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Excellence, Relevance and the University: The “Missing Middle” in Socio-Economic Engagement

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Abstract

The international political economy for higher education is marked by an increasing globalisation and regionalisation of activities. In this context an emphasis on the roles of universities as engines of economic growth and sub-national economic and social development can be seen. However, the de-contextualised nature of dominant neo-liberal global pressures gives rise to particular sets of issues for universities and a “missing middle” between contexts of knowledge production and application. This article explores these issues in comparative context, drawing on empirical work undertaken on regional science policies in Europe and considering the implications for African universities as they seek to fulfil a diverse range of scientific and civic roles. It is structured in three sections. First, it examines the global pressures that are leading to a rethinking and rescaling of science. Second, it analyses changing discourses around excellence, relevance and context and in so doing identifies a convergence in models of national science policy. Finally, it examines the implications for the global university order, including issues of stratification and diversification and a resulting tension that emerges between the expectations of higher education and their capacities to deliver. It is this missing middle that needs consideration if expectations and capacity are to be more realistically matched for greater benefit.

Résumé

L'économie politique de l'enseignement supérieur est marqué par une mondialisation et une régionalisation croissantes des activités. Dans ce contexte, un accent particulier est donné au rôle des universités comme moteurs de croissance économique et de

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développement économique et social national. Toutefois, la nature décontextualisée des pressions néolibérales mondiales créent de nouvelles préoccupations pour les universités et un lien manquant entre les contextes de production et d'utilisation des savoirs. Cet article explore ces questions dans un contexte comparatif, tirant des travaux empiriques effectués sur les politiques scientifiques régionales en Europe et considérant les implications pour les universités africaines dans leur effort pour jouer une gamme diverse de rôles scientifiques et civiques. Il est structuré en trois sections. D'abord il examine les pressions mondiales qui conduisent à un réexamen et à un redimensionnement de la science. Ensuite, il analyse les discours changeants autour de l'excellence, la pertinence et le contexte pour identifier une convergence dans les modèles de politiques scientifiques nationales. Finalement, il examine les implications pour l'ordre universitaire mondial, y compris les questions de stratification et de diversification et de la tension entre les attentes de l'enseignement supérieur et de ses capacités de satisfaction de ces attentes. C'est ce lien manquant qui doit être étudié si les objectifs et la capacité doivent être associés de manière plus réaliste pour plus d'efficacité.

Introduction

The centrality of science in contemporary political, economic and social life has been widely recognised (Turner 2003). It has been argued that the boundaries between science, society, politics and culture are increasingly blurred, leading to a de-differentiation between previously discrete areas of policy and action (Lyotard 1984; Gieryn 1999). This mirrors an epistemic permeability in disciplinary boundaries and a contestation over what counts as scientific endeavour (Knorr Cetina 1999). The result is that science is increasingly subject to the same pressures as any other area of public policy. Nowhere is this truer than in the context of a changing international political economy marked by dual processes of globalisation and regionalisation. Here a rescaling of the political governance of science and higher education policy has occurred in parallel with a rethinking of scientific justification and application. Science is valued in terms of its prestige-enhancing qualities as much as for its ability to lead to direct economic and social outcomes. Yet the excellence/relevance debate is unproblematically mapped onto a global/local dichotomy, reflecting a shift towards a dominant neo-liberal paradigm for science and higher education in which national and regional differences apparently evaporate in favour of abstract global forces. While distinct national and regional research cultures are leading to an enduring divergence in policy approaches, pressures for convergence outweigh those for heterogeneity.

For universities the consequences are far-reaching. Contrary to accounts of demise and de-legitimation (Readings 1996; Smith and Webster 1997), it is not the existence or value of the university per se that is fundamentally chal-

lenged. This is not based on any reasoned defence of the university as a space for reflection or balance to the freneticism of socio-economic imperatives (May and Perry 2006a). Rather, certain universities may often be the beneficiaries of a prevailing and uncritical view of scientific excellence as the holy grail of public policy, without due consideration of questions of justification, legitimation or application. What is at stake is the nature of the university system and emerging issues of position, power and hierarchy. Diversification of mission has been accompanied by a stratification of the university order in which universities benchmark against international league tables of research excellence. This jostling for position in relation to external challenges and opportunities has profound implications for the types of knowledge and expertise that are seen, valued, promoted or ignored.

The result is an international scientific-political economy which tends to be competitive, leaving issues of redistribution or equity to one side. A global order characterised by what is regarded as free rather than fair trade and the supposed inviolability of market forces has encroached into the domain of science, research and higher education. Economic success is seen to depend on the possession, commodification and ultimate exploitation of particular forms of knowledge. Certain epistemologies are promoted over others, exemplified in those disciplinary areas in which Western scholars are seen to excel with “one-size-fits-all” solutions imposed as a fix for development. Against such forces the outlook for African countries in establishing the profile and position of universities and their academic output may appear bleak. Yet there are opportunities, not least in reconnecting the production and application of knowledge in such a way as to create the possibility for the engagement of universities in society which is relevant to specific African contexts.

This article is based on research conducted through the UK’s Economic and Social Research Council ‘Science in Society’ programme between 2003 and 2006 on comparative regional science policies and university engagement in the UK, France, Germany and Spain.¹ Over 150 semi-structured interviews were carried out with senior university managers and policy-makers at European, national and regional levels responsible for science and research, higher education, economic competitiveness and regional development. These were supplemented by extensive documentary analysis of frameworks for action in different national and sub-national contexts. Through this work we make no claims to expertise in relation to the particularities of the African context; indeed our research approach is inherently characterised by a focus on context sensitivity (May 2005). Instead we focus on the implications of the research for the changing international political economy and the wider development

paradigm, as well as the lessons that can be learnt, rather than solutions imposed, for the African continent.

The article is structured in three sections. First, we discuss the implications of the restructuring of space and scale for the governance of science and higher education and offer an overview of recent policy developments at multiple scales that illustrate these trends. Second, we turn to a critique of the dichotomy between excellence and relevance that has emerged as a result. This is contextualised in the wider debate concerning convergence and divergence in the context of public policy approaches and research cultures. Third, we turn to the implications for the university as a key site of knowledge production and the emergent global order in higher education. Throughout this article we use the term “science” to mean knowledge in its broadest sense, encapsulating the social sciences, arts and humanities as well as the “hard” sciences, and discuss definitional issues further in this section in terms of the consequences of increasing specialisation on different disciplines and institutions. We focus on identifying relevant transferable lessons and highlighting opportunities, particularly in relation to the role of universities as engines of regional and national economic development, through addressing the “missing middle” between contexts of knowledge production and application.

The International Political Economy of Science, Research and Higher Education

Globalisation and the Knowledge Economy

Urban and regional scholars have focussed widely on the importance of the rescaling of state authority and the development of a knowledge-based economy as two of the most defining features of the contemporary world. The literature on changing forms and scales of governance in the context of trends towards globalisation and regionalisation highlights the growing importance of an increasingly diverse array of sub-national actors in political and economic processes, with concomitant implications for the nation state (Borras-Alomar et al. 1994; Brenner 2004; Storper 1995). While formal processes of devolution can be seen over the last twenty years across Europe, in which sub-national actors are seen as appropriate scales of action to redress issues of democratic accountability and economic competitiveness, a range of more informal and often unintended shifts in forms of governance has also taken place (Le Galès 1998). In the European context, authority and decision-making competences have been rescaled upwards towards supranational bodies, as well as downwards in line with notions of subsidiarity, characterised by some as a system of “multi-level governance” (Bache and Flinders 2004; Jeffrey 2000; Marks 1993).

It is not our purpose here to engage with the contours of this debate but merely to note that supranational and sub-national actors are gaining greater influence and legitimacy to act in a range of areas outside formally stated competences, thus contributing to debates on the end of the nation state (Ohmae 1995). Relevant sub-national actors can include democratically elected regional councils and assemblies, non-elected regional economic development agencies, metropolitan or city-regional authorities or local councils. We adopt an interpretation *à la française* of the terms “regional” or “sub-national” to refer to these varied *collectivités*, albeit acknowledging that there is a vibrant debate over the appropriate scales of governance for different public policy domains even among sub-national levels.

Public policy rhetoric in many Western countries increasingly focuses on the role of science, technology and innovation (STI) as the key to economic competitiveness and wealth creation, encapsulated in the “knowledge economy” paradigm. Academic analysis of the validity and value of this supposed paradigmatic shift is divided. For some the knowledge economy represents a new phase of capitalism or post-industrial economy (Castells 1996; Drucker 1998; Jessop 2002). For others the concept does not have any content, is ill-defined and is more “spin” than substance (Hellstrom and Jacob 2000; Luque 2001; Scarborough 2001). Yet such conceptual and theoretical debates are largely irrelevant. Policy developments are proceeding at a faster rate than theoretical and empirical evidence, advancing on the basis of suppositions with investments made in attempts to emulate perceived (rather than substantiated) best practice. In so doing, the link between science and economic development has led to a blurring of policy domains; science policy is increasingly complex (de la Mothe 2001) and linked to innovation and processes of wealth creation to such an extent, some say, that science, research and innovation policies are synonymous (Gibbons 2001). As a result of this emphasis a mutual reinforcement of the relationship between regional governance and science policy can be seen. Regions are becoming pivotal scales of action for economic development and competitiveness based on scientific innovation and excellence. In other words the international political economy of science and higher education is marked by both a rescaling and a rethinking of science.

Rescaling and Rethinking Science

A widespread, albeit often unintentional, regionalisation of policy for science, research and higher education is taking place within Europe. The UK provides an extreme example of this, moving in the late 1990s from a centralised system towards an asymmetrically devolved governance structure for higher education in Scotland and Wales.² Even in the absence of formal devolution to the

English regions, regional science policy governance has also emerged there. The nine English Regional Development Agencies (RDAs) have established Science and Industry Councils since 2004, bringing together academic, industry and governmental actors with the aim of linking science and research to wider regional socio-economic objectives. Most recently six Science Cities have been nominated by the Treasury to drive the UK forward in terms of innovation and economic competitiveness.³ In France the centralised or Colbertist system of research and innovation has also undergone profound changes (Mustar and Laredo 2002) in which the “collectivités” are increasingly important actors in the financing and shaping of policy priorities through the state-regional planning process, the “Contrat de Projet État-Région”. The German situation differs, given that the sixteen regional governments, the *Länder*, have traditionally had the greatest responsibility over higher education through the financing of universities, sharing responsibility with the federal government in certain areas of science policy and research funding. However, in the recent reforms of the federal state, the responsibilities of the ‘Länder’ in relation to higher education have been increased. In both France and Germany cluster-based policies also have strong spatial effects aiming to create agglomerations of critical mass bridging between the research and industrial base. Given the asymmetrical nature of the Spanish system, competences for science and technology vary between regions (Sanz-Menendez and Cruz-Cruostro 2005). An oft-cited example of developing regional competencies can be seen in the creation by the Catalanian government of the Inter-Ministerial Commission for Research, Innovation and Technology and a series of regional research plans (Charles et al. 2004; Dresner 2001).

Behind these shifts lies a series of differences in terms of drivers and dynamics. A certain convergence in the policy positions of sub-national actors can be identified as regional and local actors increasingly recognise the need to draw on endogenous knowledge assets as a precondition for socio-economic growth and to foster *innovative mileux* or “creative clusters” (Florida 2002; Simmie et al. 2002). Rationales for sub-national engagement with STI are driven by a range of concerns (Perry and May 2006). Science is a physical agent to achieve other non-scientific goals, such as the redevelopment of deprived or industrial neighbourhoods. Science also has symbolic value in terms of investments made in high-profile areas in order to rebuild regional identities. It may serve as a catalyst to the attraction of further resources or may be a transformational agent designed to directly impact on socio-economic objectives.

At the same time the direction of influence and drive for regional science and innovation policies differs. Developments in the UK have been largely

bottom-up, with a certain reluctance on the part of national agencies to accommodate the growing regional appetite for science and technology. A widespread enthusiasm from sub-national actors is motivated by the rhetoric of the knowledge economy, as well as by the need to address gaps in productivity and growth between prosperous and disadvantaged regions (Charles and Benneworth 2001). In France top-down pressures dominate, with variable yet increasing regional acknowledgement of STI and higher education as legitimate policy domains. Processes of regional capacity building and clusters are driven nationally by the need for new mechanisms for state intervention, the constraints on public budgets and the need for co-funders. Issues of political expediency are predominant in Germany, with decisions over the governance of science, research and higher education bound up in the wider debates over reform of the federal state, whilst cultural issues feature heavily in Spain in terms of wider processes of identity-building and global/regional positioning. In each case, the regionalisation of science, research and higher education policy is rarely motivated by considerations relating to scientific knowledge production, the appropriateness of scale or importance of context. Instead a complex set of economic, political and cultural issues interplay to influence and shape the governance of science policy.

The result is that science policy governance is increasingly contested. Here we enter into debates over changing notions of scientific production, justification and application (Gibbons et al. 1994). On the one hand the rise of regional science policy governance has highlighted the limits to a defence of scientific decision-making as an objective process. Science is deeply integrated into the fabric of modern societies and economies (de la Mothe 2001) and is at the heart of decisions about the environment, health, welfare and security (Stehr 2004). Science policy decision-making has never been immune to political pressures, but the divergence of actors involved in the formulation, financing and implementation of hybridised science and innovation policies further erodes an already fragile and contested notion of scientific objectivity (Williams 2005). The debate over the location of large scientific facilities can be seen as a good example of this (Perry 2006). On the other hand regional science policy can be seen as emblematic of the excellence/relevance debate. Recent theoretical developments in science and technology studies have posited fundamental changes in the criteria used for the production, justification and application of scientific knowledge, as embodied in notions of relevance, social utility and economic instrumentalism (Nowotny et al. 2001). According to such views science is assuming value as much for its economic and social benefit as for its prestige-enhancing ability, with an increasing emphasis on applied research

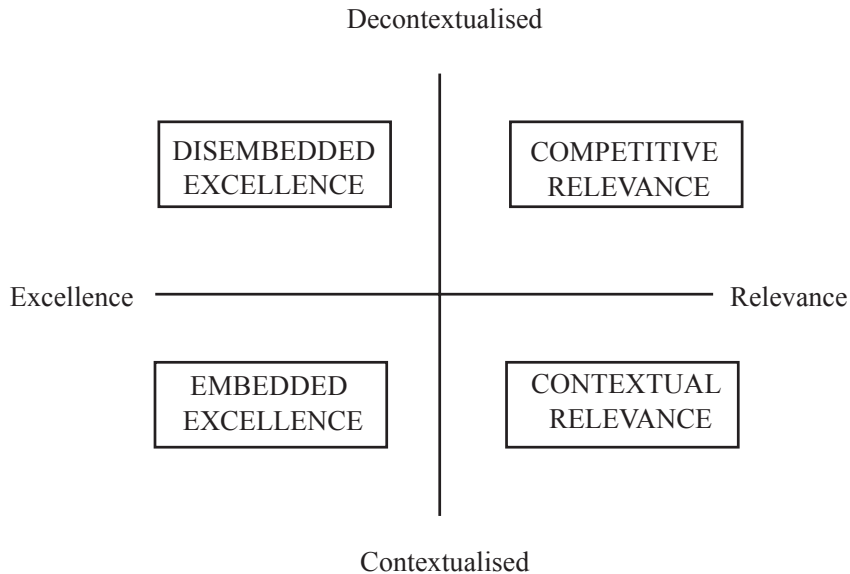
and innovation. Both excellence and relevance are contested notions; the focus here is on how the concepts are used in practice within different policy discourses.

Excellence, Relevance, Convergence and Divergence

From a conceptual viewpoint the interdependence and contextuality of excellence and relevance is complex. Taking the issue of interdependence, a dichotomous relationship is unhelpful; excellence can be relevant, and relevance can be excellent, regardless of funding sources or disciplinary areas. A temporal and normative dimension also comes into play. The unpredictability of scientific invention and breakthrough has been widely noted, and a 'shrinking of the field for research' (Ziman 1994) only limits the potential for future innovations. No amount of foresight activities can identify the long-term relevance of research beyond the demands of short-term political or economic imperatives. Relevance is subject to interpretative flexibility, encapsulating objectives and aspirations as diverse as economic wealth creation, social inclusion, civic debate and cultural diversity. Such definitional issues relate clearly to fundamental questions of who decides and who benefits.

If we map the excellence/relevance continuum against degrees of contextualisation (global/local), four different but non-exclusive discourses can be identified (see Figure 1). A "disembedded excellence" can be seen as traditionally non-spatial and global, with processes of knowledge production divorced from the context in which they are produced. Expertise is presumed to be highly mobile, with flows of research personnel and students following and thus enhancing existing quality, as judged by league tables or rankings. Distributive issues are irrelevant, both geographically and across institutions or disciplines, as no other criteria than quality is held to matter, as judged through peer-review. This perspective highlights policy approaches that focus on scientific self-governance, selectivity and the concentration of resources in existing centres of excellence, supplemented by efforts to attract and retain the best and brightest talent in terms of academic staff and students within an international environment.

The corollary to this is "competitive relevance". A decontextualised interpretation of relevance sees emphasis placed on the application of STI to specific economic or social issues and strategic priorities as a precondition for global success. The focus on biotechnology, nano-technology or genomics is a case in point. Research may be applied, with clear health-related outcomes for instance, but benefits do not accrue to any specific community or group; rather the commercialisation of technologies leads to competitive advantage for individuals or firms. This discourse leads to policies that focus on intellectual

Figure 1: The Contextualisation of Excellence and Relevance

property, university-industry links and spin-offs and business-led innovation, but without seeing context as either a contributing factor or intended beneficiary. In terms of finance, greater equality is attributed to third-party funds from industry or consultancy, alongside academic funds as a mark of quality. An emphasis on the increased steering of the direction of scientific research is seen, linked to wealth creation or the solving of global problems such as cancer, rather than wealth distribution. The outcome may still be concentration of resources in particular localities and institutions.

An embedded excellence discourse places greater emphasis on the indirect benefits of science and technology to particular places and spaces. This viewpoint implies no challenge to the underlying criteria that are seen, at least explicitly, to drive scientific investment, but accepts that there is a spatial dimension to excellence. This does not relate to changes in processes of knowledge production; rather it seeks to exploit knowledge products and institutions for territorial benefit. Expertise is still assumed to be mobile, but the role that particular environments play in influencing this mobility assumes greater importance. Policies focus on the attraction of “world-class” facilities and expertise or international students through the creation of favourable

framework conditions and are based on assumptions over the benefits that will indirectly accrue, without any necessary consideration of mechanisms necessary for their realisation. Efforts may be invested to capitalise upon the presence of scientific institutions as regeneration catalysts and agents in the redesign of physical space within particular localities. Partnerships may exist between strategic managers within universities and local partners for instance, but this has little impact on the day-to-day activities of academics.

Where embedded excellence is about extraction and attraction, contextual relevance refers to the shaping and creation of research excellence and expertise. The emphasis is as much on the processes of knowledge production as on exploiting particular products. Here we see a concern with what goes on within scientific establishments in terms of the generation of genuinely co-produced research priorities and agendas. Nationally there may be greater emphasis on the distribution of scientific resources in terms of their acknowledged effects on economic development. Skills, training and widening participation agendas assume wider importance within broader processes of knowledge transfer, not only encompassing a linear-dissemination model but also placements, apprenticeships and incentives for staff to spend time in other sectors. An emphasis on spinouts can also be seen but underpinned by a concern for outcomes for particular groups rather than pure numbers as an indicator of success. Policies emphasise how to connect the research base, both public and private, with industry, as well as issues of social inclusion or economic opportunity. Whilst this discourse appears to be the polar opposite of disembedded excellence, quality is still deemed to be important, but it is judged according to a wider set of scientific, social, economic and political criteria. What is at stake is the values that are seen to inform decision-making and issues of how benefits from STI will be realised in practice. In this respect it is here that we find the greatest challenge to the status quo in terms of issues of justification, legitimation and application.

This characterisation necessarily overemphasises difference in order to illustrate the way in which context appears in different discourses. Indeed, in practice, there are many hybridisations, with different rationales for scientific investment and distribution at multiple scales. There is no simple correlation between tiers of governance and particular positions. In England national government departments and funding agencies tend not to see context, whilst in France and Germany particular hybrid discourses have emerged that combine a traditional concern with social equity and redistribution with the recognition that more competitive strategies are required in the current global economy. The French “pôles de compétitivité”, for instance, aim at raising the competitiveness of all regions, whilst additional resources are available for the

most successful. The German federal approach equally demonstrates policies aimed at concentration, such as the current “Excellenz” initiative, with those more concerned with the development of innovative capacities in the Eastern “Länder”.

At the same time context-sensitive policies do not necessarily emerge from regional governance or autonomy. Regional actors such as the German “Länder” or the Spanish autonomous regional of Catalonia, with long histories of regional funding of universities (Charles 2006), enact decontextualised science and higher education policies, and many regional actors have little concern for issues of equity or redistribution in their quest for global position. The dominant discourse of the English regions can be characterised as embedded excellence, with those arguing for a more context-sensitive approach largely sidelined in the search for global success.

Identifying distinct discourses according to national or regional contexts is clearly problematic. Yet the disaggregation of national and regional interests according to different policy domains reveals a certain clustering of positions that cut across scales of governance. Scientific discourses relating to the contextualisation of the excellence/relevance debate are shaped not by the boundaries created through geography or governance but by those relating to spheres of previously discrete activities. For instance disembodied excellence largely characterises the discourses of those charged with science, research and higher-education policy; competitive relevance encapsulates the dominant policy rationale within economics or trade ministries or sections; those responsible for regional economic development and innovation at national and sub-national levels tend to coalesce around an embedded understanding of excellence, focussed on the attraction and then exploitation of particular products and scientific institutions; while relatively little attention is given to the notion and potential of contextual relevance, with those who speak in its name dismissed as “political” or naïve. While there tends to be little cross-departmental discussion, a recognition of the interrelationships between science and economics is reflected in the restructuring and merging of national ministries for science, research and economics in the UK, Germany and France (Dresner 2001).

Recognition of national heterogeneity in higher education and research is explicitly at the heart of most recent European developments (Communiqué of the Conference of Ministers Responsible for Higher Education 2003: 2). Despite moves to strengthen European level institutions, such as the European Research Council or European Research Area, the explicit emphasis is on divergence in approach within common frameworks (Senker et al. 1999). Jasanoff (1997) notes how global elements of convergence are filtered (and diluted)

through national systems relating to the boundaries and autonomy of STI in the context of the fragmentation of the state as the traditional unit of analysis. This is undoubtedly the case, and distinct national responses to the challenge of the global knowledge economy are evident. Nevertheless, in practice, a certain convergence is emerging through a decontextualised understanding of both excellence and relevance.

Disembedded excellence and competitive relevance dictate the contours of the emerging neo-liberal knowledge economy. Neither space nor territory are valued in the search for global success, and any understanding of the contexts within which excellence or relevance can be built is limited and partial. The tolerance of a context-sensitive approach to science, research and higher education is confined to a particular way of seeing regions and cities as funders and indirect beneficiaries of scientific investments. Regions are permitted to exploit scientific products and institutions, to do relevance, leaving national agencies to be seen as the guardians of excellence. Regional science policy is largely synonymous with second-rate science, and recent debates in England have highlighted how the role of regional agencies even as funders of research is contentious in this respect. Even within regional and local contexts we see a paradoxical defence of the supposed supremacy of an uncritical notion of scientific excellence and the infallibility of peer-review processes (Perry 2006). Sub-national actors have predominately bought into a narrow excellence paradigm to the exclusion of issues of distribution, equality or social cohesiveness. Contrary to a European model of balanced growth the result is competition (Sharp 1998) and an increasing concentration of research excellence in particular localities in which the philosophy of “survival of the fittest” reigns supreme. The next section turns to the implications of these changes for universities as distinctive sites of knowledge production and the global university order.

Universities and the Regional Agenda: Third Mission as Last Choice

In the face of these pressures how are we to understand the role, place and future of the university as a centre of research production and transmission? In seeking to illuminate this question, we may first observe that universities are subject to many different expectations as expressed through policy frameworks at international, national and local levels. Universities have varied roles to fulfil including:

- to educate and train students
- to produce excellent research according to peer-reviewed criteria
- to innovate in order to enhance productivity through collaborative relations with external partners

- to produce relevant research according to the needs of client organisations
- to make socio-economic contributions to their localities and businesses in general and to enhance civic value in the public realm (Clark 1998).

Overall the production of knowledge is a function that the university has always been well placed to fulfil, but a premium is now placed on extracting economic benefit from university-based knowledge. What was often an assumed benefit is now open to scrutiny and competition from other sites of knowledge production (Fuller 2000; Gibbons et al. 1994). Developmental opportunities for universities relate not simply to innovation through connection to business but also their roles in relation to social welfare and skills development. For these reasons the pedagogic role of universities and their contribution to social and cultural issues are key. Universities not only produce knowledge but also disseminate that knowledge to students and thus perform a public role in the sense of bringing people together in what is increasingly an individuated world (Beck and Beck-Gernsheim 2002).

We have seen an increased emphasis on the civic or moral duties of universities to serve the communities in which they operate, alongside changing ideas about their value and role in society (Delanty 2001). For some commentators the most valued role of universities is as sites of knowledge diversity in a world in which the legislators seek order (Bauman 1989). A “value production” role is one that has long been attributed to the university. Yet the producing and reproducing of values is now even more important in a multi-ethnic, multi-cultural rapidly changing world in order to root ethics and morality in future generations and thereby reflect the diversities, rather than hierarchically-inspired orders, that exist in contemporary societies (Bauman 1997).

Taken together, the diversity of roles ascribed to universities have given rise to the notion of the “third mission”, that is, the acknowledgement that universities have functions beyond research and teaching that relate to their wider economic, social and civic roles (Harloe and Perry 2004). The rise of “third leg” funding accompanies this shift, as public spending on research and development alone falls well short of international or national targets. Sub-national actors are vocal proponents of the third mission and increasingly look to universities, within broader science and innovation policies, as tools of development and engines of growth (Castells and Hall 1994). Regions have increasing expectations from universities, as STI is hoped to deliver reversals in economic fortune and the rebirth of new territorial identities. From the point of view of universities a complex mix of altruism and instrumentalism incentivise this engagement in terms of acknowledging the legitimacy of demands upon

them as publicly funded institutions, coupled with the need to search for additional finance in the context of budgetary constraints.

Inherent in these diverse roles are sets of expectations which embody different values. Their overall balance is mediated via different frameworks for action at multiple levels of scale with incentivisation through alternative funding streams. It is here that the international political economy described earlier comes into play. Mixed messages are apparent in the drives for international excellence and collaborations for regional benefit. It is held that research needs to be conducted at an international level in order to meet criteria of world-class excellence. Yet it also needs to be embedded in local and regional contexts if the kinds of benefits expected from knowledge for the economy are to be realised within its locality. The decontextualised nature of the neo-liberal paradigm leads to sets of assumptions that research excellence will lead in some way to relevance in a given locality, as if there were some automatic connection between the place in which a university is located and its benefits to that area.

The dominance of the disembedded excellence or competitive relevance discourses give rise to further assumptions about connections between research, teaching and third-mission activities which dictate “appropriate” measures of success for the university. Ideas of knowledge transfer, for example, tend to rest upon outputs that are measurable according to patents and/or the setting up of new companies. Matters of organisational accountability are set according to targets; performance is judged by the ability to attract resources, and economic impact is mediated through the production of spinout companies, patents and the attraction of inward investment, whilst research and teaching scores are taken as demonstrable indicators of excellence.

Clear tensions can be seen in the aims and aspirations for universities; the civic role of the university, for instance, has the potential to sit in tension with the importance placed upon knowledge as a commodity. A hypodermic model of knowledge transfer dominates who judges the worth of what is produced according to a narrowly conceived economic instrumentality measured according to impact and outputs. In these circumstances, different academics play particular roles, bolstered by the contexts of their knowledge production, about which they remain largely indifferent. The idea that individual characteristics are solely responsible for excellence and/or innovation is promoted through, for instance, the teaching of entrepreneurialism and enterprise as specific fields of study. “Character” is of course an important component, but focussing on this alone gives rise to an indifference to institutional conditions of knowledge production that allow claims to expertise freed from context. These contexts are political as well as social, economic or cultural. For instance, Dresner notes

how the scientific community in Germany exploits the difficulties in reaching political agreement between the federal and 'Länder' governments to obtain an unusually high degree of autonomy (Dresner 2001: 110). Individualistic cultures are perpetuated in which claims to professional autonomy on the part of academics are prioritised over the necessary condition for its attainment: that is, institutional autonomy (May 2005). What is then created is a vulnerability to the effects of those changes upon academic cultures, which seeks changes in how practices occur through measures of what they produce. Overall this produces an indifference to context which is replicated in claims to academic professionalism (May 2006).

This results in a confusion of expectations. First a confusion of expectations and incentive structures leads to demands from policy-makers, politicians and university managers for programmes to demonstrate relevance in the short-term, as well as more sustained and long-term programmes of work in the pursuit of excellence. "Quick hits" drive criteria of relevance in ever-greater demands to service the economy, with some referring to a resulting "academic capitalism" (Slaughter and Leslie 1997). Yet it is the search for excellence that dominates, producing hierarchies according to abstract league tables. The flaws of such tables may be widely noted, but this does not stop the frenetic drive amongst universities to attain a place in the rankings. Institutions tend to compete rather than collaborate, aiming for the elusive label of being world-class. As a result some universities may be "in", but not "of" their localities (May and Perry 2006b). Those elements of third-mission activities that support this world-class role, such as collaborations with industry or the receipt of regional monies, are embraced as a stepping stone to global position, the result being that the less visible yet arguable more socially or economically relevant activities are relegated to the domain of the less prestigious universities. Diversification in role then accompanies stratification in university systems with the third mission becoming the last choice for those universities outside the upper echelons of the global hierarchy.

The issue is that sub-national expectations are not equal upon all universities. Elite universities in the top world rankings are highly valued for their assumed benefits, yet it is other institutions that must deliver on agendas relating to the third mission. Research culture comes into play here. The autonomy of the professors and their right to determine their own affairs is constitutionally enshrined in Germany, whilst the widespread strike by French scientists in reaction to proposed reforms to the research system in 2004 led to a reversal in French policy. Even in more neo-liberal systems regional demands on universities are largely restricted to being physical agents, attractors and political partners. What we see then is a certain power of science to protect itself, contrary

to accounts of demise and delegitimation in the face of an encroaching relevance, but this power relates to a position in regional, national and global hierarchies.

Disciplinary consequences also ensue. So far we have used the term “science” in its broadest sense, without disciplinary specification, to incorporate the social sciences, arts and humanities. Yet differential value is attached to types of knowledge and expertise in the context of the pressures we have described. The physical sciences have tended to be more greatly valued in terms of their potential economic benefits thus far, despite a recognition of their intangible and uncertain outcomes at different time frames. Doubt remains over the proportion of viable spinouts that can be created in the life sciences vis-à-vis the huge investments needed, but there has been little systematic research in this area (Nightingale and Martin 2004). Conversely, the potential contributions of the social sciences, arts and humanities have been largely ignored, despite recognition of the “softer” side of innovation processes, the need for context-sensitivity and the importance of tacit and embodied knowledge as well as that which is codified and explicit (Baumard 1999; Polanyi 1996; Simmie et al. 2002). Not only disciplines but also broader epistemologies are at stake in terms of the value attached to different forms of knowing (Harding 2006). The “sexy” triumphs over the mundane, the tangible over the intangible, outputs over outcomes and narrow ideas of measurement over the generation of understanding.

Not surprisingly these pressures have led to a series of organisational transformations within universities that have varying institutional consequences. First the balance between steering and autonomy of universities is changing (Wagner 2004). In Germany and France increased efforts to direct universities and programmes of research have been paradoxically accompanied by increased autonomy for universities. Steering is related to governance structures and the nature of central-local relations (Senker et al. 1999), hence the importance of clarity in science policy-making in the recent reforms in Germany. Autonomy is seen as a prerequisite for both scientific excellence and economic relevance, with incentives and project-based funding used as policy levers to influence academic behaviour. The aim is to replicate a UK competitive model of higher education and research by reducing direct state influence, increasing indirect mechanisms of incentivisation and introducing greater instability and flexibility into the system through, for instance, a reduction in recurrent funding.

Second, internal coordination within the university needs to be appropriate to meet external expectations. The traditional centralised and bureaucratic mode of organisation of the university is challenged by the need to respond flexibly to increasingly unpredictable environmental changes and engage with the varying needs of different localities and social groups. New organisational forms

are said to be required that enable interpretations of environmental changes to be rapidly implemented into organisational responses. A balance between centralised bureaucracy and flexible forms for the university demands not only imaginative management and appropriate design but also the right mix of skills, values and knowledge among personnel across organisational units. Yet this raises a complex set of issues for those working in universities in respect to their purpose, as well as questions over what can be reasonably expected of higher education in relation to its positive impact upon social and economic development. Translating opportunities into tangible realities poses a number of significant challenges. These need to be managed in ways that are not indifferent to current practices and sustainable futures in particular contexts.

Meeting such challenges raises issues of leadership and management. Universities may have ambitions to be international in order to attract inward investment, but they will also need to be sub-regional and regional to be of benefit, to attract additional types of funding and to mobilise the type of political support they require to survive. This means examining the relationship between intended and actual results. It also requires political leadership which effects closure on otherwise open-ended terrains and which is willing to learn and admit mistakes. The presence of such leadership is not a sufficient condition to prevent the free play of different interests. However, it is a necessary condition to ensure benefit beyond the narrow interests of associated institutions, organisations and professions. Difficult questions are then raised in terms of the management of conflicting aims which can easily become internalised within the organisation and heighten degrees of politicisation of its purpose and processes. These issues are often ignored and instead manifest in the need to engage in organisational restructuring which focuses on process without due regard to purpose, or the constitution of visions that have no meaningful content in terms of any specific activities that will make a difference to its future.

In the process of university transformation rhetoric rapidly overtakes action, as well as the pursuit of product over considerations of purpose and value (May 2001). Such is the speed at which change is sought, little attention is given to a number of underlying issues that need to be clarified and addressed as a sound basis for moving forward. As a result potential remains unrealised. Universities need to be far better at processes of communication internally and cross-institutionally, particularly given the difficulties created by an audit culture (Power 1999). People working in universities are unlikely to find yet more initiatives for third-mission activities appealing when suffering from initiative fatigue. Innovation is often no more than the forgetting of history and the importance of context. In the case of African countries the pursuit of globally

induced objectives, without the level of investment that is enjoyed in the West for universities, will only exacerbate the problems. In context it is the reasonable and attainable gap between the actual and potential according to particular values and goals that needs to be addressed in partnership with communities, the voluntary sector, local, regional and national government and business.

Despite these issues relatively little is known about the contexts which enable and constrain the relations that exist between policy expectations and the actual capacity of universities to deliver to different groups. Instead we move from initiative to initiative without sufficient learning from experience, leaving expectations being either too impractical or unmet. Contexts matter, yet models are all too often pedalled as one-size-fits-all solutions or as development fixes. Beware those who have ready-made solutions to problems, as they commit the fallacy of believing that the model of reality has become the reality of the model. Content-less policy initiatives are left to be populated by varying interests, without sufficient time for consultation or a general understanding of the conditions for success. As a result a “missing middle” exists (SURF 2006) between the aspirations for universities in relation to socio-economic development, the nature of policy frameworks, the governance of spatial relations and organisational forms and capacities. Policy initiatives are driven by a self-perpetuating hype in which the search for excellence becomes its own *raison d’être*. The missing middle is populated by a series of issues that need to be directly addressed. Here we mention two that we feel are of particular significance to the African context, given the need expressed by many for African universities to have a greater role in the social, cultural and economic development of the continent (Juma 2005).

First, what are the relations between the cultures of academic production and reception of knowledge which do not assume simplistic hypodermic models of knowledge transfer? Here the importance of academic mobility is of key significance. If there is a need for highly skilled personnel, their export to other countries without a corresponding inflow is then problematic. Issues of retention need to be addressed, which means developing links and opportunities between universities and local and regional organisations and establishing the distinctive value of African universities. Second, there are issues of the location of a university in relation to socio-economic development and the coherence and consistency of governance structures. Whilst we have described the ways in which much policy has become regionalised, this does not relieve national states of the need to ensure equity between regions and between states to ensure that there is added value through cooperation. In the case of a diminished role of the state in developmental policies, it will be the weaker, poorer and less accessible regions that will stand to lose out. Creating inward competition for

scarce resources does not relieve governments of their responsibilities for social justice. Without this in place the strong simply get stronger, leaving the weak in their path.

These are just some of the issues that have not been subject to systematic and comparative research and yet directly influence the effectiveness of initiatives that involve universities in collaboration with various social, economic and civic partners at different levels of scale. Without this understanding in place the distinctiveness of the university as a site of knowledge production, transmission and reception is diminished and so too is its contribution to socio-economic development at local, regional, national and international scales. Issues around the mixed messages of policy and institutional capability constitute an urgent need for a proper assessment of the relations between expectations and the capacity to deliver. We hear a great deal about “what is to be done”, but much less about ‘by whom, with whom, with what capacity and according to what desired effects?’

Summary

The changes we have described operating at a global level are symptomatic of the intangible in search of the unattainable. Here we find content-less concepts without concern for context as if they can float freely from the tangibilities of particular localities. These neo-liberal dreams always have victims, and they are always the poorest. Yet ours is not a defence of some nostalgic dream for a by-gone era of institutional autonomy, but instead an appeal for a more nuanced understanding of the place, value and role of universities in society more generally. Such an understanding is being sidelined in favour of government edicts and the supposed nature of the global economy. What we see are sets of expectations on universities from national as well as regional agencies. Yet there are real issues over the capacity of institutions to deliver, particularly in the context of funding frameworks and dominant policy rationales that encourages particular behaviours. There is a mismatch between expectation, capacity and context that needs to be addressed if the potential advantages of university engagement can be realised without of course compromising the integrity or quality of what is produced.

What is lost in all this is a sense of what is distinctive about the university. For some this means universities exhibiting processes of “unhastening” that deliberately slow down the so-called environmental, economically-based imperatives and resist the de-differentiation of spheres of activity which has in any case been greatly exaggerated (Pels 2003). This requires a shared understanding of the organisational contexts necessary in order to produce and transmit knowledge that is unique. In the absence of this what is the future of

the university and why would people wish to work there? This is where a balance between the short and the long term is required. In search of distinctiveness we can say that a combination of particular professional cultures and the speed of knowledge production lead to a different form of knowledge. Without a proper understanding of the distinctiveness that universities as sites of knowledge production provide, which would allow for a clearer defence of their role and value in society, justification easily becomes the province of those whose interests lie in other contexts. Not only can this undermine distinctiveness but also the legitimacy of their activities that ultimately rest within the public realm. It is time to address these matters with sensitivity to context which implies neither a context dependence nor an abstract universalism.

Notes

- 1 This article reflects on the main conclusions of the 'Building Science Regions in the European Research Area' project carried out between 2004 and 2006. We gratefully acknowledge the support of the ESRC Science in Society programme in funding this work (RES-151-25-0037).
- 2 This is characterised by a dual system of funding in which project-specific research income is allocated through the Research Councils subject to UK-wide competition, while recurrent institutional and quality-related funding allocations are organised within each of the devolved territories.
- 3 Bristol, Nottingham, Birmingham, Newcastle, Manchester and York.

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