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Five perils of the impact agenda in higher education

Tristan McCowan* – *UCL Institute of Education, UK*

Abstract

The impact of higher education institutions on society has become the focus of significant policy attention in recent years, most prominently as part of research evaluation. This paper presents a theoretical exploration of the notion, identifying the key dimensions as source, form, trajectory, intensity, timescale and destination. While acknowledging the importance of porosity between universities and society, and the need to address critical contemporary challenges, five dangers of the impact agenda are highlighted: the normative dimension; the linear relationship; unpredictability; measurement; and instrumentalization. As a response to dominant conceptualizations, the paper proposes the notion of the *generative intrinsic* as a more robust basis on which to base the work of universities.

Keywords: higher education policy; impact; instrumentalisation; public engagement; research evaluation; universities

Introduction

While meeting significant resistance along the way, the progressive opening up of universities to society over the past century has been widely viewed as a necessary and desirable trend. Few now publicly defend the cloistered university in which academics pursue knowledge for its own sake, sharing it only with other scholars and a few privileged student-disciples. While there are still significant barriers to access for disadvantaged students, higher education institutions have expanded considerably across the globe and provided opportunities to a broader proportion of the population (Marginson, 2016; Ilie and Rose, 2016; McCowan, 2016a). The academic staff body has also diversified (though to a lesser extent than the student body). There have been increasing pressures on institutions to orient research towards immediate societal needs, most commonly the economic ones, manifesting themselves at the micro-level in the employability of graduates and at the macro-level in links to the knowledge economy. There has also been emphasis on the public communication of knowledge and dissemination of research in more accessible formats.

To counter these apparently positive trends is to brand oneself as elitist, out of touch, a knee-jerk conservative or self-serving. Furthermore, in the context of squeezes on public funding, such opposition may sound the death knell for what is still left of taxpayer support to higher education. At the same time, there remains a lingering unease with the new demands on universities. Lurking behind the attractions of porosity, and the legitimate social justice demands on the expansion of access, lies a series of critical and complex issues that are rarely faced head-on, relating to the principles by which we judge the validity of the university and its outputs, and the conditions under which learning and scholarship can best be conducted.

* Email: t.mccowan@ucl.ac.uk

One central manifestation of this increasing porosity of universities is the emphasis on *impact*. Its inclusion within the UK's 2014 Research Excellence Framework (REF), in which it was allocated a 20 per cent share in the assessment of academic research quality, has brought the question to the fore. Impact evaluation has also been trialled in the Netherlands and Australia, while the European Research Council evaluates grants in relation to commercial and social innovation, and has also introduced an extra funding stream to generate 'non-academic impacts' from research (Gunn and Mintrom, 2016: 249). In the USA, the impact gauge STAR METRICS (Science and Technology for America's Reinvestment: Measuring the EffecT of Research on Innovation, Competitiveness and Science) has been developed since 2010. While there has been significant scepticism and some outright opposition – particularly in less applied disciplinary areas – there is little doubt that the impact agenda for universities is here to stay.

This article presents a theoretical engagement with the notion of impact in higher education. It explores the conceptual and normative terrain of the idea, drawing on its expression in policy documents and secondary analyses, and puts forward a theoretical frame for understanding it. There are a number of complex questions that must be acknowledged when addressing the issue. In the first place there are the descriptive-analytical aspects: what is impact? How can impact be measured? Can universities produce impact? What are the knock-on implications of orienting universities' work towards impact? But there are also questions of a normative-evaluative nature that are much less often addressed: what kinds of impact should we be promoting? How should the benefits be distributed across society? Is orienting universities' work towards impact the best or most coherent use of the institution?

Impact is to a large extent associated with the research function of the university, and most of the academic attention to the topic has this focus (e.g. Martin, B., 2011; Oancea, 2013a, 2013b; Ovseiko *et al*., 2012; Parker and van Teijlingen, 2012). However, we can look at all the functions of the institution through this lens: teaching can also have greater or lesser impact on society depending on how it is oriented, not only on the lives of the graduates themselves but also on others through their work and other interactions. The UK's new Teaching Excellence Framework assesses some impacts of teaching in this way (Ashwin, 2016), through gauges of student outcomes in the form of employment and highly skilled employment, as does the recently introduced College Scorecard in the USA. Indeed, the entire employability agenda can be seen as a manifestation of attempts to achieve impact through teaching (McCowan, 2015), while attempts are also being made to gauge the social impact of graduates (Jump, 2015). Furthermore, the impacts of research are very often channelled through the training of postgraduate researchers, in a liminal space between teaching and research. There are also direct impacts through service or community engagement, technology transfer and consultancy (in many cases occurring without a direct link to research, as required in the REF assessment). Universities UK (2014) has also analysed the direct impact of the higher education sector on the UK economy, concluding that it contributed £73.11 billion of output and over three-quarters of a million jobs – 2.7 per cent of all UK employment in 2011.

In relation to development aid, the broader impact of higher education has also been a focus of attention – as evidenced by the UK Department for International Development's commissioning of a large-scale literature review on lower-income countries (Oketch *et al*., 2014). The severe constraints on public funds in these countries – combined with the historical capture of the benefits of higher education by the elites – have led to increasing concern regarding the contribution of the institution to society.

This role has been acknowledged in the recently agreed Sustainable Development Goals, in which universities are seen as central to the task of promoting prosperous and equitable societies and protecting the natural environment (McCowan, 2016b).

Problematic aspects of the impact agenda have been addressed in some recent works, focusing on issues of restriction of autonomy and academic freedom, of falsification and embellishment ('impact sensationalism'), excessive pressure on academics (particularly those early in their careers), controversial or negative impacts, and financial costs to universities and government (e.g. Chubb and Watermeyer, 2017; Gunn and Mintrom, 2017; Smith *et al.*, 2011; Watermeyer, 2016). This article concurs with a number of these critiques, and draws on them in a systematization of five principal 'perils' of the impact agenda. While acknowledging the urgent global challenges in the contemporary age and the significant role of universities in addressing them, the article views the current impact agenda as one that may prove self-destructive for the university. Nevertheless, the argument here is not to remove or retreat from impact altogether, but to transform it so as to achieve a broader conception of the types of impact that are of value, and a greater attention to the processes through which impact is achieved.

While there is a range of existing analyses of impact in higher education, with a few exceptions (e.g. Ashwin, 2016), these focus on the impact of research, drawing out implications for research evaluation. A distinctive aspect of this article is that it assesses impact across the whole institution, including teaching, as the logic of impact – and concomitant influences on the practice of universities – is relevant there too. Furthermore, this analysis engages with the normative dimensions together with questions of how impact works in practice, with interlinkages between these two essential for understanding the role of universities. In order to shed light on the latter, a new framework of six dimensions is put forward for understanding the nature and operation of impact. This frame enables greater conceptual clarity for assessing what we mean by impact, how it occurs, and the criteria by which we might judge its desirability.

The idea of impact and its historical emergence will be explored in the next section, followed by a discussion of the framework for understanding the constituent components of the notion. Following that there is an analysis of five perils of the agenda, and the proposal of an alternative conceptualization of the positive benefits of the work of universities.

The meaning and historical trajectory of impact

The rise of impact in higher education is not an aberration but part of a historical evolution of the university that has tied it ever closer to society's needs. Perhaps there has never been a period in which the university was entirely divorced from society – despite the apparent hostility between town and gown in earlier centuries (Perkin, 2007). In its allegiances to church and/or (city-)state, and in the imparting of professional knowledge, even from mediaeval times the university had certain practical functions in relation to the outside world. Nevertheless, a significant change took place through the nineteenth century with the linking of universities more closely to the emerging industries, and the development of new practical courses such as engineering, accountancy and agriculture. The emergence of the land-grant universities in the USA in the latter part of the nineteenth century is perhaps the most striking example of this new practical bent of the university, explicitly created as they were to support agricultural and industrial development in areas not hitherto served

by higher education (McDowell, 2003). The 'developmental university' in the newly independent countries of Africa after the Second World War continued this tradition, with a strongly egalitarian emphasis, seeking to engage with policymaking and serve the most impoverished regions of their countries (Coleman, 1986).

Since the latter parts of the twentieth century the ties between university and society have taken on a more explicitly economic dimension. Universities are now tasked with being hubs for innovation – particularly in technology, at the heart of a vibrant network of entrepreneurs and spin-off companies – the 'third-generation' university in Wissema's (2009) terms. The shift in the knowledge-production function of universities has been conceptualized in terms of Mode 1 and Mode 2 knowledge (Gibbons *et al.*, 1994), the former – the traditional, disciplinary-based, open-ended academic research – being replaced by applied, multidisciplinary research with immediate practical ends. The changing role of the university is strongly linked to the emergence of the knowledge economy and the critical role attributed to technological innovation and high-level skills in the workforce (Gunn and Mintrom, 2016). Evaluation of impact can also be linked to broader shifts in public sector management, with the rise of performativity and the replacement of professional trust with accountability (Fielding, 2003; Nixon, 2004).

The discussions above have highlighted the political economy influences on the emergence of impact – changing patterns of governance, the increasing pressures to justify the use of dwindling state funding and the need to generate private funds by selling products of economic value to individuals and corporations. Yet we can also point to cultural and epistemological roots for the move towards impact in the context of post-modernity (Barnett, 2004), with the questioning of absolute truth and morality – and therefore of the role of the university, as depicted in many accounts of the institution (Readings, 1996; Santos, 2004), leading to an increasing onus on the institution to justify its existence through demonstrations of worth. Since the 1970s there has also been increasing attention to the obligation of scientists to society and to new ways of assessing research, leading to debates around relevance, research use, research utilization and knowledge utilization (Martin, B., 2011; Walter *et al.*, 2003; Weiss, 1979).

As stated above, a highly prominent appearance of impact has been in the REF, commencing in 2014. Examples of projects submitted include improving public understanding of the Israel–Palestine conflict, introducing a new international standard of loudness for use in industry, reducing Ford engines' carbon dioxide emissions and influencing government social care support (Jump, 2015). A key point is that impact in this sense is understood as being *non-academic*: simply producing knowledgeable graduates or high-quality research is not considered as impact, even when there is a tangible change (for example, the uptake of a new theory within the research community). Impact, therefore, involves not only movement from the university to the outside society, but also from the academic to the non-academic community. Common forms of impact are influences on policy, creation of new products or patents and uptake of ideas or technologies by local communities. As defined by the REF guidance, impact is 'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia' (REF, 2011: 26). The guidance continues:

> Impact includes, but is not limited to, an effect on, change or benefit to:
> - the activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding

- of an audience, beneficiary, community, constituency, organisation or individuals
- in any geographic location whether locally, regionally, nationally or internationally.

Research Councils UK define impact similarly as

> the demonstrable contribution that excellent research makes to society and the economy. This occurs in many ways – through creating and sharing new knowledge and innovation; inventing groundbreaking new products, companies and jobs; developing new and improving existing public services and policy; enhancing quality of life and health; and many more (2017: n.p.).

It can be seen here that, in the way that it is utilized in higher education policy circles (for example in the UK). The notion of impact has an exclusively positive sense. It is understood as the process by which the beneficial knowledge generated by the university brings desirable change in society (negative impacts – the so-called 'grimpacts' – although certainly possible are not generally contemplated).

As an initial disambiguation, it is important also to mention a highly prominent use of the term 'impact' in academic publishing, in particular in the Thomson Reuters (now Clarivate Analytics) journal impact factor. This usage departs from the sense outlined above as it relates to impact within the academic community – in this case, the number of citations of an article within a given time period – although it also reflects concern that research and scholarship 'gets out there' and has exposure and influence. A relevant dimension of contemporary academic publishing is the emphasis on open access in order to ensure that the fruits of research are accessed and used by as broad a range of communities as possible: for example, the requirement of the UK research councils that publications resulting from research they have funded be placed in open-access repositories. In Walter *et al.* (2003) these forms of impact through dissemination of research are termed 'conceptual', in contrast to 'direct' or 'instrumental', the latter corresponding to impact on the non-academic community; Research Councils UK (2017) makes a similar distinction between 'academic' and 'economic and societal' impacts. The focus of this article, however, will primarily be on the 'direct' or 'economic and societal' forms, since it is this sense that presents the most substantial challenge to our understandings of the role of the university and academic work.

The above-mentioned statements from the REF and Research Councils UK provide a satisfactory working definition of the concept and, while relating explicitly to research, are relevant for teaching too. However, they hide the significant complexities of the process, involving questions of both a descriptive and normative nature. The REF guidance quoted above stipulates the kinds of impact envisaged (e.g. on attitudes or behaviour), the range of beneficiaries (e.g. individual, community) and the location (locally, regionally, etc.). The ESRC also proposes distinct forms of impact:

> **Instrumental**: influencing the development of policy, practice or service provision, shaping legislation, altering behaviour
>
> **Conceptual**: contributing to the understanding of policy issues, reframing debates
>
> **Capacity building**: through technical and personal skill development (ESRC, n.d.).

The REF evaluation furthermore has two components, *reach* and *significance*: the former the breadth and the latter the depth element. The former of these relates to the beneficiaries of the impact, while the latter relates to the distinct element of the strength of the impact. In terms of beneficiaries, sometimes called 'user communities', distinctions have been drawn between primary and secondary beneficiaries (Upton *et al.,* 2014). There might also be a possibility of non-human beneficiaries – such as elements in the natural environment – though with a view that there would ultimately be some human benefit. Nevertheless, while a range of important distinctions are made in these documents, the schemes outlined above fall short of providing a satisfactory frame for understanding the dynamics of the process as a whole.

An analytical framework for impact

In order to move beyond the rhetoric of impact, a more comprehensive analytical frame is needed to identify its constituent elements. At its most reductive, impact is seen as an 'either–or': either research or teaching is having an impact, or it is not. A slightly expanded view will acknowledge the extent of that impact – a quality we can term *intensity*. Yet in order to fully understand impact we also need to know what kind of influence is involved, who is making that influence, on whom and by what means. We can conceptualize the impact of universities, therefore, in terms of six elements, outlined in greater detail below:

1. Source
2. Form
3. Trajectory
4. Intensity
5. Timescale
6. Destination

Source

This element relates to the origin of the impact, whether in terms of actors or activities. Does the impact derive from an individual, a group, an institution or the whole system? And does it emerge from a research project, a form of teaching or another activity? This element also draws our attention to the motivation of the impact: whether the activity in question was driven and designed by the actors themselves or commissioned in response to external demand.

Form

The nature of the impact is an aspect that has been discussed fairly extensively in current debates and in the literature. As seen above, the ESRC (n.d.) categorizes these into instrumental, conceptual or capacity building. We might also think in terms of economic, social, cultural, political or technological impact and so forth, or consider a combination of these. Another way of categorizing is according to 'activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding', as seen above in the REF guidance (2011: 26). An interesting question is raised here as to the extent to which the form of impact is contemplated within the original activity (e.g. a research project), or materializes only when reaching its destinations (e.g. in its application in industry).

Trajectory

The third element refers to the vehicle, means or process through which the impact takes place. Is it, for example, through dissemination of research findings to policymakers, formation of values in undergraduate students, or establishment of a patent for an innovative product? Trajectories can display different degrees of intentionality: in some cases a project may have built in an impact plan with specified outcomes; in others significant impact may have occurred in entirely serendipitous ways. Given the diversity of activities undertaken by the contemporary university, the pathways through which impact on society can take place are diverse, as indicated by the framework proposed by Oketch *et al*. (2014), for example. Ashwin (2016) puts forward the idea of a 'translation device' mediating in this way between knowledge production and impact on society.

Intensity

The next two elements describe specific qualities of the impact itself: in the case of *intensity*, the strength or depth of the influence, which corresponds to the element of 'significance' in the REF (2011). How we might understand intensity depends significantly on the form of impact in question – whether we are referring to changes in attitudes or to increases in national GDP; or whether we are referring to conflict resolution or fuel efficiency.

Timescale

The timing of impact – how long it takes from the original conducting of the activity to the emergence of an effect in the destination – is highly variable. Differences may be due to the types of trajectory (as outlined above), or to its form, or simply to the volume of resources available for dissemination. It is important to observe the interactions between this element and the previous one: in some cases there may be an intense impact to start off with, but one that dissipates rapidly; in others the impact may be slow to emerge, but prove to be highly significant in the long term.

Destination

Finally there is the question of the recipient or benefactor of the impact. Is it individual or collective? How equitably are the benefits distributed? This element is addressed in the REF 2014 guidance through the notion of 'reach' and in distinctions between different kinds of user communities. Notions of public and private returns are also relevant here, with impact either restricted to specific individuals or corporations, or in the case of non-rivalrous and non-excludable goods, potentially for the benefit of all (Marginson, 2011).

These elements can be used in empirical analysis, to gauge the process, participants and effects, and therefore to assess what kinds of impact are possible, and under what circumstances. As will be explored further below, we might like to problematize the possibilities of isolating these elements, for example in determining a single source of impact. Yet there is also a range of normative questions concerning the forms of impact that are seen to be most desirable (should we be prioritizing driving forward economic growth or bolstering social cohesion?), and the optimal distribution of the benefits (should we be focusing on the worst off in society, or maximizing the aggregate benefit?).

Take the example of a (fictional) research project on natural sweeteners. The *source* of the impact is a multi-institution research project in Paraguay on the composition and uses of the stevia plant. The research is being carried out in conjunction with a large drinks manufacturer, and the findings are taken up immediately by the company (*timescale*), as well as being subsequently disseminated in the public sphere, minus the commercially sensitive material (*trajectory*). The *destination* and *form* of the impact are multiple, and the *intensity* is variable: significant economic benefits for the company; some financial gain for Paraguayan farmers; a new variety of low-calorie fizzy drink for consumers; and loss of lands and environmental destruction for indigenous groups in the country.

What the scheme shows us is that it is unhelpful to see 'impact' in a unitary way. In fact it is a multifarious process that operates through diverse channels and involves multiple actors and that cannot be determined to be inherently positive or negative. 'Having impact' is, therefore, a woefully inadequate criterion for universities or for research, in terms both of understanding descriptively what is happening and of evaluating it normatively. These are among the complexities that will be outlined in the section that follows.

Five perils

The critique of impact that follows must be seen in light of the plentiful arguments in favour of the notion. The contemporary world is facing some urgent challenges in terms of environmental destruction, climate change, water shortage, as well as persistent armed conflict, displaced populations, severe poverty and inequalities. The university would be at the very least remiss, and most would think morally culpable, if it did not do everything in its power to address these challenges. Furthermore, in receiving public funds for its activities (in decreasing but still substantial amounts) it has a corresponding obligation to work in the public interest.

In addition, in its student body, the university receives people relying on the institution to forge their livelihoods and guarantee their financial security and well-being, and therefore has responsibility to those individuals (McCowan, 2015). While the empirical evidence is not always conclusive, there is extensive research showing the beneficial influence of higher education on graduates' lives, not only in terms of improving their salary prospects, but also in relation to their health and nutrition, empowerment and engagement in community life and the political sphere. Viewed from the perspective of the collective, higher education has been shown to have positive impacts in relation to democracy, governance, attitudes towards racial diversity, environmental protection and lowering of crime rates, among others (Brennan *et al.*, 2004; Bynner and Egerton, 2001; McMahon, 2009; Oketch *et al.*, 2014; Sall *et al.*, 2003).

The argument presented here is not then that the university cannot or should not aim to have a positive impact on society – indeed, these benefits are extensive and essential in our contemporary context, and are in fact often underestimated. The problem lies instead with the particular ways in which the impact agenda has been conceptualized and implemented. Five of these dangers are outlined below. Some of these points have been broadly acknowledged in public debate and in the moderate number of publications on the topic, particularly the threat to blue-skies research, short-termism, economization and difficulties of evaluation (e.g. Fielding, 2003; Gunn and Mintrom, 2016; Watermeyer, 2016). As Fielding states about the impact agenda in education more broadly:

> My sense is that it valorises what is short-term, readily visible and easily measurable. My sense is also that it has difficulty comprehending and valuing what is complex and problematic, what is uneven and unpredictable, what requires patience and tenacity (Fielding, 2003: 289).

The first of the points below relates to the normative question of what kinds of impact are desirable for universities to promote. The next two address the descriptive-analytical questions of what impact is and how it operates in practice, followed by a consideration of how it might be measured. The final point assesses what the implications of the impact agenda for universities might be.

The normative dimension

The first of these risks concerns the fact that matters of impact are not entirely technical but involve normative moral and political questions. In keeping with the 'evidence-based policy' and 'what works' agenda – the supposed movement from ideological or convention-based decision-making to a form based entirely on objective empirical evidence – impact is presented as a neutral endeavour. Needless to say, 'what works' is predicated on a prior question, namely what we want to achieve, and that in turn is based on fundamental values relating to human life, the nature of being and knowing, and the ideal society.

Views on the kinds of impact that universities should have vary by focus, with some emphasizing economic benefits, others cultural and aesthetic, or democratic participation and social cohesion (the dimension of *form* outlined above). Even within a specific area there may be contestation: two people may both have a purely economistic conception of higher education, but one might be focused on reducing absolute poverty and another on maximizing aggregate national income through strengthening investment banking systems; political conceptions of the role of higher education can vary from inculcating a rigid national ideology to promoting Freirean conscientization and grassroots transformation. A micro-finance scheme for women in Bangladesh can from one perspective be seen as beneficial in empowering them relative to men, while from another as locking them into exploitative capitalist relations; the development of publicly accessible scientific information is a laudable aim for some, but from a religious fundamentalist perspective is simply reinforcing false views of the origin of the universe. Gunn and Mintrom (2017: n.p.) also discuss 'controversial impacts', citing 'fracking, genetically modified crops, nanotechnologies in food, and stem cell research'. How, then, can we speak simply of 'positive' impact?

The distribution of the benefits of impact (the *destination* dimension) also involves a range of contested moral and political questions – i.e. whether contribution, need, desert, utilization or some other criterion should predominate. It is important in this way to distinguish between private and public goods produced, the latter in its triple sense of countable goods, a collective sense of good and the public sphere (Marginson, 2011). The impact may not in fact involve a net gain for society as a whole: it may simply be providing positional advantage for some people in relation to others, along the lines of 'zero-sum game employability' explored in McCowan (2015).

A central problem, therefore, is that the impact agenda assumes not only that impact will be positive, but also popular consensus on the ideal society, or at least the direction in which society should be moving. While from a certain standpoint generation of new knowledge and understanding is always desirable, their application in the 'real' world raises contested issues of society's priorities and the political and moral values underpinning them.

Linear relationship

The second issue is the assumption that the impact relationship is a linear one – with residual echoes from the non-metaphorical meaning of the term *impact*, of one moving object hitting another. From this perspective, knowledge is produced within the university, and is then applied and transferred in some way to beneficiaries outside the university. Oancea (2013b: 248) describes this as the 'chain-link' approach, assessing 'trajectories of influence from research insights to non-academic changes and benefits'. While this may conform to our conventional perception of the events, it hides the more subtle bi- or multi-directional flows that inevitably take place (Smith *et al.*, 2011). Students and staff have lives outside as well as inside the university, and bring learning, subject matter and values from society into the institution. Furthermore, as indicated in the change of rhetoric in institutions from 'knowledge transfer' to 'knowledge exchange', there is a sense that universities should be taking steps to ensure that they are absorbing ideas and knowledge from other communities, rather than just divulging them. Santos (2004) calls this 'counter-extension', in opposition to the conventional 'extension' role of universities in sharing their knowledge with less enlightened communities. Whether or not universities succeed in this democratic bi-directional exchange, in a descriptive sense it is problematic to claim a simple linear movement from inside to outside.

There is a further aspect to this question residing in the general complexity of cause and effect. Although it might appear a trite point, all actions inevitably have some impact on the world around – and according to the so-called butterfly effect, apparently small and inconsequential interventions may in the long run bring about significant changes. What is at stake here then is not impact versus no impact, but of what kind of impact is desired. Even the rarefied scholarship 'getting dusty on the shelf' brings some kind of change in the life of the academic who wrote it, and in the few people who have read it, and so does have an impact on society in some form – and can be unexpectedly powerful in the long term.

A further dimension of this point is that of *ownership*. Once we start to question the linear movement of impact, the *source* of that impact becomes more ambiguous. Evaluations of research impact assume that the credit is due to the research team, that academics are the owners of the impact, which is then delivered to others (although Smith *et al*. (2011) point out that impact assessment does this to a lesser extent than conventional research evaluation). Yet we might also see the recipients of impact as deserving of credit here, for their openness to the ideas, or their ability to incorporate and contextualize the theory or research into their practice. Ashwin (2016) goes further, by arguing that it is misleading to think of any academic knowledge as attributable to the researchers in question, as it is built on a longer tradition of scholarship stretching back centuries; conventional conceptions of knowledge production being excessively individualized, and ignoring the collective construction of ideas. This idea is supported by respondents in Oancea (2013b), who also emphasize the collective dimension, in a contemporary rather than historical sense, of academic communities across the world working on similar problems.

Unpredictability and time lag

Emphasis on impact usually leads to short-termism. Whether through political exigencies, requirements of research methodology or funding streams, the impact that is generally sought after is one that occurs in a relatively short time span after the university action has taken place. So, for example, community involvement in a

water management programme may have immediate effects in terms of allowing the community to store and manage collected rainwater more effectively. However, as widely acknowledged (e.g. Gunn and Mintrom, 2017) many impacts from university – including the most valuable ones – are not of this type. Decades would pass before Einstein's theory of relativity would be utilized in GPS navigation. The German tripartite secondary system (imperfectly implemented in the UK in the post-war period) appears a replica of Plato's ideas more than two thousand years earlier on gold, silver and bronze souls, and the corresponding forms of education needed. Whether or not we consider this to be a positive impact, one can hardly deny its practical significance in changing society. On a smaller scale, much of the learning acquired during higher education may only manifest itself in individuals' lives – and consequently in the work they do and their influence over others – many years after graduating. It is not only a question of impact being observable only after an extended period of time – the *form* and *intensity* of impact can also transform over time, becoming stronger or weaker, or even turning from positive to negative or vice versa.

This challenge was made evident in a recent large-scale review of existing research on the impact of tertiary institutions in lower-income countries (Oketch *et al*., 2014). Many of the influences on society (whether through teaching or research) take many years to show their effect, and inevitably dissipate and become more ambiguous in terms of their trajectories in that time, making difficult the establishment of attribution. There are also specific difficulties in terms of the direction of causality – most commonly seen in the 'chicken and egg' problem of determining which of macro-economic growth or expansion of higher education systems comes first.

Consequently, the impact agenda may move universities away from basic research whose immediate relevance may not be apparent, but which in years, decades or even centuries may bring significant benefits to society, towards research with immediate practical relevance but on a less ambitious scale. Similar concerns are raised by the shift from 'basic', 'blue skies', 'curiosity-driven' or 'frontier' research to Mode-2, applied research. In some cases, a degree of insulation from immediate demands (McCowan, 2017) may be beneficial to longer-term agendas.

A further point relates to unpredictability. Are universities machines for impact that can simply be programmed for producing a particular effect? What we know of teaching and learning processes on the one hand, and research and scholarship on the other tells us this is not so. The inherent unpredictability of both of these endeavours means that foreseeing impact will always be a challenge. This characteristic of academic life is apparent to those working within universities, with the serendipitous nature of impact highlighted by respondents in Oancea's (2013b) study. In fact, this is not necessarily to be lamented, as we can see the elusiveness and spontaneity of learning and enquiry as part of their richness (McCowan, 2009). Upton *et al*. (2014: 359) argue in this way for 'a shift in focus from the outcomes of knowledge exchange to the process of engagement between academics and external audiences' with this process-based approach through intellectual curiosity and 'interpretative conversations' allowing for 'serendipitous benefits' to emerge. We might also argue that there is a need to fail. In order to encourage deep enquiry, challenge norms and ensure potentially significant breakthroughs, we need to allow a space for failure, with no apparent impact emerging from a given project.

The achievement of concrete objectives is uncertain in an empirical sense. We can provide particular stimuli for students, but we can never be certain what in fact they will take away from the process. Similarly, these objectives falsify the nature of research and scholarship: as Collini (2012: 55) states, 'the drive towards understanding

can never accept an arbitrary stopping-point, and critique may always in principle reveal that any currently accepted stopping-point *is* ultimately arbitrary'. This point reflects a deeper consideration that 'impact' in the sense of an outcome is an illusion, that all is process observed at different stages – as Dewey (1974: 100) notes: 'nothing happens which is *final* in the sense that it is not part of an ongoing stream of events'. In summary, determining and achieving specific objectives is unviable, yet it can also be seen as having an undesirable effect on the nature of learning and enquiry, closing off the unexpected outcomes that may end up being the most significant and, ironically, impactful.

Measurement

Much of the academic debate (e.g. Gunn and Mintrom, 2017; Penfield *et al.*, 2014; Upton *et al.*, 2014) around impact has focused on how it should be measured (in fact, one downside of this has been the lack of attention to other, in some ways more profound, aspects of the question). Even if it were to be shown that impact can be achieved by universities, and that it were desirable for them to achieve it, there are still significant doubts about our ability to identify, assess and evaluate this impact. The REF in the UK utilizes case studies to gauge impact, involving a mainly narrative account of the research and its uptake in different spheres. However, there are those who call for an entirely metric evaluation of impact, one which would allow for greater objectivity and comparability (Jump, 2015). When related to higher education, the term is not generally used in the more technical sense associated with impact evaluation – i.e. taking account of (and measuring through experimental or quasi-experimental research) the counterfactual, the state of affairs that would have pertained if the intervention had not been made. Instead, the more general use common in policy and debates on higher education is more akin to 'outcome' (Siegfried *et al.*, 2007). Oancea (2013b) highlights tensions between the counterfactual causation underpinning performance-based accountability and context-sensitive fluid notions of impact.

There are also difficulties around attribution: it is very hard to establish with certainty that a particular change in society is exclusively or even partly attributable to an action taken by a university. Just as problematic perhaps are the destinations of the impact: where we look may be determined *a priori* by our preferences or prejudices, or simply by our inability to track and identify all of the various influences stemming from our work.

A final point concerns commensurability. Quantitative evaluations of impact – and even qualitative ones in some cases – assume that we can compare between different cases, and different forms of impact. However, it is highly doubtful whether we can meaningfully rank the impact of a project fostering technological innovation to drive macro-economic growth against one promoting mutual understanding between diverse ethnic groups in the local community. Can we ever say which has the 'greater' impact?

Ultimately, there is always the danger (seen in all spheres of society) of the tail wagging the dog: that the forms of measurement that are possible (or are seen to be preferable) end up determining what we understand as impact, and conditioning our work in practice. These risks of distorting behaviour, of gaming the system and even of falsifying evidence have been observed at other levels of the education system and in other parts of higher education (Chubb and Watermeyer, 2017; Martin, B., 2011; Smith *et al.*, 2011). With significant resources attached to these evaluations, the scenario is highly likely – and will also reinforce some of the tendencies outlined above, of a linear, university-owned, predictable and short-term process.

Instrumentalization

Higher education can be seen to have intrinsic or instrumental value – depending on whether the learning or scholarship in question is seen as being worthwhile in itself or alternatively appealing to external justifications (i.e. whether having a greater understanding of ourselves and the world around us in itself constitutes well-being and a flourishing life, or whether it does so only in so far as it acts as a conduit for increasing income, etc.). Universities through history have varied in the emphasis placed on the intrinsic or instrumental benefits, but generally speaking both forms of value coexist, and are not mutually exclusive (McCowan, 2016b). Emphasis on impact clearly prioritizes the instrumental benefits of higher education. It is not in fact impossible for knowledge seen as intrinsically valuable to have impact: for example, an anthropological research study may have been carried out purely for the intrinsic aim of developing understanding of human origins, but in practice have served to empower a previously misrecognized ethnic group and led to shifts in the political sphere. In practice, the incorporation of impact metrics into research assessments such as that of the UK has occurred alongside traditional gauges of research quality – so is still a far cry from the pure instrumentalism of the university 'without content' (Readings, 1996; Lee, 2017). Nevertheless, for the most part the impact agenda entails a downgrading of the intrinsic, and its portrayal as a rather precious, self-indulgent or old-fashioned view.

This article is not attempting to promote a fundamentalist conception of university justified only by its preservation and transmission of self-evidently true knowledge and morals: instrumental benefits from both teaching and research are both valid and necessary. What is essential – in promoting instrumental benefit – is that we do not entirely ignore the intrinsic value. In the case of the university, that condition resides in an appreciation of human understanding – and the pursuit of understanding – as valuable activities that require no further justification.

Instrumentalization, when tied to specific and externally defined goals, reduces institutional autonomy and academic freedom, as highlighted by a number of commentators (Smith *et al.*, 2011; Watermeyer, 2016). A further concern is that the instrumental is often conceptualized in narrow terms, focusing mainly on the economic (according to Upton *et al.* (2014), this tendency is more common among government than academics). This emphasis is historically contingent, given the forms of economic competition that exist between nation states: in previous eras, military might or nation-building may have been more prominent goals. While in the UK the research councils and the REF did acknowledge a range of different forms of impact, there has been a tendency to focus on economic aims rather than political, cultural and intellectual ones, or alternatively to subordinate the latter to the former (Jump, 2015; Research Councils UK, 2017; Research Council Economic Impact Group, 2006). A case in point is the current effort made by arts and humanities subjects to demonstrate their validity through their impact on economic growth, through for example the media industry (Belfiore, 2014; Oancea, 2013b).

Towards the generative intrinsic

The above sections have summarized several risks posed by the impact agenda – some of which have obtained ample attention in public debates and in the literature, others much less so. Other concerns have also been raised – Phipps (2014) points to the personal dangers to academics when publicly expressing controversial views on gender and sexuality, for example. Ben Martin (2011) argues that the financial costs

of assessing impact are so great that they outweigh any potential benefits. We might also point to broader trends of changes to academic work, increasing pressures on lecturers, deskilling and erosion of trust (Macfarlane, 2011). It is not being argued in this article, however, that the assessment of research impact in its current incipient form is necessarily a pernicious influence – the inclusion in the REF, for example, is relatively moderate, and indeed acknowledges some important aspects of the uptake of research (Francis, 2011). Nevertheless, the trend is for these emphases to expand their prominence, and their reach across different aspects of the work of the university, and ultimately for the value of the university as a whole to be solely determined by its impact.

The principal danger highlighted here is that, when it starts to dominate, emphasis on impact can undermine the practice of enquiry that is at the heart of the university. Instead, this article argues for a different conceptualization, one that we might term the *generative intrinsic*. According to this conception, the impact of universities is organic to their intrinsically valuable practice. That is, teaching and research are oriented wholeheartedly to the deepening of understanding – of ourselves, our societies and the universe – the process Collini (2012: 92) terms 'extending human understanding through open-ended enquiry'. This understanding, along with the practice of enquiry itself, needs no further justification. However, from it emerges a range of instrumentally valuable outcomes, ones that are not entirely predictable or subject to control, but that nevertheless bring significant benefits to society in many spheres. Some of these benefits may be immediate, while others will only manifest themselves after years, decades or even centuries. Instrumental benefits are valued, but do not hollow out the content of the university, and the latter's worth does not stand or fall on predefined goals. As such, the idea of the generative intrinsic acts as a kind of reconciliation of deontological and consequentialist approaches.

Returning to the frame outlined above – of source, form, trajectory, intensity, timescale and destination – the notion of the generative intrinsic has important implications. The first is that the source of the impact will be the quest for human understanding itself – that is, activities that are intrinsically valuable, and not only means for achieving external ends. While those activities may be externally promoted, funded or commissioned, the actors involved will retain autonomy, in accordance with the processes of open-ended enquiry and dialogue in which they are engaged. The element of trajectory becomes highly important in this conception, as also argued by Upton *et al*. (2014), in their emphasis on process rather than outcome: not only should the initial teaching and research be characterized by open-ended enquiry, but the passage of these ideas to the beneficiaries must also be dialogic, and open to contestation and transformation. As discussed above, the elements of intensity, timescale and sometimes destination will be unpredictable in many instances; moreover, while the form of impact will in many cases correspond closely to the original activity, there may be unexpected benefits – for example, an archaeological research project that generates unexpected sources of tourist income for a local community, or a business studies degree that instead of producing malleable executives sparks a campaign against unethical corporate practices.

The primary emphasis on open-ended enquiry argued for here is not, of course, equivalent to stating that universities should not have responsibility to society, or should not be open to it. As argued by Christopher Martin (2011: 617), while it is not justified that (philosophical) scholarship be 'valued only in so far as it is seen to have obvious, clear, short-term, social or economic value', there is a requirement for public engagement: 'normative claims applicable to the community-at-large must be vetted

by the public in some way as a necessary condition of their legitimacy or justifiability.' As stated above, given the critical challenges facing the global community and the severe inequalities, there is an onus on universities to contribute wholeheartedly to enhancing well-being, reducing poverty and promoting social justice. Furthermore, the boundaries between university and society should remain open and porous, in terms of both actors and ideas. Nevertheless, responsibility and openness are not equivalent to the orientation of the work of the university towards immediate and direct impact, narrowly conceived, and the latter may indeed work against the former in unexpected ways.

Ultimately, what universities should do is what they do best – to engage in individual and collective exploration of humanity and the universe, so as to enhance and further knowledge and understanding (these processes include both those traditionally understood as teaching and those understood as research). Knowledge and understanding will inevitably have positive impacts, though it is not always possible to predict exactly what, when or how. The change that without doubt needs to take place in universities is an opening towards society – a willingness to share, and importantly also to receive from those communities outside – even without commercial motivations. This form of porosity of boundaries can address the limitations of the aloof, ivory-tower model of the institution, but does not entail abandoning intellectual enquiry, variously termed as curiosity-driven, basic or frontier research. These forms of enquiry, with a *generative intrinsic* role, offer paradoxically the greatest chance of universities having a lasting beneficial impact on society.

Aesop's fable of the goose that laid the golden eggs comes to mind. Pursuing the impact agenda may indeed be akin to slaughtering the goose in the belief that its innards are solid gold, only to find that, now dead, it is unable to continue laying its golden eggs. The whimsical and unruly nature of knowledge production in universities may be frustrating to policymakers, but there is perhaps no other way of achieving the truly remarkable insights and breakthroughs in knowledge than through open and undirected critical enquiry.

Notes on the contributor

Tristan McCowan is Reader in Education and International Development at the UCL Institute of Education. His work focuses on higher education, citizenship education and human rights, and covers a broad range of contexts, particularly in Latin America and Sub-Saharan Africa. He is the author of *Rethinking Citizenship Education* (Continuum, 2009) and *Education as a Human Right* (Bloomsbury, 2013), and the editor of the journal *Compare*.

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