



Universities and the post-2015 development agenda: an analytical framework

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Abstract Higher education is increasingly acknowledged by national governments and international agencies as a key driver of development, and systems are expanding rapidly in response to rising demand. Moreover, universities have been attributed a central role in the post-2015 development agenda and the achievement of the sustainable development goals. Yet questions of institutional models and their differential impact on society have not received sufficient attention. This paper presents an analysis of the ‘anatomy’ of the university in order to identify the salient changes in the institution across time and location in relation to knowledge and relationships with society. A framework is proposed structured around three key dimensions: first, ‘value’—the extent to which knowledge is treated as intrinsically or instrumentally worthwhile; second, ‘function’—the role of the university in terms of storage, transmission, production or application of knowledge; third, ‘interaction’—the flow of ideas and actors between the university and society. This analytical framework is then utilised to assess two dominant tendencies in global higher education: commodification and unbundling. Finally, implications are drawn out for universities’ potential impact on development in low- and middle-income countries in the context of these contemporary trends.

Keywords Commodification · Higher education policy · International development · International organisations · Unbundling

Introduction

Higher education’s return to favour amongst international development agencies is by now widely acknowledged, after decades in which other forms of education—particularly the primary level—were seen to be a more appropriate focus for their attention. Evidence of

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this rekindling of interest can be seen, for example, in the UK Department for International Development's new partnership scheme and in the designation of 'Strengthening higher education and workforce development programs' as one of four current priority areas for USAID's education programme (Childs 2015; USAID 2015). While commitment to the tertiary level was tentative in the discussions around the replacement for the Millennium Development Goals (MDGs) (King and Palmer 2013; Unterhalter et al. 2013), the United Nations resolution on the Sustainable Development Goals (SDGs) includes the target to, 'by 2030 ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university' (United Nations 2015). In addition to being a goal in its own right, higher education is also accorded an instrumental role in achieving the broader aims of sustainable development. In fact, allocation of resources by development agencies to the tertiary level has been reasonably high over recent decades [20 % of World Bank funds (MacGregor 2015) and 34 % of the total education aid of DAC countries in 2013 (OECD 2015)], but a large proportion has been dedicated to scholarships to study in high-income countries, particularly in the country of origin of bilateral donors. However, there are signs now of renewed investment within universities and systems within low- and middle-income countries (LMICs) themselves.

To what do we owe this change of course? A first explanation is the revision in understandings of the rates of return to different levels of education, and an acknowledgement of the higher returns for the tertiary level than was previously assumed in studies such as Psacharopoulos (1994). Second is the changing nature of global political economy and the perceived increase in value of knowledge in economic competitiveness. These changes have led to significant interest in higher education amongst nation-states, both in order to drive technological development through research and to equip graduates with high-level skills for the adoption and application of that technology in the workplace (World Bank 2002). Third is a rather tardy realisation that the professional formation provided by universities is an essential piece in the puzzle of providing basic public services to the whole population: particularly in training teachers, but also public health care workers, engineers and many others (High Level Panel 2013). This latter point has succeeded in countering the (in some ways justified) concerns that higher education was simply a mechanism for reproducing and even magnifying the privileges of a small elite and therefore not a progressive use of public or donor funds.

While this renewed interest is welcome, the forms of intervention in higher education proposed—and the rationales underpinning them—are not always clear and at times are highly contested. The lack of empirical evidence to support claims about the contribution of higher education to development has been addressed to some extent by recent multi-country studies and large-scale reviews (e.g. Bunting et al. 2014; Clery and Rhead 2013; Cloete et al. 2011; Jones et al. 2014; Luescher-Mamashela et al. 2011; Oketch et al. 2014; Clifford et al. 2013; Bloom et al. 2006a), but there are still significant needs in terms of verifying the kinds of impact on society and individuals' lives that different kinds of higher education have. More fundamentally, there is a conceptual and theoretical lack, in terms of developing understandings of what the university is and is for, and of how systems interact with and impact the rest of society—from analytical and normative perspectives.

This article engages with this latter task. Assessing the changing nature of universities across the ages, it develops a theoretical model for understanding the characteristics of institutions, their relationship to society and their potential for contributing to societal development. This framework is then applied to assess the prospects of two major currents in contemporary international higher education: *commodification*—the packaging of knowledge into products for profitable sale, whether teaching, research or knowledge

transfer; and *unbundling*—the fundamental unravelling of the unity of the institution as we know it, influenced by the development of new modes of delivery, particularly MOOCs, and moves away from tenured faculty and unitary geographical locations. While ‘traditional’ forms of institution still dominate in LMICs, there are clear signs of change in line with these trends, and many interventions of international donors are encouraging similar transformations. It is essential therefore to assess the implications of these currents for the developmental potential of universities.

In recent years, there has been a growing awareness that unbridled expansion of the system without due attention to quality undermines the entire project of higher education (Schendel 2015; Schendel and McCowan 2015). However, even attention to quality in addition to access is not entirely sufficient. Most discussions of quality—both within academic literature and in the regulatory practices of governments and institutions—are firmly lodged within a set of assumptions about the nature of the university, and of what constitutes a ‘good’, an ‘excellent’, or a ‘world-class’ institution, assumptions that are rarely made explicit or questioned. This article intends to go beyond, or at least to deepen, the debates on quality by opening up the box of what exactly we mean by university, why society would want universities in the first place, and what kinds of benefits different types of university might bring.

In the discussions that follow, so as to maintain as broad a relevance of the arguments as possible, the article will take as its backdrop a conception of development largely along the lines of the SDGs. These goals, like the MDGs before them, have as their primary aim to eradicate poverty and to ensure basic needs are met for all across the world, but add to them more extensive requirements for environmental sustainability. Two further aspects of the goals are important to highlight: first, that they target diverse aspects of development—including health, security, and biodiversity—ones that may be connected with but cannot be reduced to GDP growth; and second, that they display a concern not only for aggregate benefits, but also for the equity of the distribution of those benefits across the population. The university is fundamentally implicated in all of these aspects. It is potentially a driver for economic growth, a space for creation and innovation, and for application of theoretical knowledge to address environmental challenges; it has a significant impact (whether positive or negative) on the distribution of the wealth of a society; in addition, it potentially provides a space for discussion of models of local, national, and global development. Yet the exact ways in which the university will contribute to these ends depend absolutely on the type of institution in question. For this reason, it is essential that we look closely at the directions of travel of university systems and the forms of development in society that they will promote.

In engaging with the post-2015 development agenda, the focus of this article is on those countries categorised as ‘developing’. This label is highly problematic and groups together a large number of countries that are not only diverse in terms of their income levels, political systems, cultures, and geographies, but also have diverging higher education systems. In simple terms of enrolment, LMICs have a range spanning from 1.75 % (gross enrolment ratio) in Niger to as high as 62 % in Mongolia and 58 % in Iran (UIS 2015). Nevertheless, there are some elements that meaningfully tie together these diverse contexts. First, they all experience significant resource constraints in terms of both financial inputs and human resource capacity available in universities. Second, they are disproportionately vulnerable to the decisions of supranational agencies and in many cases dependent on donor assistance; consequently, it matters much more for them what the dominant ideologies at the global level are.

A further clarification on scope is required. The discussion here focuses on the tradition in European higher learning associated with the term ‘university’—defined by Perkin (2007: 159) as ‘a school of higher learning combining teaching and scholarship and characterised by its corporate autonomy and academic freedom’. There are many other traditions of higher learning around the world, from Buddhist monasteries in India, to the mosques in North Africa, and the training of scribes in Mayan Mesoamerica: nevertheless, the focus here will be on the university, which has now become the dominant form worldwide. Furthermore, within all systems there is institutional differentiation, and many non-university institutions—specialised colleges, polytechnics, etc.—will not have all of the characteristics discussed here.

The article will start by assessing diverse historical manifestations of the university, from which is derived an analytical framework for understanding the key dimensions of the institution. This framework is then applied to the two trends of commodification and unbundling in order to draw out the implications for international development.

Value, function, and interaction

Simply identifying the characteristics of the university—let alone its nature or essence—is an endeavour fraught with danger. In part this difficulty is due to the diversity of institutional forms across locations and historical eras, and in part to the overlaying of fact and imaginary, the melding of the historical realities of the institutions, and the normative writings of theorists, commentators, and reformers. Histories of European higher education generally start with the universities of Bologna and Paris from the twelfth century, communities of students and scholars, respectively, with a strong influence of the Church, and largely antagonistic relationships with their local communities (Perkin 2007; Carpentier, in press). The task of the university was primarily to transmit to students the bodies of knowledge inherited from the classical world and the Christian theological tradition, combining a broad-based education in the *trivium* (grammar, rhetoric, and dialectic) and the *quadrivium* (music, arithmetic, geometry, and astronomy) with a specialisation in areas of law, theology, or medicine.

While the mediaeval model of university was remarkably resilient, it is generally recognised that the institution went into a period of decline in the 1700s, having suffered from religious turmoil and a gradual loss of relevance over the preceding centuries (Perkin 2007). The influence of Wilhelm von Humboldt in the early nineteenth century is seen as being pivotal in its revival. Through his writings and the founding of the University of Berlin in 1810, he advocated for a revitalised role of the university in society, based on the ideas of philosophical and scientific enquiry, academic freedom, and the union of teaching and research—shielded from the political and economic vicissitudes of the world by the protection of the monarch. While historians such as Nybom (2003, 2007) argue that in reality the Humboldtian university was short-lived and inadequately implemented, it has had a profound influence on conceptions of the institution and laid the basis for the later US research university.

Further changes took place in the nineteenth century on account of the accelerating industrial revolution, bringing new professional areas—including engineering and accountancy—into the sphere of the university. In nineteenth century USA, a number of ‘land-grant’ universities were created with a distinct remit for contributing to local development, through fostering technical skills for agriculture and industry. These

institutions were forerunners of the later ‘developmental university’, a term emerging in the following century to describe the new emphasis in countries that had recently gained independence, particularly in Africa, and endorsed by the Association of African Universities (Coleman 1986; Yesufu and AAU 1973). The primary characteristic of the developmental model was that universities would be explicitly oriented towards those activities that would enable the development of the economy and society, particularly in impoverished regions, with a prominent role for community engagement.

In the twentieth century, the USA became the primary driver of developments in the university, leading to the emergence of what Kerr (1963) described as the ‘multiversity’: involving some aspects of the developmental model through its emphasis on service, but defined by its great size, varied functions and units—including, in addition to traditional faculties, hospitals, laboratories, extension centres, and a bewildering multiplicity of roles in relation to society. More recently, in the context of expanding enrolments and declining proportions of public funding, institutions have had to become more financially self-sufficient and entrepreneurial, leading to the emergence of the ‘enterprise university’ (Marginson and Considine 2000)—alternatively described as the ‘entrepreneurial university’ (Clark 1998; Sam and van der Sijde 2014). As expressed in Wissema’s (2009) ‘third generation’ university, some of these institutions aspire to become technology hubs, as seen in Silicon Valley or the Cambridge model: at the heart of a web of high-tech companies with constant cross-fertilisation and mutual financial benefit.

However, while the enterprise university is undoubtedly a dominant model in contemporary times, it has not completely superseded the previous forms, and many ideas and practices from mediaeval, Humboldtian, and other models are still present in our contemporary institutions. Moreover, there has been further diversification of institutional forms in distinct geographical and cultural contexts, such as the Nordic university (Välimaa forthcoming), the Latin American university (Bernasconi 2007), and the post-Confucian University (Marginson 2014a).

What patterns or trends, if any, can be observed in this shifting trajectory of the institution? This article adopts an analytical framework of three components—value, function, and interaction—in order to identify salient characteristics of the institution. First, there are differences in the fundamental justification for the existence of the university—the *why* of higher education. This can be termed the *value* dimension. Second, there are differences in what the university actually does, the range of activities and roles that it fulfils. This can be termed the *function* dimension. Third, there are differences in the way the university relates to the outside society, and in the movement of peoples and ideas inwards and outwards—the *interaction* dimension.

The aim of this three-pronged framework is to understand the ‘anatomy’ of the institution—its purposes, the practices organised to achieve those purposes, the links with society outside—and the interrelationship between those elements. One advantage of this scheme is that it allows some conceptual breathing space from the more obvious and highly contested categories such as public/private, academic/vocational, or face-to-face/distance learning, and considers the deeper significance of the changes affecting the institution. It is important to highlight that this framework does not attempt to capture all aspects of relevance of higher education: more specific frames are needed, for example, to understand fully the governance of institutions, their funding, and equity of access.

Value

The value attached to the university revolves largely around the axis of intrinsic versus instrumental worth. On the one hand, the knowledge stored, generated and transmitted by the university might be seen to be intrinsically valuable, being worthwhile in itself without any further justification. This is the view usually associated with Cardinal Newman's (1852) well-known work *The Idea of a University*. Alternatively, the knowledge in question might serve an instrumental purpose, contributing to individual and societal goals, and interests of an economic, political, or cultural nature. A subspecies of instrumental value is *positional* value—a person's opportunities and benefits relative to others, in the context of scarcity and the existence of excludable and rivalrous goods (Marginson 2011). Positional advantage may be obtained through screening or signalling functions of higher education, even when there is no tangible instrumental benefit gained through learning (McCowan 2015). There may of course be some combination of these, with intrinsic and instrumental value not being mutually exclusive categories (so, we might hold that there is intrinsic worth in furthering human understanding of the deep structures of language, while also valuing its contribution to developing computer programming).

The dimension of value concerns not only the extent to which knowledge is instrumental rather than intrinsic, but also the purpose of the instrumental activity. So, the knowledge produced by the university could be instrumental in strengthening the military capacity of a nation in order to conquer its rivals, or alternatively it could function to produce globally available cures for diseases. In relation to individual outcomes, we can distinguish between economic ends—associated with human capital theory—and broader conceptions of outcome in terms of developing freedoms to pursue one's life goals, such as those associated with the capabilities approach (Boni and Walker 2013). This dimension, therefore, leads us to a consideration of the private or public benefit of the goods produced by higher education (Marginson 2014b; Bloom et al. 2006b; Tilak 2008), and the locus of benefit at local, national, and global levels.

The value dimension of the university also relates to equality, involving both *import* and *export* roles of the university in Brennan and Naidoo's (2008) terms, referring to equality of opportunity for students entering the university, and subsequent impact on equality in the outside society. There has been extensive policy and research attention on the former, relating to equitable admissions procedures (e.g. Ilie and Rose 2016; Marginson 2016; McCowan 2016; Meyer et al. 2013; Mountford-Zimdars and Sabbagh 2013), but less so on the latter, relating to the impact of teaching, research, and other activities on equality, as seen in Walker et al.'s (2009) study of pro-poor professionals.

Function

Function relates to the concrete activities undertaken by the institution. There are different ways of categorising these activities. Most commonly, the triad of teaching, research, and community engagement or public service is used as a frame for understanding the functions of the university—sometimes in an official or constitutional form, as in Brazil. However, these broad categories do not exhaust the specific activities undertaken or the ways in which we might understand those activities.¹ Universities also function as sites for archiving of knowledge, and for the maintenance, interpretation, sorting, and selection of

¹ The World Declaration on Higher Education of 1998 provides a more extensive outline of the missions and functions of higher education in Articles 1 and 2 (UNESCO 1998).

intellectual traditions and texts. They are also sites for critical reflection on and discussion of society and policy, along the lines of Habermas's public sphere (Marginson 2011). They also provide an array of other services, such as medical treatment, venues for community and corporate meetings, sporting facilities, and events. For many students, they also represent a space for social interaction, recreation, and cultural enrichment.

Within teaching and research, there are also a range of possibilities. Teaching can be focused on traditional disciplinary areas, can categorise disciplinary areas in different ways, or develop a more transdisciplinary approach. There are also differences in relation to the balance between undergraduate and graduate study, in providing for a more professional or more academic formation and so forth. 'Research' so to speak only becomes a function of the university with the advent of the Humboldtian model, but conceived more broadly, the relationship to the stewardship, production, or application of knowledge can differ markedly between different forms of institution. The nature of and balance between all of these activities has changed dramatically over time, with a trend of increasing diversification—captured in Kerr's (1963) idea of the multiversity discussed above.

Interaction

The university is a distinct institutional entity and in many cases a physical place with physical boundaries. Yet universities vary considerably in the extent to which they are porous to the outside world, in terms of the human actors able to participate in their activities, and in terms of the flow of ideas. We can distinguish here between *inbound* and *outbound* porosity, the ease of flow of actors and ideas from society into the university and vice versa.² So, in some cases universities are porous in relation to knowledge from other sectors—for example, technological developments from industry—or conversely, are active in translating and communicating the knowledge produced within them to partners outside, say new research on water sterilisation for the local authority. Or alternatively they can be more resistant to flow in both of these directions.

We can also view access for students as a form of porosity—the extent to which universities are open to a broad range of students or alternatively restrict entry. Also included here is the extent to which universities are permeable to incorporation in the teaching staff of professionals from outside and open their doors to community members to participate in courses and activities. All of these dimensions of porosity can be seen at different scales: in relation to local communities, the national and the global, thereby linking it into debates on internationalisation.

Applying the three dimensions

There is some interlinkage between the three dimensions of value, function, and interaction. It would be impossible for an instrumental conception of the university not to have any porosity with the outside world, and some functions—such as the existence of a university hospital and adult education courses for the local community—would also necessarily involve this form of interaction. Likewise, a strong intrinsic value attached to knowledge would encourage the functions of archiving or interpretation of that knowledge, while the authoritative value given to historical texts in the mediaeval university would encourage low porosity.

² A similar idea to porosity is expressed by the term 'connectivity', as used in the U21 Ranking of National Higher Education Systems.

For illustrative purposes, it is useful to isolate five of the types of university outlined in the historical sketch above—the mediaeval, the Humboldtian, the developmental, the multiversity, and the enterprise—albeit bearing in mind that these do not correspond to distinct historical realities. When applied to these five models, we can see some marked differences and evolution in the three dimensions. In terms of value, the mediaeval university is known for its conception of intrinsic value of knowledge, although it also had an instrumental role in equipping people for their professional lives. The Humboldtian university continued with a strong sense of the intrinsic value of knowledge, but again with an additional instrumental role, given the knock-on benefits to society from research and scientific discoveries. The developmental university, on the other hand, moves away from the intrinsic value of knowledge and has an entirely instrumental one, closely linked to the interests of society, especially those segments of the population not previously enjoying the fruits of higher education. In the multiversity, these forms of value are combined, while for the enterprise university, the value of knowledge resides in its commercial appeal and in its impact on economic growth in the broader society.

There are similarly notable changes in terms of function. The university moves from a role of archiving, scholarship and transmission of bodies of knowledge, to one of original research and discovery, to the application of knowledge to society's problems, to a proliferation of functions, and finally to commercialisation of knowledge. One aspect of these shifts of function of the university is the movement from mode 1 (blue skies, academic, disciplinary-based) knowledge towards mode 2 (interdisciplinary, applied) knowledge (Gibbons et al. 1994). In terms of the third of the dimensions, interaction, we see a progressive movement of opening, from the low-porosity mediaeval and Humboldtian models with limited flow of people and ideas, towards a much greater interaction in the developmental university and multiversity, with the trajectory continuing in the enterprise model.

The Table below summarises the key characteristics for each of the three dimensions. The designations are necessarily reductive—particularly for 'function'—but serve to give an overall characterisation (Table 1).

We can therefore identify three major trends, one in each of the three dimensions. First, that of *instrumentalisation*, a movement from valuing knowledge for its intrinsic worth towards its instrumental worth; second, that of *application* of knowledge, of employing theoretical ideas increasingly for practical ends; and third, *opening*, as universities become more porous with the outside world. The implications of these trends for development will be drawn out in greater detail below.

Table 1 Five models of the university

	Value	Function	Interaction
Medieval	Intrinsic (+instrumental)	Stewardship and transmission	Low porosity
Humboldtian	Intrinsic (+instrumental)	Discovery	Low porosity
Developmental	Instrumental (service)	Application	Medium porosity
Multiversity	Instrumental (+intrinsic)	Multiple	Medium porosity
Enterprise	Instrumental (economic)	Commercialisation	High porosity

Developmental impact in the context of commodification and unbundling

The hopeful vision presented by development agencies of the potential role of universities in poverty reduction and societal development in LMICs is to a large extent dependent on particular orientations for the characteristics of value, function, and interaction outlined above. A university engaged in achieving the SDGs would largely follow the developmental model of institution. The characteristics of this model are that taught courses are directed towards areas in which societies are in need of human resource, research is directed towards applied areas of need, and academics are encouraged to provide advisory services to government and communities. Access also becomes a key issue in the developmental model, with universities opening their doors to a broader proportion of the population. No longer is academic freedom and the pursuit of truth sacrosanct as in the Humboldtian model; the key feature now is relevance, applicability, and developmental impact.

A higher education system conducive to development would, therefore, be characterised by instrumental value attached to knowledge, but by a form of instrumentality oriented towards the public good, with strongly egalitarian orientations, requiring that the fruits of the institution be distributed in the interests of all in society. It would require a range of teaching, research, and public engagement functions as outlined in the previous paragraph. As regards interaction, there would be very high levels of porosity in both agents and ideas. In terms of inbound porosity, access for students would need to be open and equitable for those from all social backgrounds, and participation would need to be widened considerably. Universities would also need to be porous to the entry of ideas from outside, particularly the priorities of development: agendas for research and teaching would be set by the needs of society. Outbound porosity would also be high. University staff would be expected to engage actively with external bodies, disseminating research findings and providing advice. Ideas generated within the university would be shared externally, seeking tangible application in different spheres of society.

Few institutions fully adhering to the developmental university model have been created in practice. One attempt was the University for Development Studies in northern Ghana, created in an arid and impoverished region of the country, with multiple campuses serving areas that had previously had no presence of higher education. The university has focused its taught courses in applied areas of science, health, and agriculture, and all students undertake placements in rural villages carrying out development projects at the end of each academic year (Abukari 2010). A new wave of public universities created in Brazil also adhere to this model, such as the Federal University of the Southern Frontier, again with multiple campuses outside metropolitan areas and engaging in extensive outreach work, in particular with communities of landless peasants. However, while these examples are relatively rare, the principle that a university should have a role of service for society has been influential—at least in rhetoric—and has been expressed particularly through the community engagement function of institutions.

Nevertheless, institutions of this sort—and the developmental role of universities in general—are circumscribed by a range of influences, including national and international rankings, student and staff mobility, the preferences of employers, the direct operations of transnational higher education providers, and the agenda setting of influential international organisations such as the World Bank and OECD. It is these trends that need to be borne in mind when assessing the likely trajectory of higher education and its ability to attend to development goals.

Two currents characterising the contemporary higher education landscape are particularly relevant in this regard: *commodification* and *unbundling*. Commodification refers to the process of conversion of the functions of the university into products and services for sale, while unbundling refers to the separation out of those functions from packages into individual units. They clearly grow out of the ‘enterprise’ model outlined above, but are distinct from it. Commodification is already practised by entrepreneurial institutions, though usually in combination with nonprofit-making activities, state-funded activities and so forth, and represents the acceleration of these tendencies. However, what characterises the contemporary enterprise university is not the complete abandonment of teaching and research of intrinsic value or in the public good, but the continuance of some of these activities alongside the revenue generating ones. The nature of the enterprise university is captured well in this statement by Bowen (2013): ‘Universities do have to become more business-like in relevant respects at the same time that they have to retain their basic commitments to academic values’. The coexistence of these missions (either complimentary or contradictory, depending on one’s point of view) is what distinguishes the model from the trend towards total commodification. As Marginson and Considine (2000: 5) state, ‘‘Enterprise’ is as much about generating institutional prestige as about income’, a feature that will also act against tendencies towards unbundling, as discussed below.

As highlighted by Marginson (2011), status competition can be as much a threat to the public good function of universities as the market. Nevertheless, this dynamic is less relevant to lower-income countries, few of which have institutions within touching distance of the upper echelons of the rankings. For this reason, it will not be a primary focus of this article—although it could equally be seen to have a pernicious effect on the developmental role of the university assessed here.

Unbundling is a logical result of the emergence of entrepreneurial activities in institutions, as it seeks to drive down costs and maximise profits through separation of activities. Commodification and unbundling are linked, therefore, as both can function to maximise commercial profits. However, they are not identical, since it is possible to have a commercialised comprehensive university and to provide unbundled higher education on a nonprofit or public basis. The following sections outline the basic characteristics of the two trends and assess them in relation to the three dimensions of value, function, and interaction.

Commodification

In essence, commodification refers to the process of conversion of services or products not initially for sale into ones oriented towards profit-making. The process is close in meaning to ‘commercialisation’, although the latter has a rather broader application. In higher education, commercialisation has affected all of the diverse forms of function. As explored in Bok (2003), US universities were early examples of commercialisation of their campuses, starting with those activities at the periphery of the university experience, such as catering, sports, and institutional merchandise. In more recent years, that commercialisation has crept towards the core, affecting teaching—with the raising or introduction of fees, and competition between institutions for prospective students—research—with significant amounts of funding provided by corporate entities, often with intellectual property restrictions—and community engagement—replacing freely given public service with income-generating consultancy and other services. These dynamics manifest themselves in the emergence of purely private institutions and a rapidly growing for-profit sector, but equally affect previously public institutions. The very life of the faculty member through

this process becomes one of ‘academic capitalism’ (Slaughter and Leslie 1997). While forms of commercialisation are present in all higher education systems, there are significant differences, with public universities in Continental Western Europe and Latin America being much more resistant than those in Anglophone countries, for example.

While many aspects of the university can be commercialised—including conventional commodities such as branded clothing, rental of space, etc.—the term commodification as employed in this article will refer specifically to the sale of knowledge. It refers to the process through which knowledge that could be freely imparted and acquired—whether through activities relating to teaching, research, or community engagement—is organised and made available for the purpose of generating income, and potentially profit.

In terms of the notion of *value* outlined above, a commodified system will encourage instrumental benefit: if the production and transmission of knowledge are dependent on an external client, then normally the client will expect to receive benefit deriving from that knowledge and direct their purchases towards the sources of greatest benefit. At first sight, the market would appear to be attuning the activities of the university to the needs of society. However, as with all markets, supply follows not need but demand, and the latter is dependent in turn on purchasing power. We move, therefore, from a notion of instrumental value to one of *exchange* value. Knowledge in this conception is valued not for the benefits that it can bring directly, but for the value that it can obtain on the market, and which can be used to purchase other desired goods. The university in turn is incentivised to create and disseminate not the kinds of knowledge that will bring the greatest benefit to society, but those which will bring the greatest revenue in relation to cost.

The commodified university may well have a multiplicity of *functions*, as in the ‘multiversity’, but the nature of those functions will be determined by considerations of financial viability. Teaching activities will for this reason migrate gradually towards courses that have high marginal profit, i.e. those for which there is high demand but in which the costs are lower. In consequence, for-profit universities tend to have a high proportion of students in applied social science courses, such as business studies, education, and law, with low provision of more costly courses, such as medicine or engineering, even if there are significant societal needs in these areas (McCowan 2004).

In terms of *interaction*, the commodified university is characterised by a high level of porosity. As regards flow of people, the market has no interest in restricting access to the few, as in the traditional elite university. However, in order to cater for high-income and low-income students a diversity of products is made available, with a range of prices, leading to a stratified system (McCowan 2016). Some consumers will be unable to purchase even the cheapest products or may decide it is not worth their while. In terms of outbound movement of people, there is also a high degree of porosity, with academics engaging closely with industry, as well as potentially starting up their own spin-off businesses. There is also extensive flow of ideas—deriving the ‘subject matter’ of research and teaching from the economic interests of external consumers and in return providing a range of products for the external market.

Unbundling

Unbundling, on the other hand, is a current of which we are only seeing the initial signs. As a concept, it has its origins in business, referring to the movement from a set of products sold together as a bundle—for example, the traditional music ‘album’ or the Microsoft Office package—to one in which the consumer instead is able to purchase the individual components—so the preference for downloading ‘singles’, or purchasing only Excel if one

does not need the other programs. While in markets for some products there may be considerable advantages in bundles—for example, the package holiday—which may provide savings of money as well as time for consumers, in other cases bundles simply lock consumers into paying for products they do not want.

In higher education, the bundle in question is that of packaging tuition along with a range of other services: in many cases accommodation, broader learning opportunities such as overseas exchanges and language classes, recreational and cultural activities, and not to mention the research and scholarship undertaken by faculty. This model has been particularly prominent in the US campus-based institution, in which fees have been escalating in recent years as universities try to outdo each other in the facilities available for students (Selingo 2013; Bowen 2013). Unbundling, therefore, refers to the process of selling to consumers only those parts of the university experience that they want or can afford: in particular, providing just the basic tuition, without the ‘extras’ (Barber et al. 2013; Macfarlane 2011).

Perhaps the best-known manifestation of unbundling is the phenomenon of massive open online courses (MOOCs), which represent not only the extraction of the teaching element of universities, but a further paring down of the instructional process. MOOCs represent the presentation of knowledge content and learning activities, but in most cases without personal tutoring and without the validation aspect of credit-bearing awards. For those requiring validation for the purpose of job seeking, it is now possible to earn ‘badges’ from external bodies (e.g. Mozilla³), vouching for one’s knowledge or skill in a particular area.

In part, unbundling stems from technological changes making certain functions of the university obsolete—in particular its function as a store of humanity’s knowledge. It signals the end of the programme of study designed by lecturers, with learners choosing the individual components of their studies from a range of providers, whether university or other. One possible ramification of this process is for the traditional tenured faculty member to be replaced by a few ‘stars’—whose lectures are broadcasted to millions—supported by a team of part-time tutors who provide direct instruction. The boundary between educators and professionals is also broken down, with classes taught by those exercising a particular form of work in addition to specialised professors (Barber et al. 2013).

Unbundling has no inherent position on the question of *value*. While it is currently associated with highly commodified forms of higher education, it could in fact be used for teaching with intrinsic value. In fact, the lack of credentials attached to MOOCs indicate that learning is being acquired mainly for intrinsic and instrumental, rather than exchange or positional value (This may of course change as MOOCs develop accreditation and direct costs).

The key point in relation to *function*, and indeed the central characteristic of unbundling, is that it separates the specific functions from each other. It therefore represents the contrary tendency to the multiversity. While the previous diverse functions of the university may still continue, the higher education provider itself becomes more exclusively focused on teaching, and within teaching, on the packaging and delivery of knowledge, and possibly tutoring support. The research function of the university is then moved over to specialised research institutes, laboratories and think tanks, or research wings of private corporations.

³ See <http://openbadges.org/>.

Unbundling leads to the highest degree of porosity, to what we might describe as *hyper-porosity*. First, it represents an almost complete destruction of the idea of university as place. Through multipolar and distance provision, learners can access knowledge and instruction from anywhere and are interacting with students and instructors in other locations. The instructors themselves are unlikely to be full-time faculty and may have most of their lives outside of the higher education space. In relation to ideas, there is also an extreme degree of porosity, with learners developing a portfolio of knowledge and skills partly from higher education providers and partly from other knowledge sources, and having them validated by a third party.

The characteristics of commodification and unbundling are summarised in Table 2.

Implications for development

What then are the prospects of these two trends for development and the SDGs? The movements towards porosity are undoubtedly positive for development. While the ‘ivory tower’ conception of university may bring (sometimes unexpected) benefits of a concrete nature to society in the long-term, the increased openness to society’s demands and needs is without doubt important in the short term, particularly for lower-income countries. Furthermore, development of distance education and new providers have the potential to bring higher education to a greater proportion of the population. With streamlined forms of provision and greater efficiency, they also have the potential to increase availability through lower costs to the state and greater affordability to consumers.

However, the implications of the move towards exchange value and private benefit are of great concern in terms of development in LMICs. By definition, a university for development would need to have primarily instrumental benefit. The value of its activities would be judged by their effectiveness in solving critical problems facing society, enhancing economic growth, ensuring poverty reduction, and promoting sustainability. The kinds of benefits provided would need to be available for all of the population, and to a large extent in a relatively short time frame (given the pressing nature of many of the challenges). It would avoid becoming merely a positional good—for example in the case of diploma bestowal becoming merely a means for elites in society maintaining advantage over others, but without an aggregate benefit.

Impact on development may require, therefore, moving away from the conception of intrinsic value of knowledge embodied in different ways by the mediaeval and Humboldtian models. Yet in a move towards instrumentalism, it is also important to avoid the emphasis on exchange value brought by commodification: the worth of the goods provided by the university would be in the tangible benefits brought to society, not in the success of their sale (which depends as much on the availability of a buyer as on the worth of the product).

Table 2 Trends of commodification and unbundling

	Value	Function	Interaction
Commodification	Exchange	Determined by demand	High porosity
Unbundling	Undefined	Knowledge delivery	Hyper-porosity

In addition to problematic implications raised by commodification and unbundling in relation to *value*, there may also be issues in relation to *function*. Commodification, as outlined above, assigns its functions in relation to demand. As with all markets, this mechanism has positive points in its responsiveness to individuals and groups in society, but has downsides in relation to its dependence on purchasing power. There are further distortions that occur through advertising, in convincing consumers to have particular ‘wants’ that may not be in their interests.

Most examples of the operation of marketisation in higher education are of the quasi-market type, with significant state involvement in funding—either to students directly or to institutions—and regulation of fee levels and numbers. Brazil is an example of a country with something closer to a free market within the private sector. In this case, the benefits and dangers of commodification are clearly seen. On the one hand, private sector expansion has enabled a rapid increase in enrolments, giving access to populations previously unable to find a place. On the other, it has led to a worrying decline in quality in many institutions, a narrowing of the disciplinary range of course offerings, a movement away from community engagement and research activities, and increasing inequities through stratification of opportunity (McCowan 2004; Sampaio 2011).

In Kenya—and a number of other African countries—on the other hand, marketisation has occurred to a large extent through the public sector. In addition to government-sponsored places allocated on the basis of academic merit, public institutions are allowed to admit fee-paying students on parallel programmes. Here too, there has been a negative impact on quality. Incentives for revenue maximisation have led to an uncontrolled influx of these parallel stream students, without corresponding recruitment of faculty, leading to a significant worsening of the conditions for learning (Oanda and Jowi 2012).

Equally, commodification of the products of research and community engagement place constraints on the possibilities for development, particularly if the aim is for ‘inclusive development’, one in which the fruits are equitably distributed across the population, with a focus on maximising of the prospects of the least well-off. Commercially funded research may indeed have knock-on public benefit, but it will be filtered first through the profit requirements of the corporation; in some cases it may even have a negative impact. The growth of the so-called consultancy culture amongst lecturers in lower-income countries—through which academic staff supplement their meagre incomes by renting out their services—has also had a prejudicial effect on their institutions, reducing their available time for core activities.

In relation to unbundling specifically, it is important to state from the outset that there is nothing inherently wrong with the process or anything inherently valuable in the packaged university. It is necessary to assess the implications of the alternative scenarios for the role of the institution and benefits emerging. The difficult question—and one that cannot be comprehensively covered in this article—is whether unity of teaching, research, and service is necessarily needed, or whether these functions can be performed equally well by different institutions. While more empirical research is needed to investigate these dynamics in LMICs, there are reasons to believe that there are cross-fertilisation benefits to the coexistence of teaching and research: for instance, with teaching enhanced by lecturers’ engagement in research activities, and potential for student learning through their participation in research projects. Interaction between research and community engagement can also lead to positive synergies. The movement of research out of universities towards specialised (often private) units has been argued for on the basis of greater efficiency and attunement to industrial needs, but it has deeper implications in terms of the shift from basic towards applied research, with a movement from mode 1 knowledge towards mode 2

knowledge (as discussed in relation to Botswana in Tabulawa et al. 2013): this shift has apparent short-term benefits, but the longer-term ramifications are a source of concern. Furthermore, unbundling also prevents cross-subsidisation, through which institutions can use more lucrative activities to support those pursuits with less potential for profit generation but with other forms of value.

In addition to cross-fertilisation and cross-subsidisation, there is also the question of equality of opportunity. A coordinated higher education sector, or even a comprehensive institution, can allow for mechanisms that ensure equitable chances for all students, including affirmative action programmes and extra support for disadvantaged students. This political and financial leverage is weakened through unbundling. Furthermore, extreme forms of unbundling such as MOOCs, while touted as the solution for impoverished countries with low higher education coverage, present particular difficulties for disadvantaged students. In resource-constrained countries in which there are problems of quality at primary and secondary levels, students are unlikely to have the learner autonomy necessary to navigate and learn effectively from a MOOC, and there are further issues of cultural appropriateness (Wildavsky 2014). The well-known initiative Kepler in Rwanda has in fact introduced a form of ‘rebundling’ in response to these challenges, combining US-accredited MOOCs with face-to-face tuition and student accommodation, so as to make the course content more relevant to the local context and to provide a social network for students, thereby improving retention (Kepler 2016).

Conclusion

It is understandable that commodification and unbundling appear attractive options to those looking to expand opportunities for higher education in the poorest parts of the globe. A large number of nation-states lack the funds to support anything beyond a 5 % higher education enrolment rate, and the introduction of private providers and streamlined, affordable courses seems like the only solution to the conundrum. In addition, there is the perception that because MOOCs are new and use cutting-edge technology, they are the best preparation for young people for entering the new technology-driven world.

However, there are a number of problems presented by these trends. As seen above, they show very positive points in relation to *interaction*, but raise a number of concerns in relation to *value* and *function*. In particular, there are concerns relating to inequities of access and the undermining of the public good function of universities. Above all, it is particularly problematic to consider that trends whose worth in high-income countries has been shown to be uncertain (to say the very least) should be exported to the ‘developing world’ as purportedly superior options.

Equity of access is intrinsically important, for those who hold to the value of fairness. But it also has an instrumental value in allowing for talented individuals with an interest in higher study to pursue their interests, produce new knowledge, develop technology, and become competent professionals. An inequitable higher education system, therefore, is also an inefficient one in relation to the interests of society. The marketisation of higher education—whether through private providers or quasi-markets within public sectors—has generally exacerbated inequities of access. While free-of-charge public higher education systems in the elite phase were far from equitable—with the privilege of access conferred through apparently meritocratic admissions, but in practice out of the reach of most of the population—private systems make those inequalities even more entrenched and impede

attempts at affirmative action. Unbundling also weakens levers to ensure equality of opportunity. Furthermore, it also presents greater barriers to those without sufficient learner autonomy, meaning that epistemological access is not possible for those from disadvantaged backgrounds. As discussed above, for access to be meaningful it also needs to be linked to a consistently high quality of provision, involving opportunities to learn and to convert that learning into subsequent opportunities.

The combination of the profit incentive and disassociation of the diverse functions of the university also undermines its ability to provide teaching, research, and community engagement in the public interest. The underpinning value of the university moves towards exchange rather than intrinsic and (net gain) instrumental benefit, and its functions become fragmented and unable to reinforce one another.

Poverty reduction and other aspects of sustainable development are unlikely to occur purely through responsiveness to market forces. Instead, proactive functions are necessary on the part of the university, as attempted—but rarely put into practice—by institutions in the developmental model. Three of these functions appear fundamental: first, investigating and determining the nature of societal challenges; second, providing solutions to those problems, and in some cases implementing those solutions; third, providing a space for construction of society's conception of development.

The first of these functions will primarily involve the activity of research. Solving the problems, on the other hand, will also incorporate the teaching pillar, in equipping individuals for their personal, professional and civic lives, either along a perspective of human capital theory of skills for enhanced productivity or alternatively a capabilities perspective with a broader conception of human agency. In addition, it will also involve a significant service function, in allowing the uptake of the ideas generated by the university in society, whether through technology transfer to industry, advice to governments, or interchange and developmental work with communities [as explored in Chege (2015) in relation to Kenya]. The third of these functions is rather less concrete in terms of the activities involved, but it rests on the principle that universities provide a space for free interchange of ideas without constrictive influences from external bodies, and allow for as broad a range of social groups as possible to contribute their ideas.

This article is not proposing that the mid-twentieth century model of the developmental university is the only potential conceptualisation or even the most desirable in the current age. There are certainly reasons to be wary of the strong state control that many developmental universities endured, given the unpredictability of government, and threats posed to institutional autonomy and academic freedom (Coleman 1986). There are also important contributions from the other university models. The 'blue skies' research associated with the Humboldtian model is also of fundamental importance in the long term in advancing knowledge, leading to innovation in technology and intellectual, cultural and artistic vibrancy.

Indeed, there are reasons to be cautious of a predominantly instrumental conception of university however defined: universities should also cherish the intrinsic value of the pursuit and acquisition of understanding, and [as argued by Collini (2012) and others] tying the university to short-term tangible goals can end up falsifying and degrading the purpose of the university in an ultimately self-destructive manner. Excessive porosity can also have a negative side, with some insulation of the university from society's concerns and priorities beneficial in terms of allowing for the generation of innovative and paradigm-shifting ideas.

Nevertheless, the basic characteristics of the developmental model are the ones most aligned with developmental goals of LMICs, and the best positioned to fulfil the

expectations of the post-2015 agenda. There is more than a degree of contradiction then in agencies that endorse the new SDGs but simultaneously promote commodification and unbundling in higher education. Attempts to find solutions that are ‘affordable’ and efficient are of course laudable, but there is little point in enabling access to higher education for students—and safeguarding the viability of the higher education sector as a whole—if the overarching purpose and potential for impact of the institution are whittled away.

The university that will address the post-2015 development agenda may not need to be a state university, at least not in the traditional sense of a fully state-controlled and tax-funded institution. Yet it will need to be a public institution, that is to say, one fully oriented towards the public good. Achieving this aim will require the reversal of a number of explicit policies—and de facto trends through lack of policy—currently in course around the world.

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