developed, even in relation to publicly funded fundamental research. According to this principle customers (ministries, research councils or other funders) have indicated their needs and contractors (universities and other research institutions) have undertaken to satisfy these needs. More recently still there have been a pronounced shift towards programmatic, or themed, approaches to the funding of research. Less and less funding has been available for speculative enquiry as the bulk of resources have been concentrated on research in pre-selected scientific areas. Now there is pressure to measure the impact of research.

Alongside this second trend has been a third, the growth of short-term consultancy-style projects at the expense of longer-term curiosity-driven research. In the social sciences, for example, an increasing proportion of the funding for research comes from policy makers who are concerned to develop a stronger evidence base for their policies (which are themselves ideologically constrained). In the life sciences the influence of the big pharmaceutical companies is also growing. These trends have reshaped the practice of research in many scientific fields. Shorter project time-lines, more frequent (and more competitive) bids, more detailed (and intrusive) accountability systems, tighter management of the research process — these are among the practical effects of this new research economy which, it seems, increasingly resembles a market.

Of course, not all these trends can readily be associated with post-modernity. As with the trends in higher education and teaching that have already been discussed, they can also be treated as discrete phenomena or else as evidence for more instrumental (and commercial?) approaches to the organisation of research. However, taken together they do reflect a number of characteristics that can be linked to post-modernity — for example, the proliferation of stakeholders, the growing reflexivity of research practice, the heightened activism of research users (patient groups as well as pharmaceutical companies).

There is also a fourth, and final trend, that links more directly to post-modern conditions. This is the increasing eclecticism of research methodologies. This is apparent in many ways — in the growth of new forms of 'action' and practitioner-led research, in the variety of research topics and in the range of research outputs (no longer monographs, articles, patents but more accessible, and flexible, outputs) as well as in the methodologies themselves. Complex computations have been made much simpler by computer packages; other advances in communication technologies have enabled the building of new (and more democratic?) research communities; new types of evidence, often more intuitive and less 'scientific' have been admitted. In these, and other, examples there are tantalising links to, and glimpses, of a new post-modern landscape. Indeed the boundaries between teaching and research are themselves becoming more permeable (BARNETT, 2005).

4.3. Systems and institutions

The second half of the 20th century, the era of the late modern university, saw the elaboration in most developed countries of coordinated higher education systems (Scott 1995). This systematic approach to the development of higher education was a new phenomenon, associated with the rapid expansion of student numbers to meet the growing demand from young people and linked to the increased output of highly skilled graduates to meet the needs of a rapidly developing knowledge-based economy. The growth of systems took several forms:

1. The development of systems embracing not only classical universities but also other institutions of higher education, whether technical institutes or higher professional schools. In most cases so-called 'binary' systems were created in which the distinction between universities and other institutions was formally maintained within a framework of greater coordination, although in some (for example, the UK) unified systems were established when the former polytechnics became universities after 1991. But even in 'binary' systems the forces of integration and coordination were strong. For example, over-arching quality assurance systems were often established. The upward pressure from non-university institutions, sometimes stigmatised as 'academic drift', was also strong.

2. The integration of higher education and research systems was also a significant trend. Even in countries where independent research establishments had flourished such as France (CNRS institutes) and Germany (Max Planck institutes) stronger formal links with universities were established through co-location on campuses or by established *pöles*. After 1990 in central and eastern Europe Soviet-era Academies of Sciences were reformed, and Academy institutes were also often closely associated with or incorporated into universities. In countries such as the UK where universities had always been the most important providers of research their dominance increased as separate Research Council institutes closed and all universities, old and new, acquired stronger research missions.

3. Finally, most Governments came to regard higher education as a single entity in terms of funding and planning. Even when some (generally non-university) institutions remained subject to other ministries apart from the ministry of education (or ministries universities and science) and retained separate funding systems, the focus of finance ministries was on the total cost of higher education within national budgets. This in turn often led to a common approach to the planning of student numbers, common regulations for student support and (in some cases) common quality regimes. The emphasis on reformed governance, often involving non-institutional stakeholders (notably from industry and business), and improved management, the so-called 'new public management', was also

applied to all parts of these coordinated higher education systems further strengthening elements of commonality.

More recently, it has been argued, these trends towards integration and coordination have gone into reverse. For example, globalisation has weakened the grip of national systems by offering new alliances and hierarchies of institutions. National systems themselves have sometimes attempted to promote greater diversity of institutional missions, which has sometimes required the abandonment of common systems, policies and processes (but, of course, at the cost of more intrusive political direction). Finally new funding regimes that involve either 'contracts' between universities and the State or the introduction of tuition fees paid by students (or, where fees already exist, substantial increases in their amount) have tended to focus on institutions rather than systems. Even when these new funding regimes have not been designed according to explicitly 'market' principles their general effect has been to make it more difficult to plan national higher education systems in detail.

However, it is important not to exaggerate these effects by talking of the 'retreat of the State'. The State is still very much in command of nearly every national system; indeed in some cases its new role as a regulator has proved to be more powerful than its traditional role as a funder and administrator. The freedom granted to universities has been more operational than strategic. The aim of most reforms of higher education has been to encourage more diversity by removing, or reducing, rigid bureaucratic categories and rules; and also to increase competition between institutions, with the intention of improving efficiency and reducing costs. In other words the changes in systems have had limited objectives; higher education systems have been made more permeable and more flexible — but they have by no means ceased to exist. Certainly it would be wrong to talk of 'post-modern systems' of higher education (if such a label is not itself a contradiction in terms).

In the case of institutions themselves there are two, apparently conflicting, accounts of recent trends. Both accounts emphasise the growing complexity and heterogeneity of the 21st-century university. Roles that were not so long ago regarded as peripheral to the mission of the (at any rate, classical) university have now become routine. For example, most universities now engage on applied research, consultancy and technology transfer activities as well as undertaking fundamental research and

scholarship. Many have also offer continuing education and continuing professional development programmes alongside traditional Bachelors, Masters and doctoral programmes. Yet this complexity and heterogeneity (and, some would add, incommensurability) of the contemporary university are interpreted in two different ways:

- According to the first account the university now has to grapple with super-complexity (BARNETT, 2000). To cope successfully it must become a highly reflexive institution, not only in terms of intellectual configuration but also in terms of its organisational culture. The practical effect is to more radical forms of decentralisation —of budgets and of managerial authority. The university itself shrinks to become a small core, the repository of fundamental and transcendent values as well as (or more than) a corporate head-office. This account of the university is certainly consistent with the larger phenomena of post-modernity— and even of post-modernism.

- However, according to a second account, the 21st-century's ability to cope with complexity requires a very different approach. In order to counteract these centrifugal forces, which can all too easily be aligned with the particularism of traditional academic disciplines, the university's managerial capacity must be enhanced. This capacity has been described as a 'strengthened steering core' by one higher education scholar (CLARK, 2008). There are other justifications for enhancing the managerial capacity of the university. First, it enables new inter-disciplinary configurations to be created, both in higher education and research, that would be more difficult to establish in decentralised structures. Secondly, the size and complexity of contemporary university (and, paradoxically, the greater operational freedom they have been gained) require the elaboration of professional management systems. Thirdly, in order to engage with its external stakeholders the university must not only have a 'personality' (or 'brand' in the language of marketing) but also be an effective and coherent organisation. This second account of the contemporary university appears to have little in common with the idea of a 'post-modern university'.

At first sight the experience of most universities over the past two decades supports the second account, the managerial university, rather than the first, the super-complex university. Rectors (and Vice-Chancellors) have grown in power and influence; Faculty Deans have taken on executive roles; professional administrations have expanded rapidly. Conversely the power of the professoriate has been attenuated; and collegiality (and academic democracy) appears to have wilted. The university seems to be coping with complexity by reinforcing control systems. The playful ambiguities, the delight with difference, so characteristic of post-modernism have almost no role to play. This trend, apparent across Europe and in north America, is sometimes stigmatised as 'managerialism' (DEEM, 2007).

However, the contradiction between the two accounts should not be exaggerated. Alongside the obvious tensions there are also synergies. First, many of the major features of post-modernity —the growth of a knowledge economy, acceleration combined with the 'abolition' of time and the emergence of the 'extended present', the trend towards self-organisation in systems (which is not necessarily the same as the operation of 'markets'), the accumulation of risks (and the counter, but also linked, development of audit and accountability systems, the evolution of new patterns of knowledge production and other features— are all apparent in the structure, and behaviours, of the contemporary university. Secondly, it is possible to argue that the 'hard' structures of the managerial university are necessary to accommodate, and balance, the increasingly 'soft' intellectual systems characteristic of 21st-century knowledge systems. For example, in so-called 'clever cities, those crucial nodes of social experimentation, cultural vibrancy, knowledge production and business enterprise, the university is only one of several key institutions. It is through the linkages between these institutions, the networks they establish, that potential is realised. To form linkages and establish networks the university must be a robust organisation, which implies a degree of managerial resilience.

5. CONCLUSION

The fundamental question is whether post-modernism (or post-modernity) offers a useful interpretative framework in which to analyse the

development of the 21st-century university. The majority view is to reject this claim. After all, post-modernism was only ever influential within a comparatively narrow range of disciplines; its 'break-out' from its original home in aesthetics, literature and critical theory to colonise the wider humanities and (some) social sciences was always precarious, limited in extent — and, some would like to add, in time because in their view post-modernism was an intellectual fashion that emerged during a particular historical epoch, the middle and late 20th century. The 21st-century university, increasingly dominated by vocational and professional subjects and still centred on science, engineering, technology and mathematics (the so-called 'STEM' disciplines), appears to have little in common with the playful games of deconstruction and 'difference' so characteristic of post-modern thought.

However, that categorical rejection of the continuing influence of post-modernism needs to be qualified in three respects. First, the instrumentalism that dominates contemporary higher education systems, and is much resented within classical universities, does share with post-modernism a scepticism about the validity of absolute and universal knowledge. Both stress the importance of contingency, although in very different contexts. Secondly, many professional disciplines the intellectual roots of which can be found in the social sciences have been influenced, unwittingly perhaps, by post-modernism. Indeed post-modernism, in its broadest sense, has helped to confer academic respectability on these disciplines which have only recently been introduced into the university, if only by eroding the traditional hierarchies of knowledge which favour more established disciplines. In short, post-modernism has provided them with academic 'cover'. Finally, of course, post-modern thought has seeped into the *zeitgeist* in powerful but unknowable ways, fulfilling Karl Marx's prediction that in the bourgeois order where capital and profit are kings 'all that is solid melts into air'.

At the start of this article a clear distinction was drawn between post-modernism, as a pattern of ideas and mode of thought, and post-modernity, as a description of social and economic forms and cultural habits that others have preferred to label in other ways (as 'late' or 'fluid' modernity). The 21st-century university, like most other institutions, has been shaped by these new forms and habits —which have been both empirical, such as the emergence of knowledge-based economies or of new patterns of knowledge production;

and conceptual (or even philosophical), such as the reconfiguration of time and space and the dialectic between risk and audit. Indeed the university as the leading knowledge organisation may have been particularly affected by these phenomena— in two senses. First, because through post-modern thought (however limited its explicit academic impact), the university has perhaps acquired a special sensitivity or heightened intuition, and as a result been able to offer conceptual frameworks that help to interpret these larger social, economic and cultural transformations. Secondly, higher education and research systems have themselves been engines of these transformations — by generating the science and technologies (social as well as technical) that have powered them, and through mass participation that has reshaped habits, behaviours and expectations in society at large. So the university has not merely observed and interpreted the transformation to post-modernity; it has itself been a transformative institution.

Post-modernity and the university, the title of this article, remains a contested theme (BAUMAN, 1997; SCOTT, 1997). That is inevitable —in both negative and positive senses. From some, perhaps a majority, it provokes instinctive resistance; the very idea that post-modernity, a rag-bag of relativistic ideas elevated into a mischievous ideology, has any interpretative hold over the university, the citadel of science, reason and truth, is immediately rejected. But the theme is contested for a more positive, and perhaps more fundamental, reason. Although post-modernity has been carefully distinguished from post-modernism, it continues to share some of the latter's sense of indeterminacy, fluidity, 'difference' —and, of course, contestability. In other words contestability is a virtue not a vice. It is possible to conclude, therefore, that post-modernity does offer one interpretative framework in which better to understand the contemporary university— but perhaps only one of several.

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PROFESIOGRAFÍA

Peter Scott

Peter Scott has been Professor of Higher Education Studies at the Institute of Education University of London since January 2011. Previously he was Vice-Chancellor of Kingston University London, Pro-Vice-Chancellor and Professor of Education at the University of Leeds and Editor of 'The Times Higher Education Supplement' (now 'The Times Higher Education'). His main research interests are the development of mass higher education systems and of new patterns of knowledge production, and the governance and management of universities.

Datos de contacto: Institute of Education, University of London, 20 Bedford Way, London WC 1H OAL, UK. Email: P.Scott@ioe.ack.uk