

Experts, knowledge and criticality in the age of ‘alternative facts’: re-examining the contribution of higher education

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Introduction

We find ourselves in a ‘post-truth’ era where conventional forms of knowledge and methods for validating knowledge claims are downplayed by those in power and where expertise – and the experts who hold it – are under attack. The phrase ‘alternative facts’ was coined by US presidential aide Kellyanne Conway in January 2017 in her attempt to explain why official figures for those attending Donald Trump’s inauguration were inconsistent with the photographic record of the event (McGregor and Park, 2019, in this issue). It is cognate with Trump’s own term ‘fake news’, which he uses to dismiss inconvenient voices, often from experts, that are at odds with his own versions of events. Similarly, former UK education secretary, Michael Gove, notably suggested that ‘people [...] have had enough of experts’ (Gove, 2016). Both phrases ‘alternative facts’ and ‘fake news’ have been taken up as touchstones for discounting evidence-based information in favour of misinformation forged to promote ideological beliefs and ‘common sense’ assertions.

In his book for a popular audience – *Post-Truth: The New War on Truth and How to Fight Back* – journalist Matthew D’Ancona (2017) makes one of the first attempts to examine this contemporary phenomenon. He chronicles how and why ‘alternative facts’ have been deployed, from issues of global importance (climate change or the refugee crisis) to the utterly trivial (Barack Obama’s birthplace), arguing that it is the unbridled growth and pervasiveness of social media that makes this possible. On these platforms, it is repetition, affirmation and opaque algorithms that dictate which ‘facts’ gain traction and which do not.

However, while the manifestation might be novel, scepticism towards experts and their expertise is not new. Abdul-Jabbar (2019, in this issue) reminds us that all of this has happened before, nearly a millennium ago during contact between Islamic scholarship and the translated works of Plato, Socrates and Aristotle. According to the medieval Islamic scholar, Al-Ghazali this period witnessed a growth in ‘the illusion of self-proclaimed knowledge [from] incoherent thinkers’ (p.??), where misinformation and egregious misrepresentation were rife and ‘everyday people [were] not able to see the wood for the trees’ (p.??).

More recently, Nietzsche’s (1873/1954) rejection of facts in favour of interpretations was drawn upon by Lyotard (1984) and other postmodernist writers in their exploration of the collapse of Enlightenment grand narratives, including the idea of accessing universal truth through human reason. An effect of this destabilisation of modern epistemology by critical and postmodernist theory has been the legitimisation of individual subjectivity and lived experience as epistemically authoritative. In addition it is now widely assumed that we are all authorised to determine our own ‘truths’ through our consumption of the deluge of facts – real and ‘alternative’ – available to most through the revolution in information and communication technologies. Indeed, while acknowledging its welcome role in ushering previously marginalised voices into public life, D’Ancona questions postmodernism’s influence on society: ‘when healthy pluralism is supplanted by unhealthy relativism, the cultural assumption is that all opinions are equally valid’ (2017, p.84).

Giddens (1991, p.90) conceptualises this surge of information as a “‘bargain with modernity” governed by specific admixtures of deference and scepticism’. People have learned to trust experts only as access points to information, but technological advances have created conditions for that trust to be both tested and lost. Indeed, Beck (1992) argues that an inevitable result of scientific and technological progress is that the general public learns to appreciate the fallibility of given knowledge, as well as how its application creates new scientific and societal problems.

Beck also anticipated disciplinary conflicts, as experts jostle for influence and funding, leading to a marketplace of facts, ideas and opinions where it is ‘presentation, personal persuasive power, contacts, access to the media or the like which will provide the “individual finding” with the social attribute of “knowledge”’ (Beck, 1992, p.169). In this confused world, ideological positions can readily be publicised and maintained:

‘One just has to read *more*, including the alternative investigations. The objections are consumed *before* the results, with advance notice as it were. Keeping a couple of basic (methodological) objections on hand for all cases is enough to make this or that obstinate scientific news collapse in itself’ (Beck, 1992, p.169, original emphasis).

Similarly, Bruno Latour (2004), commenting on the role of ‘new scepticism’ towards science in the global warming debate in the US, laments how the mission of critical epistemology to show the social construction of scientific fact – the quest ‘to *emancipate* the public from prematurely naturalised, objectified facts’ – has backfired to become ‘an excessive *distrust* of good matters of fact disguised as bad ideological biases’ (2004, p.227, original emphasis).

In this post-truth context, higher education, with its pivotal role as knowledge producer (research) and reproducer (teaching), is key. It is higher education that generates both expertise (through research) and the next generation of experts (through teaching), as well preparing its graduates to engage critically with an information-complex world. The question is: what is the role of higher education in a post-truth age, how should it be reconfigured and what does this mean for the relationship between (a) research and teaching; (b) academics and students; and (c) the academy and the wider public? We believe that higher education must be responsive to the challenges of the post-truth era and join the ‘fight back’ against ‘the war on truth’ (D’Ancona, 2017) – indeed, it is this idea that inspired this special issue.

The twelve papers contained herein provide complementary perspectives – theoretical and practical – on the challenges faced by universities in this context, the sources of contestation and their implications. They also offer possible ways forward with regard to re-thinking epistemological assumptions about knowledge production, protecting and extending institutional conditions for epistemic practice and developing innovative ideas for curriculum and pedagogic practices that are responsive to these challenges. The first section of our editorial draws together the challenges faced by higher education (the roots of the problem) and the second section looks at possible ways forward (the seeds of a solution), followed by brief concluding thoughts.

The roots of the problem: challenges, contestations and implications

We discuss the challenges, contestations and their implications faced by higher education in a post-truth age under four categories: firstly, the phenomenon itself - the expansion of global capital and the revolution in digital technologies; secondly, we explore related epistemic contestations; thirdly, we look at threats to the institutional conditions that sustain epistemic communities and fourthly at some of the challenges that this context poses for curriculum and pedagogy.

The expansion of global capital, transnational education and the digital revolution

The first challenge, noted in the introduction, arises from factors external to the academy – the expansion and transformation of global capital that has been accelerated by huge advances in digital technologies, including the emergence of the internet and subsequently social media. It is now widely recognised that the colonisation of the academic lifeworld by global capital's instrumental, market-driven rationality has not only commodified the production and dissemination of knowledge but means that universities in many countries are now run as businesses – undermining traditional academic values, shifting the nature of academic identities and eroding institutional conditions for epistemic communities of practice (Stevenson *et al.*, 2014).

In his analysis of globalisation and the impact of mass and social media, Rizvi (2006) argues that we now inhabit global 'social imaginaries' generated by a globalised hybrid culture carrying a variety of localised versions of modernity. He suggests that in place of old nationalist imaginaries, digital media have created a new 'commons' that works to produce globalised subjectivities constitutive of people's meanings, discourses and norms – including axiologically charged 'structures of feeling' (2006, p.196). While global capital seeks to exploit these common networks to produce homogenous, competitive consumer-subjects, Rizvi argues that we should use education to offer people democratic alternatives.

However, two of the authors in this issue problematise the role of higher education in a globalised market. Both McGregor and Park (2019) and Mahapatra and Mishra (2019, in this issue) view the hegemonic status of the canons and languages of the global north as effects of their imperial

histories that work to exclude and silence other voices. In their analysis of the recent 'internationalisation' of higher education, McGregor and Park (2019) show that although the export of higher education from the global north to the global south (for profit) offers access to knowledge to previously excluded millions, it also places people of the south in a 'double bind'. On the one hand the marketisation of higher education and digital technologies democratise access to knowledge, but on the other they reinforce the ideological and cultural dominance of the north. In addition, 'protest movements may have revealed the flaws in the home curriculum, but that curriculum is nonetheless being exported to [the global south] at an increasing rate' (p.??).

Mahapatra and Mishra (2019) explore the role of English as the dominant medium of instruction in Indian higher education, initially imposed through the British colonial regime. They argue that this led to the rise of a highly-educated, English-speaking elite in India who gradually took over positions of power from the British within government, science, law and commerce - such that participation in civil society in India is still predicated on higher education delivered in English. They also note the paradox that historically, it was access to higher education and modern discursive formations – including the concepts of liberty and justice – that led to a new national consciousness and ultimately to independence. In contemporary India, Mahapatra and Mishra (2019) also argue that the role of the English language (and a higher education curriculum that remains largely 'British') remains contested. For some, access to higher education in English provides membership of a global community of expertise – 'the living stream of emerging knowledge' (p.??) – and offers opportunities for social mobility to the lower castes. However, others contend that the hegemonic role of English is an ever-present reminder of an unjust colonial past and an impenetrable barrier for those Indians who lack access to instruction in English in school.

These contributions suggest that the democratisation of access to information and Western forms of knowledge does not necessarily lead to emancipation and social justice for peoples of the global south – as often assumed by developmental projects initiated in the global north (Murray Li, 2007). Rather, there are complexities and contradictions that require close attention to avoid the replication of old inequalities and the creation of new ones (Clegg, 2016).

Epistemic contestations

The second challenge that higher education faces in a post-truth era is epistemic. The challenge to modern epistemology was initiated by post-structuralist scholars in the humanities and social sciences in the 1960s and developed further by postmodern, feminist, gender, race, postcolonial and decolonial critical theorists. These theorists have problematised reason and its entanglement in power relations. They draw attention to the contradiction between the assumed rational autonomy of Enlightenment thought and the domination, racism and sexism of European social practice – evident internally but especially through slavery, colonialism and imperialism. This critique of the Enlightenment's discursive formations and the socio-historical conditions that underpin western ideas of progress and modernity has definitively undercut modernity's epistemic certainties (Allen, 2016). For example, decolonial theorists point out how Western thought forms - institutionalised and universalised through the modern university system, the modern disciplines and through the five hegemonic (ex-colonial) European languages (Grosfoguel 2013, p.74) – have excluded and silenced other ways of knowing. Insisting that modernity is plural, not the sole property of Europe, the decolonialists claim that Eurocentricism is based on 'confusion between abstract universality and concrete world hegemony' derived from Europe's colonial and imperial history (Mignolo 2010, p.317).

Regarding epistemology, the positivist assumption that we can access reality directly through thought and language, revealing transcendent truth no longer holds. Certainly, in the Humanities and Social Sciences, claims to universality, neutrality and objectivity made by supposedly rational individuals working within the norms and conventions of communities of scientific and disciplinary practice are no longer taken as authoritative. Instead we are admonished to view all knowledge production as situated, embodied and contextually relative – leading to the conclusion that all ways of knowing are equally relative. Thus, in the Humanities the focus has shifted from knowledge to knowers, that is from internalist criteria for validating knowledge claims to critiquing the perspective, standpoint or positionality from which particular socially positioned knowers make a claim (Maton & Moore, 2010; Moore, 2000).

When combined with open access to information and the democratisation of knowledge production afforded by digital technologies and social media, the loss of deference to traditional epistemic and cognitive authority is amplified. Social media platforms provide unmoderated

conduits to millions of followers and the impetus for a popular (and populist) re-examination of what is known and what it means to know. In this new world, the volume and intensity of repetition threaten to replace expertise and authority as markers for credibility and integrity (Farrow and Moe, 2019 in this issue). They suggest that in the online communities of social media, 'erroneous beliefs [are] reinforced by social recognition' (p.??), partly because expertise is neither recognised nor understood by non-experts. Similarly, Bhatt and MacKenzie (2019, in this issue) note that students are often unaware of the non-neutral algorithms that drive search engines, such that 'the internet appears to be structured so as to encourage people who enter it to confine their browsing to opinions they already accept' (2019, p.??), thereby narrowing their horizons and reinforcing unsupported beliefs.

In an intellectual climate of epistemic and judgmental relativity, the status of all knowledge claims has come to be viewed with equal scepticism, regardless of whether these are based on empirical research, careful epistemic reasoning, lived experience, social positionality or axiological stances. Hordern (2019, in this issue) warns that a crisis may be looming because the higher education community has been too slow to recognise and respond to these shifts in the ways that knowledge is understood and used in society. However, several authors in this special issue remind us that scepticism towards authority and expertise is not, in and of itself, to be feared. Indeed, Hordern (2019) argues that this allows for greater transparency about the relationship between knowledge and power, while Farrow and Moe (2019) assert that students should be entitled to question 'whose authority determines what is to be learned' (2019, p.??).

Threats to institutional conditions for epistemic practice

The rise of critical epistemologies and the democratisation of knowledge production made possible by digital technologies means that control over the methods of knowledge production previously vested in the disciplines and expert communities in the academy has been lost. Further, the encroachment of market logics into academic lifeworlds means that one can no longer assume that academics themselves remain committed to prioritising the 'epistemic interest' over advancing their own careers. Historically, expert communities – supposedly committed to the epistemic interest (as opposed to personal, political, social or economic interests) – emerged to

establish and monitor the rules and conventions for publicly evaluating knowledge claims and for understanding their significance to a particular field.

According to Hordern (2019), expert communities have attempted to impose forms of accountability on knowledge production through institutionalised, norm-referenced criteria and practices that are used to judge knowledge claims. He describes how self-policing communities of scholars in higher education not only establish 'truth', but also the rules by which 'truthfulness' is legitimated and maintained in the face of emerging evidence – although this is not always recognised by non-experts (Farrow and Moe, 2019). Horden (2019) advocates that students be thoughtfully and carefully inducted as novices into expert communities, not only learning agreed truth, but also the criteria and procedures by which it is validated (Wright, 2019, in this issue).

Challenges for curriculum and pedagogy in higher education

The papers in this issue discuss several challenges thrown up by the post-truth era for curriculum and pedagogy in higher education. Firstly, authors in this issue note the challenge for academics as teachers. Abdul-Jabbar (2019, p.??) describes the conflict that arises for the academic, between the teacher who is a 'staggering source of authority, and the researcher who is frantically engulfed by a dreaded sense of uncertainty'. Farrow and Moe (2019, p.??) point out that, despite their support for students' questioning of authority, the contestation of curriculum risks 'a loss in the cognitive authority of the educator, who is implicitly challenged when learners demand greater control over the curricula they are taught, or how they are taught it'.

The higher education curriculum is increasingly a site of contestation (see Shay & Peseta, 2016). Questions are rightly being asked about the selection of content, whose knowledge is privileged and whose voices constitute the canon. This is particularly true in the humanities and social sciences, where the historical hegemony of traditional curricula is increasingly under scrutiny through online social movements like '*women also know stuff*' and '*why is my curriculum white?*' (Jester, 2018). Students and academics are also questioning how the science curricula can be brought into closer alignment with real-world problems and the social element of discovery and implementation (Hauke, 2019, in this issue).

Several authors describe how students' approaches to learning are influenced by market logics and social media. Driven by performativity and individualism, many students instrumentally focus on receiving packaged knowledge that allows them to accumulate high marks. An assessment-led paradigm leads students to valorise epistemic certainty and avoid the uncertainties associated with liminal learning spaces where they are both learner and knowledge creator (Hughes, 2019, in this issue; Hauke, 2019). Cooper (2019, in this issue) notes that a 'fear of making mistakes makes students more likely to seek ready-made answers, rather than risking independent assessment of evidence' through the exercise of their own judgement of credibility, while Bhatt and MacKenzie (2019) argue that students' reluctance to deviate too far from the expectations of those marking their work leads to 'epistemic dependency'. Clark and Hordósy (2019, in this issue) reflect on the conflict between enabling undergraduate students to undertake primary research – with all the uncertainty and experimentation this entails – and the imperative on students to achieve highly for future employability. Rather than benefiting from the opportunity to engage in research, some students felt disadvantaged by it, anxious that having to do research could compromise their instrumentally-driven outcomes. However, Wright (2019) notes that an ethic of 'epistemic humility' is often woven into teaching in higher education. This helps avoid reductionist replications of the teacher's favoured perspectives and the temptation to look for perceived 'right' answers to complex and contested questions.

While some authors have concerns for students' epistemic dependency and fear of stepping into the unknown, others note the negative implications for learning where students are committed to a strong form of individualism. For some, this appears to give them licence to use their higher education experience to simply reinforce their own pre-existing belief structures in the face of contradictory evidence or arguments. Cooper (2019) and Wright (2019) both describe how a notable minority of students arrive at university with a resistance to having their own beliefs challenged by those of others, including teachers. Adopting a naïve form of scepticism – a 'two sides to every story' mindset – leads to 'a misreading of debates in postmodern epistemology and ethical relativism' resulting in some students taking up positions of 'bigotry [and] a position that is impervious to argument' (Wright, 2019, p.??). For others, personal experience is reified as 'truth' with a status comparable to academic canons (Abdul-Jabbar, 2019). According to Wright (2019), possible reasons for students' naïve scepticism are multidimensional and often include an inability to engage fully with the complexities of the discipline, a commitment to being tolerant of alternative worldviews and a well-intentioned desire to avoid causing offence, alongside an

unwillingness to have one's own beliefs challenged. He suggests these stances are problematic when they hold students back from pursuing truth through the evaluation of evidence and skilled argumentation.

Finally, Bhatt and MacKenzie (2019) raise an interesting perspective on ignorance. They argue that our access to facts, evidence, assertions and opinions in almost limitless quantities at little cost creates information and cognitive overload and consequently to 'forms of non-culpable and strategic ignorance' (p.??). They view ignorance not as a 'mere lack of knowledge, a benign gap in knowledge or some epistemic oversight that needs only to be filled or rectified' (p.??), but interestingly as the result of active choice by the knower or an expression of power by those controlling access to information – and therefore as a social practice worthy of research.

The seeds of a solution: possible ways forward

The rise of post-truthism looks set to be a 'wicked problem' for higher education. As we have discussed above, its challenges are diverse and their manifestations are legion and overlapping. Scepticism about expertise is likely to be a feature of public debate for the foreseeable future and it is increasingly clear that it is a phenomenon with which higher education will need to engage if it is to retain its relevance on the global stage as a knowledge producer and reproducer.

It is important to highlight that, while sometimes giving a sober account of the challenges faced by higher education in a post-truth era, none of the papers in this special issue take a reactionary stance, advocating a return to earlier modernist certainties (and dominations). Most of the papers offer insights into how higher education might respond – these may not be solutions, *per se*, but they offer insights into possible ways forward. The focus, as might be expected for this journal, is on the pivotal role of the teacher in higher education. As the interface between the university, society and the student, the teacher has both the freedom and responsibility to develop curricula and pedagogic strategies that might address some of the challenges outlined in the first half of this editorial.

Below we discuss our own and contributing authors' ideas for possible ways forward under the following categories. Firstly, we look at possible ways through the epistemic challenges raised

above. This includes ways in which teachers think anew about disciplinary knowledge and the role and identity of their disciplines in contemporary society where material and social problems are inherently complex, inter-connected and multidimensional. Secondly, we look at the public roles of academics and at possibilities for re-establishing and extending their cognitive authority in the public realm. Finally, we look at authors' suggestions for curricular and pedagogic strategies and innovations. This includes rethinking curricula, course design and pedagogic approaches as a means of better preparing students to deal with cognitive and information overload and forms of knowledge that derive their legitimacy from experiential, social or axiological stances. We discuss each in turn before making some concluding remarks.

Epistemic shifts

We suggest that the epistemic challenge we face will not be addressed by denying the fallibility of knowledge claims or that these are produced in particular socio-historical and subjective contexts. Instead we support the ideas in this issue advocating 'epistemic humility' (Wright, 2019) and the need to contextualise our curricula (McGregor and Park, 2019). The position advocated here is to both recognise how social identity and lived experience are salient to epistemic judgement, especially in the humanities and social sciences, while rejecting the reductionist notion that knowledge is no more than an effect of power or that social identity and/or experience, on their own, are sufficient grounds for making a knowledge claim (Maton & Moore, 2010). This means that we teach students that appeals to experience, positionality and axiological or moral positions cannot be permitted to trump rules for the public use of reason ('truthfulness') and the use of empirical evidence ('truth') when supporting a knowledge claim.

In our view, the post-positivist epistemologies found in the philosophy of science offer less reductionist approaches to epistemology. This includes the idea of the 'fallibilism' of knowledge, which accepts the socially constructed and provisional nature of all knowledge production without accepting epistemic relativity. The fallibilist position asserts that some forms of knowledge are more adequate and useful than others based on their validation through empirical testing (based a belief in a realist ontology) as well as the use of public criteria for making epistemic judgements (Bhaskar, 2016).

A nuanced position is proposed by feminist philosopher Louise Alcoff (2011). While critical of Western epistemology's individualist, decontextualised and politically non-reflective approach to the effects of its own cultural and social locations, she argues for a 'political epistemology' that questions how epistemic roles and authority are structured and institutionalised and what the ontological implications might be of our truth claims (2011, p.70). However, she insists that this does not entail epistemological relativity - we should maintain epistemology's normative capacity (2011, p.70) and not abandon our attempts to justify knowledge claims. Along similar lines, Farrow and Moe (2019) do not reject critical epistemologies' emphasis on the subjectivity of truth; but they do call for a stronger epistemological basis than what constructivism has been able to offer, especially in the complex fields of the social sciences.

McGregor and Park (2019) advocate (re)designing curricula (in the humanities and social sciences) that deliberately contextualise and deconstruct Western hegemonic forms of knowledge in order to demonstrate to students the ways modern knowledge claims developed historically and how these are implicated in relations of domination and subjugation. In response to the challenge from the global south to 'decolonise' the curriculum, they argue that the decolonial approach remains locked in binary forms of meaning (e.g. south versus north). Instead they contend that deconstructing the curriculum of the global north could have a wider impact on an increasingly global curriculum exported to the south by metropolitan universities in the north. But this is not simply a pragmatic argument – they assert the importance of contextualising curriculum knowledge so that students can understand the time, place, subjectivities and discursive formations in which its narratives and concepts were produced. They conclude that while neoliberal curricula from the north tend to emphasise the universal, decolonial curricula tend to focus on the particular, a deconstructive approach would focus on the relationship between the universal and the particular.

The epistemic and institutional power of the disciplines is challenged in this issue. Disciplinarity, with its strong classifications and boundaries affording depth and rigour to enquiry, was arguably a key feature of 20th Century higher education. Hordern (2019) and Abdul-Jabbar (2019) argue that despite societal change, disciplinary boundaries have continued to strengthen, leading to introspective forms of scholarship that produce knowledge and expertise relevant only to micro-debates within academia, rather than knowledge that is accessible and useful to wider society. In order to combat this tendency Abdul-Jabbar (2019) argues for adapting the concept of *rihla* as a

metaphor for interdisciplinary engagement by contemporary scholars. Drawn from the works of Al-Ghazali, this term encapsulates the idea of a journey, physical or intellectual, that allows scholars to journey across time and space in 'non-regional, nonconformist, and diversifying' ways (p.??). It is a rejection of narrow disciplinarity, with the solace it provides in deep (but potentially indulgent) expertise, in favour of a cross-cultural and interdisciplinary engagement. Noting 'the culture of complacency' that has crept into academia where interdisciplinary rigor is mistakenly considered the antithesis of focused disciplinary studies, he regrets our lack of exposure to different theoretical lenses and pedagogical practices' (p.??).

Rihla in this sense provides an expansive reconceptualisation of academic rigour that could occur through the scrutiny of truth claims from multiple sociocultural and disciplinary perspectives. Indeed, Farrow and Moe (2019) see a growing future role for a new breed of interdisciplinarians who will 'broker' knowledge created between the traditional disciplines through the application of distinctive epistemological skills that enable them to 'independently assess the validity of a particular truth claim and the evidence associated with it' (2019, p??).

Hauke (2019) extends this idea to science and engineering, which, she suggests, have historically stressed linear forms of learning to enable students to accumulate bodies of accepted knowledge that provide access to graduate employment. She contrasts this with the more contested and dialogic ways of knowing found in the humanities and social sciences. She argues that students must engage in interdisciplinary spaces in order to address 'the big issues facing civilisation' – uncertain futures that they will need to '*create* rather than *predict*' through new forms of thinking (p.??). She advocates an interdisciplinary approach to curriculum development that will offer students 'variant understanding, abnormal discourse and revolutionary science' if we want to produce 'independent thinkers capable of taking our civilization into the future safely and sustainably' (p.??).

Reclaiming spaces through public intellectualism

One response to the threat to institutional conditions for ensuring the quality of knowledge production is a conservative one – namely to re-assert the importance of retaining and protecting traditional expert communities in the disciplines and professions and their norms and practices for

judging 'truthfulness'. This position wants to 'fight back' and recover the authority, institutional autonomy and discursive space required to reassert the epistemic principles that might take us out of the quagmire of judgmental relativism. However, this is not the response advocated by the authors in this issue. Rather than a retreat that shores up the walls of the academy, authors have advocated moving out of the disciplines into society, onto digital platforms and across traditional institutional boundaries in order to re-establish and reassert the relevance of communities of scholars where 'others value your knowledge for what it offers in terms of insight [or] its capacity to help in the solving of problems' (Hordern, 2019, p.??). Hordern argues that access to expertise relies on the accessibility of experts; he calls on communities of experts to 'reach out' through public intellectualism to avoid alienation from society and a loss of relevance. The argument is that expertise should be inherently outward-facing. Others in this issue advocate exploring possibilities for expanding the membership of knowledge producing communities to include different kinds of subjectivities (Abdul-Jabbar, 2019; Park & McGregor, 2019) and also to blur the boundaries between researcher and researched (Hughes, 2019; Hordosy & Clark, 2019).

Reclaiming and expanding the role of the public intellectual also works at the level of the individual. Farrow and Moe (2019) argue that the contemporary academic needs to be present in digital spaces with an assertive willingness to engage in the forums where knowledge claims are increasingly assessed: 'if educators don't act to fill public space then others will' (2019, p.??). They draw on the *#immodestwoman* movement to highlight how experts (in this case, women making public their academic credentials) can begin to reclaim public intellectual spaces and, in doing so, reassert their status as expert - able to both create knowledge and assess the claims of others. Indeed, Abdul-Jabbar (2019) reminds us that Al-Ghazali had to leave his prestigious professorship in order to gain his most important insights, leaving his community of scholars and undertaking a literal and metaphorical *rihla* that served to 'deterritorialise' knowledge and provide it with a wider relevance.

In addition to academics, Brooke, Monbec and Tilakaratna (2019, in this issue) assert that graduates also need to be inducted into this mindset of public engagement in a globally-connected world where their expertise will be contested in the workplace and further afield. They highlight the different forms of persuasive writing required for academic and public audiences; and in their pedagogy, demonstrate to students how different audiences require contrasting knowledge structures and different writing techniques.

Curriculum and pedagogic strategies and innovations

Several papers in this issue tackle the challenge of designing curricula and formulating pedagogic strategies that could shift students beyond positions of naïve scepticism and epistemic relativity. Perhaps the most striking feature of the papers in this issue is the widespread call for rethinking what and how students are taught in response to the post-truth era. In this section we outline curriculum and pedagogic strategies that aim to teach students how to navigate information overload, manage complexity, assess claims to knowledge and understand what is required of them in the contemporary exercise of their chosen fields and careers.

The point that students are now expected to engage with a potentially limitless corpus of information hardly needs rehearsing, but the question remains how to teach this skill to undergraduate students. Cooper (2019) draws on a recent curriculum review to conclude that before undertaking independent information searches, undergraduate students should first develop critical literacy skills that enable them to identify and ‘interrogate different sets of assumptions and different worldviews’ (p.??) in the texts they are reading – including the ability to distinguish between commonly-held beliefs and research-informed knowledge. Brooke *et al.* (2019) take a complementary approach by focusing on the use of metalinguistics to ‘train students to be discerning analysts’ by understanding how writers argue their case based on the available evidence and to assess their success at doing so: ‘Our goal is to develop our students’ critical dispositions and to enable them to make informed judgements [and] unpack the anti-expert rhetoric’ (p.??).

Bhatt and MacKenzie (2019) explore in detail ‘how [students] search for information, engage with it critically (or not), and make evaluative judgements about its credibility and relevance in curricular work’ (p.??). They argue that ‘students must be supported in developing a critical awareness of how power operates in online spaces, and how ways of thinking and being are culturally produced and re-produced and sponsored’ (p.??). This supports Cooper’s (2019) call for the development of ‘credibility standards’ among students – a framework for assessing which facts are real and which are ‘alternative’.

Wright (2019) also views the first undergraduate year as an essential formative phase in which students are introduced to foundational knowledge, but where the introductory course aims can be quite distinct from later phases. He argues that the widespread practice in introductory courses of providing students with an overview of contrasting perspectives and theoretical frameworks within the discipline risks giving the impression of equal epistemic status, accidentally endorsing judgmental relativity. The solution suggested by this author is to make the special status of introductory content overt to students - making clear the distinction between introductory course aims (which emphasise disciplinary skills-training and practice) and other broader meta-disciplinary aims. He concludes that this explicit positioning of 'teaching the debate' as a transitional stage, before engaging with more complex concepts and meta-disciplinary arguments in the field, will avoid reinforcing a naïve scepticism of multiple relativistic 'truths' in novice students.

One meta-disciplinary aim in many curricula is to develop the know-how for producing knowledge through primary or secondary research. Hughes (2019) and Clark and Hordósy (2019) argue the case for research development among undergraduate students as an important strategy for countering post-truthism. Hughes contends that if students learn to make explicit the procedures and processes of knowledge production, they will be better placed to evaluate the truth claims of others, including making 'appropriate judgements about the quality and accuracy of the deluge of information and opinion that they receive online'. However, Clark and Hordósy (2019) found considerable variation in students' experiences of research practice across a research-intensive university, especially as students progressed from a foundational understanding of basic research practices (e.g. referencing) to personalised enquiry in their later years. Notably, Hughes (2019) was surprised to find that academics leading programmes with a strong research development thread did generally not consider generating effective research questions as an important threshold concept. Nevertheless, Clark and Hordósy (2019) conclude that the post-truth world is one the 'where the *capacity* for information literacy, independent learning, critical appreciation and [...] the broad ability to do 'research', are all critical in being able to navigate everyday networks of knowledge' (p.??, original emphasis).

Conclusion

These discussions around epistemic shifts, public intellectualism and curriculum and pedagogic strategies feed directly into the conclusion drawn by Hordern (2019), who reminds us of Bernstein's three pedagogic rights of *enhancement*, *participation* and *inclusion* as a philosophical framework for higher education in a post-truth world that could restore the link between experts and society. The right to *enhancement* stresses the transformative (as opposed to transactive) nature of education at the individual level, including the right of the individual not only to access expertise but to become an expert oneself and transform the nature of that expertise. The right to *participation* is a political right that addresses the right to participate in the civic practices and procedures that govern knowledge production and dissemination. The right to *inclusion* argues for a pluralism and tolerance of difference within the epistemic community to ensure that power does not dominate its social relations or silence unorthodox perspectives (Motta and Bennett, 2018). This leaves open the potential for the ongoing iteration of expertise through engagement with new perspectives, encouraging a dialectic relation, both between old and new members of expert communities and between old and new forms of knowledge. In summary,

‘Institutions and disciplinary and professional communities responsible for higher expertise have insufficiently recognised the new context of a non-deferential society in which all assertions are challenged and need to work harder at ensuring that inclusion and participation make enhancement a possibility for all’ (Hordern, 2019, p.??).

The papers in this issue suggest that higher education needs to rethink its practices to reflect multiple (and contradictory) voices in knowledge construction and curricula. It needs to lead the self-reflexive deconstruction of received orthodoxies and canons and open up membership of expertise communities in ways that are transparent, inclusive and humble. In this way, the notions of expertise, truth and truthfulness will be re-conceptualised to support a transformational vision of higher education that disrupts traditional elites and the counterproductive commodification of expertise and experts – producing instead knowledge that is genuinely accessible, meaningful and useful for resolving wicked global problems. It will also find a means of countering the deluge of facts and falsehoods fed by the new forms of knowledge production opened up by social media.

By way of concluding our discussions around epistemic shifts and public intellectualism we briefly return to Bruno Latour (2004) and Matthew D'Ancona (2017), offering complementary perspectives from the academic and popular realms respectively. Latour questions whether 'a certain form of critical spirit has sent us down the wrong path, encouraging us to fight the wrong enemies' (2004, p.231) and prepare students for old battles. Instead he argues that 'Critique has not been critical enough' (2004, p.232). 'The question was never to get *away* from facts but *closer* to them, not fighting empiricism, but on the contrary, renewing empiricism' (2004, p.231). He asks whether we can 'devise another powerful descriptive tool that deals this time with matters of concern whose import then will no longer be to debunk but to protect and care [...] by adding 'reality to matters of fact' as opposed to 'subtract[ing from] reality' (2004. p.232). Similarly, D'Ancona's (2017) challenge to the reader is to work towards restoring a societal balance where multiple voices can be heard, but where alternative 'facts' are readily rejected and 'objective' truth is sought – albeit within the constraints of fallibility, context and interpretation. We hope that this special issue will contribute in a small way to these epistemic challenges and renewal.

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