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Towards A Postdigital Social Contract for Higher Education in The Age of Artificial Intelligence

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Abstract

This paper sketches contemporary transformations of social contract and outlines a path towards the development of a postdigital social contract for higher education in the age of AI. We set the scene by looking at existing research in AI and education. We then briefly discuss the idea of the ‘social contract’ as it has been conceived by both classic and contemporary authors. We also examine the more recent calls for a rethinking and reactualization of the social contract, given ongoing inequities of opportunity and societal disadvantage. Finally, we warn about the problems with mixing the algorithmic *epistēmē* and McPolicy, argue for a rehumanization of the policy discourse, insist on a shift from short-term hyping to sustainable development, and call for a rich, wide, and critically reflexive debate about how a postdigital social contract for higher education in the age of Artificial Intelligence might look.

Keywords: postdigital, social contract, higher education, HE, artificial intelligence, AI, ChatGPT

Introduction

A social contract is an agreement across members of a society to cooperate and give up certain natural rights, to recognize a form of authority, in order to enjoy the benefits of society with less risk. Social contract theory became popular through the sixteenth, seventeenth, and eighteenth centuries with theorists such as Thomas Hobbes, John Locke, and Jean-Jacques Rousseau providing their interpretations of the origins of government and also the obligations of those subject to government. In the twenty-first century, this agreement has been significantly impacted by techno-social development leading to the advent of the postdigital condition (Jandrić et al. 2018). Within this postdigital context, there exists a need for a reformulated social contract, one that takes into account the border-transcending scope and pervasiveness of big-tech algorithms which, for better or worse, influence almost all facets of contemporary global society (Bratsis 2022).

At the beginning of 2023, inspired by the arrival of ChatGPT and similar large language models, Artificial Intelligences (AIs) have acquired a lot of public attention. Unsurprisingly, Higher Education (HE) has quickly followed suit (Bozkurt et al. 2023; Peters et al. 2023). Public attention is important, yet the hyping of AI research can also bring less positive (and largely unintended) consequences (Jandrić 2023). Particularly, ‘hype’ is understood herein as the viral and indiscriminate proliferation of knowledge, information, exaggerations, falsehoods, lies, and gossip surrounding a particular topic as characteristic of the ‘post-truth’ context (Jandrić 2023; Peters et al. 2022b). In order to bring some balance to the recent AI hype, this article sketches contemporary transformations of social contract theory and outlines a path towards development of a postdigital social contract for HE in the age of AI.

One of the aspects persistently missing from the proliferation of headlines around AI possibilities, or in contrast, ‘face palming’ gloom (Vallance 2023), is the considerable inequities of human experience when it comes to the diverse ways in which humans get to interact with data-driven digital systems (Hayes et al. 2023). As Ellen Helsper points out in *The Digital Disconnect* (2021), there is a close and complex relationship between digital and social inequalities and the lived consequences of digitisation. This goes well beyond who is connected or not, when socio-digital inequalities have daily tangible outcomes that affect all

aspects of people's lives and learning opportunities. Postdigital positionality (Hayes 2021; Hayes and Jandrić 2022) is one way to anchor the diverse, reflexive, and contextual socio-digital human narratives, amid the hysteria that can accompany rapid technological change like AI.

In the training of lecturers, it is common to ask them to write about a critical incident they have experienced when learning something, or when teaching students. Pressing pause, so to speak, and reflexively considering responses in order to learn and develop future practice from these occurrences, can yield lasting insights. When such narratives are shared across the wider academic community, others may enrich the professional insights gained by providing their own personal dialogue about their positionality in a teaching or learning context.

This is true of research too, when reflexive discussion on researcher positionality, context, values, and approaches, is included in projects, published articles, events, and research informed teaching. In *The Persistence of the Human* (2016), Matt Escobar argues:

The presence of narratively based concepts of personal identity even in texts which explore posthuman possibilities is strong proof that our basic understanding of what it means to be human has, despite appearances, remained mostly unchanged. This is so even though our perception of time has been greatly modified by the same technology which both interrupts and allows for the rearrangement of our experience of time at a rate and a level of ease which until recently had never been possible. (Escobar 2016: 3)

Digital technologies have brought disruption to rearrange how we experience time, work, and life, but they didn't do it alone. Technological environments are not passive containers of people, but active processes that shape people and other technologies alike, with the character of 'the public' emerging from the printed word (McLuhan 1962).

Postdigital refers to the idea that 'people are increasingly no longer in a world where digital technology and media are separate, virtual, or "other" to a "natural" human and social life' (Jandrić et al. 2018: 893). Thus, a positional, postdigital narrative speaks to an individual's physical, temporal, mental, biological, economic, social, or academic circumstances, in digital and analog society, and how such features combine to construct a narrative of the self. This is a debate too, where the postdigital positionalities of different societal institutions also matter, particularly in relation to social contract theory and AI. Specifically, the foregrounding of postdigital positionalities within this article, i.e., how people understand and construct themselves within contemporary postdigital-bidigital global society (Hayes and Jandrić 2022), will allow for a more nuanced reevaluation of human-technological relations, in specific to AI, as fundamental to a reimagined social contract.

In only the last five years, 'we have already experienced considerable hype in post-truth and fake news, followed by a huge hype in Covid-19 research, and now we have the hype of ChatGPT' (Jandrić 2023). Yet despite the AI frenzy to be found in the media, valuable insights on past and future practices with technology, including AI, are being exchanged across teaching and research communities. These may vary in discussion concerning how AI can help student learning (O'Byrne 2023), point out concerns over digital poverty (Illingworth 2023), or even explain what humans need to know to understand how machines learn (Escobar 2017). Such dimensions are important when hype is generating a fear about machines with human-like minds. Knowing more about how these 'minds' might work, can give us the power to be agents of positive change in a way that can allow us to maintain control over AI and not the other way around (Escobar 2017). In other words, there exists an opaque new global ecology revolving powerful AI advances that requires 'dialogue, tolerance, learning and understanding

on key principles and practices for an agreement among members of society for shared social benefit'.¹

In the sections that follow we will firstly set the scene by looking at existing research in AI and education. We will then briefly discuss the idea of the 'social contract' as it has been conceived by both classic and contemporary authors. We will also examine the more recent calls for a rethinking and reactualization of the social contract, given ongoing inequities of opportunity and societal disadvantage. Finally, toward a rehumanization of the policy discourse, we will warn about the problems with mixing the algorithmic *epistēmē*, i.e., the assumption of a performative individual based on behavioural data (Fisher and Mehozay 2019), and McPolicy, i.e., a discourse that presumes to efficiently calculate, measure, predict and control human experience (Hayes 2020), insist on a shift from short-term hyping to sustainable development, and call for a rich, wide, and critically reflexive debate about the form a postdigital social contract for higher education (HE) in the age of AI might take.

Setting the Scene

At a time when many parts of life and education now look set to become modified via the linguistic and media capabilities of AI systems, it does seem odd to us to read press headlines such as: 'Artificial intelligence could lead to extinction, experts warn' (Vallance 2023). Given the human programming that has developed AI systems, and the commercial companies and governments that have deployed them so far, it would seem more accurate to write something like: 'The humans that have engineered the creation of AI and its commercial applications, are now raising concerns that we could be engineering our own extinction.' It may not be such a snappy title, but it clearly hearkens the mutually constitutive nature of human labour and political economic narratives, with our developed technologies (Hayes 2019). In other words, whether we state it explicitly, or not, across the ages, 'we have always been posthuman' and thus never independent from our technologies (Matthewman 2011: 172). As stated by Brusseau: 'Ultimately, posthumanism is the commonly cited vision of humans melding with technology. But there is also an ethereal dimension where differences between me and other people collapse, which occurs alongside the falling hierarchy placing me above machines' (2023). This has strong implications for the construction of social contract theory, because 'if social theorists neglect technology they fail to comprehend their object'. More than ever before, in the age of AI, we cannot afford to 'lose the opportunity to explain what makes us human, how action comes about, how power is exercised, and how society is constructed, maintained and transformed' (Matthewman 2011: 176).

Drawing on the work of past philosophers and literary theorists, highlighting both the narrative structure of the self and the importance of temporal positioning of the self, Escobar (2016) argues that, amid the rapid digital progress that has accelerated our pace of life, narrative plays an essential role in the process of constituting and maintaining a sense of self. He points out that when individuals experience a crisis or trauma situation, they rely on the senses, the body, and memory to seek continuity and to repair personal identity (Escobar 2016: 7). Even as we write, we can read the very personal reflective narrative that an AI 'godfather', Yoshua Bengio, now feels 'lost' over his life's work (Kleinmann 2023). From the field of narrative identity research, Singer posits that a process of narrative development situated within 'hybrid realities', built upon increasingly isolated 'digital islands', will invariably lead to questions surrounding 'what it means to be human—what are the crucial constitutive factors of human nature and human interaction—and what is missing' (2020). These arguments are closely connected to debates on the 'postdigital positionality' of each of us, a term which focuses

¹ See <https://ssrc.mit.edu/wp-content/uploads/2020/10/Social-Contract-for-the-AI-Age.pdf>. Accessed 1 February 2024.

attention to how individuals personally experience postdigital contexts in unique and diverse ways (Hayes 2021). This is a deliberately open-ended concept, recognising that whilst the digital may have become ‘the master narrative of our world’ (Fuller and Jandrić 2019: 215), the human and the biological is more important than ever (Mañero 2020).

In a recent Special Issue, Neil Selwyn, Thomas Hillman, Annika Bergviken-Rensfeldt, and Carlo Perrotta, caution on ‘the need to tackle the topic of automation and education in socially nuanced, politically aware, and appropriately sceptical ways’, adding:

These forms of technology—and the logics that underpin them—are now a significant aspect of the digitization of education, and therefore require our sustained attention. As with most aspects of the algorithmic landscape of everyday life, these are technologies that are quickly becoming woven into the digital infrastructure of education—and therefore increasingly ‘invisible and forgettable’ (Knott 2022), only revealing themselves when they impact on our lives in notably unfair, harmful, and obtrusive ways. As such, now is the time to be drawing full attention to the reconfigurations of power that are taking place in the name of automation. These are technologies that need to be the subject of ongoing conversations about what we want AI and automated decision-making in education to be, what purposes we can benefit from and are prepared to devolve to technology, and what aspects of education we are definitively *not* willing to hand over. (Selwyn et al. 2023: 12)

At the point of writing, we acknowledge other recent wider calls for ‘A New Social Contract for the Digital Age’ (Saran, Chapman, and Sharma 2018; Muniz 2020) and for ‘Rethinking the Social Contract in the Digital Age’ (Deffains 2022).

However, our focus is on the policy narrative being crafted for HE in the age of AI, and the opportunity we may have to reconfigure the narrow auditing of ourselves as humans in which we have been entrapped for decades. Instead of positioning students and staff as standardized groups with one ‘experience’ (Hayes and Jandrić 2018), we suggest that a consideration of the postdigital positionality (Hayes 2021) of each citizen is helpful in acknowledging the diverse contexts and different levels of digital disadvantage that can be experienced by individuals. For example, Knox details how China has promulgated AI for Ed-Tech developmental policies and initiatives that, while aimed at reducing regional socioeconomic disparities, may serve to further disadvantage traditionally underserved student populations (2023). Thusly, while open-ended, the concept of ‘post-digital positionalities’ enables a more nuanced discussion on the broader linguistic assumptions in HE policy, the complexities of human data interaction and postdigital inclusion (Hayes et al. 2023), and biodigital developments and new knowledge ecologies (Peters et al. 2022) in contemporary societies that are no longer homogenous (Muldoon 2016).

It is therefore time to scrutinize and call out the marketing campaigns and market control over processing power and people’s datasets (Hayes et al. 2023). It is time to recognize that ‘instead of pursuing the limits of computers’ potential for simulated humanity, the hawkers of “AI” are pursuing the limits of human beings’ potential to be reduced to their calculability’ (Center on Privacy and Technology 2022). If convenient forms of surveillance that appeal to companies, governments, and institutions have emerged amid an ethics and governance vacuum around machine learning, then there are risks that society’s vulnerable are becoming further disadvantaged. As part in parcel to the reimagining of a postdigital social contract, this current vacuum in AI governance necessitates a global call to action wherein ‘diverse stakeholders with different cultural, social, political, and expert backgrounds’ work together to ‘figure out how best to govern AI’ (Dias and Sagoo 2024).

In recent months, the Daily Telegraph has revealed that in the UK a secretive government body, The Counter-Disinformation Unit (CDU), worked with an AI firm to scour social media sites, monitor critics of the government's Covid-19 policies, and remove posts. Discussions opposing vaccine passports were flagged and individuals campaigning to keep schools open and even expert advisers, were screened. A further Rapid Response Unit (RRU) hunted for content considered to be disinformation and these units were able to request for such content to be fast-tracked for removal by Twitter or Facebook. Similar information has been released by Twitter in the US to reveal government programmes to curtail discussion of Covid lockdowns (Diver 2023). At the same time as these stark revelations, public misconceptions about what AI actually is, and assumptions that it is smarter than people, are fuelled through opaque headlines. These can (if the will is there) be replaced with more specific, clear explanations and human narratives (Center on Privacy and Technology 2022).

We contend therefore that as humans we appear to have been setting up the conditions in education for our narratives to be controlled by technology (and related neoliberal discourse) for decades. Not only do we cease to attribute human labour to educational activities in policy discourse (Hayes 2019); we have also allowed our personal and individual values, as necessary elements of narrative development, to be manipulated and marketed by institutions (Hayes and Jandrić 2022). Now, in the age of AI, there is even more urgency to be critical and explicit about how humans are represented in discourse concerning all kinds of data-driven technologies, education, and the social contract.

The Idea of the Social Contract

Social contract theory offers a set of differing perspectives on society, cooperation, and the legitimisation of certain authority, norms, or laws for the mutual advantage of citizens. As Estlund explains:

The idea that a political constitution or a society itself, is grounded in a social contract among society's members is a recurring feature of modern political thought. Since Thomas Hobbes *Leviathan* (1651) many social and political theorists have regarded society as a cooperative undertaking for mutual benefit. (Estlund 2012: 133)

For Hobbes, a central issue was how to control violence and selfishness amongst people living in the State of Nature, where life could be brutish and short without protection and security from a ruler, monarch, or head of state. Hobbes advocated for people to surrender liberty and submit to a political authority in order to preserve peace, life, and prosperity for all (Laskar 2014).

In John Locke's theory of social contract, the State of Nature is considered less bleak, focusing less on the avoidance of civil strife but more on identifying the conditions that would sustain social order. Whilst people had the rights which nature could give them, property was not secure, so a government was needed to uphold and protect people's rights. Government achieves this purpose, with laws that are valid and binding. When it ceases to fulfil its purpose, the government can be removed. Locke's approach placed the access to, and possession of, goods and property at the heart of the contract between rulers and ruled. As long as the former did not threaten 'the spirit of possessive individualism' among the latter, the political order of church, parliament, and monarchy was preserved (Neave 2006: 276). In a departure from the ideas of Hobbes and Locke, Adam Smith located a view of the social contract, not on social stability imposed from above, but more on the marketplace and the notion of a society made dynamic through competition, negotiation, and agreement that was exercised individually and daily from below (Neave 2006: 277).

These brief summaries of just some of the different approaches towards the idea of a social contract help to underline that there are alternative ways to organise both societies and institutions. As Neave (2006: 277) points out, there are many ideas on forms of social contract, and they make different presumptions about human behaviour.

By the time that Rawls' *A Theory of Justice* (1971/2020) was published, the manufacturing economies of the Western world were still relatively homogenous in terms of cultural diversity. Rawls' theory addresses the issue of a socially just distribution of goods and resources in society, as a variant of social contract theory. Responding to subsequent challenges to this approach, there have been revisions since, including the book *Justice as fairness: A restatement*, in which Rawls (2001) argues that whilst society should be structured to give the greatest possible amount of liberty to its members, the liberty of any one member should not infringe upon that of other members. Thus, for Rawls, justice is more than the efficiency of a utilitarian approach where the greatest good for the greatest number is pursued. Instead, fairness is key in an equal distribution of resources and liberties for every individual.

In contemplating these differing perspectives on society, cooperation, and the legitimisation of certain authority and norms for the mutual advantage of citizens, we recognise a danger in the training of AI systems on potentially conflicting or contradictory social contract narratives. It takes a human, critical, postdigital imagination to spot the problem of too much reliance on 'moral sounding' mission statements and charters from AI tech company founders (see for example, Altman 2023), if certain AI decisions taken by governments reveal a contradictory narrative and infringement of liberties (Diver 2023). We draw attention to the point made by Colin W Evers in a recent collective article on 'AI and the Future of Humanity':

Training a multi-layer, deep learning artificial neural network on both Rawls's *A Theory of Justice* (1971) and Machiavelli's *The Prince* (2010) is not going to guarantee chatbot outputs promoting equality of opportunity without either sustained backpropagation of Rawlsian ethical bias, or harmony (coherence) adjustments involving more data heavily weighted in favour of Rawls. In general, the old computer adage of 'garbage in, garbage out' remains even more relevant today. (Peters et al. 2023: 13).

In *Social contract theory for a diverse world: Beyond tolerance*, Muldoon (2016) provides an alternative account of social contract theory that explicitly aims to address complex problems and opportunities that are now found in our more culturally diverse societies. Muldoon establishes 3 key ideas that differ from traditional social contract theory. Firstly, the idea of *perspective* in political reasoning helps to avoid assumptions that all citizens view moral and political problems in the same way. This links well with the notion of 'postdigital positionality' (Hayes 2021) which highlights our diverse postdigital identities and contexts. The second idea is of a *bargaining* model that requires virtually no agreement amongst its participants, and the third principle concerns how agents can be *motivated* to seek out more diverse societies, even in the face of distributive disputes.

Muldoon (2016) creates a theory of social contract that embraces Mill's concept of 'experiments in living' through social experimentation and a process of discovery. The intention is to protect diverse citizens in a different way from the logic of former social contracts which viewed society as homogenous. In Muldoon's (2016) reorientation of political philosophy, a dynamic process of discovery and contemporary debate is centred, giving us the opportunity to rethink our approach to core questions of how we are to live with one another. Recognising how such core questions are interlinked with digitisation is crucial too, in relation to establishing a postdigital, positional social contract for HE in the age of AI.

Recent Research on AI and the Social Contract

Before we continue our argument for a reimagined postdigital social contract, it would be prudent to first provide a brief overview of how AI has been reflected within the field of social contract theory (SCT).

Rahwan (2017) argues for a shift away from previous humans-in-the-loop (HITL) characterizations of human-computer interaction (HCI) i.e., humans as accountable entities, identifying and correcting misbehaviour within otherwise autonomous systems, towards a more appropriate societies-in-the-loop (SITL) algorithmic contract. Specifically, the author notes that while ‘HITL AI is about embedding the judgment of individual humans or groups in the optimization of AI systems with narrow impact, SITL is about embedding the values of society, as a whole, in the algorithmic governance of societal outcomes that have broad implications’ (2017). Relatedly, Turnbull presents a case study of Uber to highlight unfair algorithmic contracts, foregrounding the juridical difficulty of establishing intent or agency within an AI algorithm (in this case economic coercion), while arguing that there exists a need to both acknowledge and modify legal doctrine to account for the ‘emerging form of the algorithmic contract’ (2023). Schneiderman defines human-centered AI (HCAI) as ‘an expansion from an algorithm-focused view’ by researchers, developers, business leaders and policy-makers that embraces a ‘human-centered perspective’ of AI-driven technologies that ‘better serve human needs’ while ‘enabling people to care for each other’ (2022: 3). As such, the author augments previous ‘one-dimensional models’ of human control over increasingly autonomous computer automation by providing a two-dimensional HCAI framework that has ‘the goal of reliable, safe, and trustworthy designs, which are achieved by a high level of human control and a high level of computer automation’ (Schneiderman 2022: 59-60). Schmagor posits that given governments’ considerable access to citizen data, the use of AI towards the benefit of the collective good is ‘conceptually alike to the general will’, requiring a form of AI government oversight marked by ‘rigor caution and care’ as ‘specific to the dynamics between citizens and public service’ (2022). Through an analysis of existing HCAI guidelines, the author recommends several amendments within the realm of public service: ‘1) articulation of a clear value proposition by weighing the public good versus the individual benefit; 2) definition of boundaries for repurposing public data given the relationship between citizens and their government; 3) accommodation for user group diversity by considering the different levels of technical and administrative literacy of citizens’ (2022). Noting that ‘Ethical AI refers to the fair and just development, use, and management of AI technologies’, Bankins and Formosa utilize integrative social contracts theory (ISCT) to provide a framework for understanding the macrosocial and microsocial contracts that contribute to the development of individual ‘psychological contracts’ within workplaces deploying AI technologies (2021: 60). The authors conclude that, given the increasing use of AI in the workplace, understanding how higher-order norms influence lower-order norms within a coalescence of individual psychological contracts surrounding ethical AI in the workplace has important implications for ‘reciprocal obligations between employers and employees’ (Bankins and Formosa 2021: 69). Recently, the UNESCO International Commission on the Futures of Education called for a new social contract for education that is ‘grounded in human rights and based on principles of non-discrimination, social justice, respect for life, human dignity and cultural diversity’ (2021: 3). Referencing this call, Bartoletti argues that: ‘There are very few areas where AI ethics matters more than they do in education, because education – alongside housing, borrowing, and health – is a leveller for improving equal opportunity and social mobility’ (2022: 74). As such the author notes that: ‘Global organisations, as well as governments and institutions, have set out their approach to ethics to ensure AI works for the common good’ (Bartoletti 2022: 75). Nevertheless, Locatelli argues that ‘neither the concept of the new social contract nor the principle of education as a common good are clearly defined. As a result, we lack political

discussion regarding the relationship among the institutions that should govern the new social contract for education' (2023). Moreover, challenging techno-deterministic accounts of how increasing access to AI 'will reduce inequality in educational opportunities', as well as 'the logic that equates access to technology as a form of equity', Madeio et al. (2022) argue that widespread adoption of learning technologies, and data collection on educational algorithmic systems 'has demonstrated the potential for such systems to reproduce and amplify societal biases in a variety of ways' (203).

Within the field of SCT, this brief review has highlighted a growing concern for human-centeredness within algorithmic governance, computer automation, jurisprudence, public service, industry, and education as a public good. Within this scope, i.e., reimagining a social contract for ethical AI governance, the following will contribute to this growing discourse as concerns the reimagining of a postdigital social contract for HE in the age of AI.

The Algorithmic *Epistēmē* and McPolicy Are a Dangerous Mix

If a new social contract is to be concerned with a socially just distribution of goods across diverse citizens, including rights of access to education, then there are many questions to be raised about current commercial applications of AI in a society where there are considerable digital disconnects in people's lives and learning opportunities (Helsper 2021). These cannot be divorced either from a political economy that has seen decades of audit culture and neoliberal policy discourse in education. This discourse has co-existed with the ongoing, unregulated development of many data-driven surveillance systems and devices that hit the headlines from time to time, such as 'face recognition'.

The term gives little explanation as to what this entails, so colleagues at the Center on Privacy and Technology (2022) have suggested that rather than say: 'face recognition uses artificial intelligence', we might say something like 'tech companies use massive data sets to train algorithms to match images of human faces'. This articulation then positions the form of technology and its purposes in such a way that it can be discussed in human contexts. It is necessary to insist on more explicit and detailed discourse of this nature when planning for AI in education too. To further our dialogue on how a postdigital, positional social contract for HE might emerge, building on the arguments of Muldoon (2016) concerning diversity, and acknowledging the complexities of human data interaction and postdigital inclusion (Hayes et al. 2023), we examine ongoing problems with the current HE policy discourse.

Elsewhere we have already pointed to a dehumanising McPolicy (Hayes 2019), where we seem to have been writing human labour out of HE policy documents for a long time (Hayes and Jandrić 2014, 2022; Hayes and Bartholomew 2015; Hayes 2018). As well as the ongoing tendency to reduce human agency and refer to buzz phrases (in which we now include AI) as if these are enacting the labour of humans (Hayes 2019), there is also a concern that this shift of emphasis in the use of language and ideas has had a transformative influence on our way of thinking about public policy in general (Sardoč 2018: 6).

Our concern is that McPolicy returns our focus to the homogenous form of social contract rather than developing the diverse 'experiments in living' (Muldoon 2016) that a postdigital, positional social contract for Higher Education in the age of AI requires. As we have argued elsewhere, there seems to be a reinforcement of a set of core institutional values that individuals in HE are required to uphold in their daily living – a form of social contract – but how these concepts become applied, quoted or misquoted, and developed, is much less concrete (Hayes and Jandrić 2022).

Just as the introduction and reinforcement of certain values may occur through icons, committees, meetings, classes, documents, and other contexts, we appear to have set up a framework where AI systems can simply drop into this structure. D'Olimpio has previously stated: 'It is clear that the [social] contract is not agreed to by everyone, notably the voiceless,

and ideally, the contract benefits everyone. The social contract is ‘by us and for us’ – yet who is denominated by this ‘us’? (2019). However, now that we learn of the liaison of AI with McPolicy in supporting government enforcement of Covid-19 rules, whilst at the same time limiting free speech (Diver 2023) via surveillance systems (Zuboff 2019), it is time to further question exactly what social contract is now being upheld, and in whose interests.

Re-humanising the Policy Discourse

Policy rhetoric has previously textually ‘manufactured consent’ to certain forms of educational governance, amounting to a ‘discursive representation of social identity and social action’ (Mulderigg 2011: 562). Today, big data epistemologies are an increasing infringement of our ways of thinking, feeling, and being, through policy frameworks that impose certain institutional values over the postdigital positionality (Hayes 2021: 31) and the personal cultural values of individuals ((Hayes and Jandrić 2022).

The nature of certain HE metrics, linked to such policy discourse, moves human lives into ‘the algorithmic episteme’ which is problematic ‘because it undercuts the critical faculties inherent in narrative, speech and inter-subjectivity’ (Fisher 2020: 119). In particular, we are keen to draw attention to the need for postdigital dialogue (Jandrić et al. 2019) concerning the ongoing problem in educational hype where empty buzz phrases, and often abbreviated versions of these, are carelessly discussed and written into policy as if they enact the work of humans (Hayes and Bartholomew 2015; Hayes 2018, 2019).

For example, the phrase Technology Enhanced Learning (TEL) became widely adopted some years ago to describe the use of technology in education. Yet a close linguistic analysis of many HE policy documents revealed a persistent assumption that *in exchange for the use of technology, there will be enhanced forms of learning*. The inbuilt (and impossible to uphold) promise of such an ‘exchange value’ serves the simplified claims of neoliberal agendas, but not necessarily the needs of students (Hayes 2019: 90). The shortening of Technology Enhanced Learning to the acronym TEL only further obscures this issue. It is a ‘shorthand’ that conceals decades of critical theory about technology (Hayes 2019: 91) and we note that the constant abbreviation of Artificial Intelligence into AI, amid the hype, serves also to evade closer scrutiny.

As colleagues at the Center on Privacy and Technology (2022) point out, terms such as ‘Artificial Intelligence’, ‘AI’, and ‘machine learning’, carry prevalent misconceptions about what these technologies are. Commenting on the 2021 FrameWorks Institute Report, in partnership with the MacArthur Foundation (Conklin et al. 2021), the Center on Privacy and Technology (2022) draw attention to misconceptions where (1) the public does not know what ‘AI’ is and (2) the public assumes that AI is smarter than they are. They cite the example that participants talking with FrameWorks researchers about predictive algorithms focused on the need to give the algorithm ‘good data’, but appeared not to recognize the algorithm itself as something constructed (Conklin et al. 2021).

Elsewhere we have argued that all too frequently

technology discourse resides in the dominating ideology of technological determinism and co-opts with neoliberal agendas by omitting humans from explicit mention in UK policy documents. It shows that true counter-hegemonic practice against dominating social practices is possible only through reinvigorating the central position of human beings in regards to information and communication technologies. (Hayes and Jandrić 2014: 193)

We concur therefore with the concerns of a ‘neoliberal colonization of discourses’ in education and a need to ‘decontaminate’ these in both offline and online spaces (Wagener 2021: 190) if

we are to look afresh and with reflexivity at an emancipatory and inclusive social contract for HE in the age of AI. As Fisher (2020: 119) observes, reflexive experience ‘is the core of the practice which emancipates individuals from being an object and allows them to develop a subjectivity’.

From Short-Term Hying to Sustainable Development

Our postdigital condition is ‘both a rupture in our existing theories and their continuation’ (Jandrić et al. 2018: 895). In relation to today’s social contract for HE, the continuation part is about understanding the complex dialectic between humans and technologies beyond technological determinism and instrumentalism; about a shared understanding of the role of universities, about ensuring a critical, explicit representation of humans in policy discourse; and about the importance of positionality and dialogue (just to mention a few most relevant aspects for our argument). Some facets of AI-related postdigital rupture include the rising importance of posthumanist approaches; the transforming role of HE in a postdigital society; and postdigital reconfigurations of positionality and dialogue.

The ruptures are deep and all-encompassing; impossible to miss, yet often elusive and hard to make sense of. Therefore, it is hardly a surprise that the arrival of practical applications of new technologies, such as ChatGPT, provoke a lot of interest – and sometimes hypes. The lure is plentiful and diverse – from replacing human labour with automated technology, to developing whole new approaches in teaching and learning (see Bozkurt et al. 2023; Peters et al. 2023). However, Jandrić (2023) shows that hying scholarly research is a double-edged sword.

Hypes ... benefit knowledge development; for instance, Covid-lockdowns have done more for distance and open learning than several decades of research (see Jandrić et al. 2021). However, that does not make hypes inherently positive: hyped cash flow has a limited time span, and many types of research fare better with continuous research funding rather than with hyped financial ebbs and flows. (Jandrić 2023)

Jandrić’s (2023) argument can be extended to our theme. On the negative side, we have always lived under some sort of social contract; it is a permanent feature of human communities. As such, Fraser has outlined that contemporary calls for a just social contract embody a ‘radical heterogeneity’ that lacks a coherent understanding of justice. (2009: 1-2). Resultantly, the author poses the question: Can substantively heterogenous claims really be weighed on a single balance?’ (2009: 3). This is a larger question that this article does not claim to answer. However, on the positive side, the existing social contract for HE in the age of artificial intelligence transforms rapidly as we write these words. Therefore, it requires as much attention as it can get – and more. Given the understanding that human societies are always in flux, our social contracts should be designed to reflect this constant change.

In the long run, a postdigital social contract for HE in the age of AI requires permanent attention; hypes, with their ebbs and flows, are not particularly well suited for the task. In order to bring some attention to the postdigital social contract for HE in the age of AI, we do not shy away from riding the ChatGPT hype. Yet we are also aware that, in the midst of the hype, we need to give a lot of attention to the long-term sustainability of our efforts.

Towards A Postdigital Social Contract for Higher Education in The Age of Artificial Intelligence

We started this paper with a combination of observations and concerns arising from the recent ChatGPT hype; an overview of old and new understandings of the social contract, together

with some latest challenges; and a selection of relevant research insights. This resulted in a messy, perhaps even hectic, mix of themes, concerns, and ideas. In the final stages of writing up, we were tempted to bring some structure into this mess – and to an extent, we did rewrite and shuffle parts of the text for clarity. However, we decided against too firm a structuring of the argument, in a neat logical or perhaps temporary sequence, because this would not be faithful to reality. Our postdigital condition ‘is hard to define; messy; unpredictable’ (Jandrić et al. 2018: 895), and representing it in a fully structured way would remove us too far from reality. We decided to embrace the mess; not because we particularly like it, but because we want to keep our theory true to practice. At the end of the paper, however, we now need to distil its main messages and takeaways for the future. So, what is to be done about a postdigital social contract for HE in the age of AI?

First, we need to accept the mess – and in all its diversity. We need to accept our messy postdigital positionalities, as researchers, teachers, and participants in HE: physical, temporal, mental, biological, economic, social, or academic circumstances, in digital and analog society, that co-construct a narrative of the self (Hayes 2021). We need to accept messy relationships between humans and machines, our messy posthuman existence, and try to make the best of what we’ve got. In the words of Sian Bayne,

We should not be asking the question: In 50 years from now, will there be a human or a robot teaching? Rather, we should be asking the question: What kind of combination of human and artificial intelligence will we be able to draw on in the future to provide teaching of the very best quality? (Bayne in Jandrić 2017: 207)

We also need to accept messy understandings of the social contract – as evidenced, for instance, in vastly different responses to the Covid-19 pandemic, from China’s complete closure to Sweden’s open model (Jandrić et al. 2021). Finally, each act of acceptance is mirrored by an act of rejection. For instance, accepting the messiness of postdigital higher education implies a rejection of McPolicy (which fails to reflect the mess) and quality assessment based on an over-simplified, extensive use of metrics.

Messiness, however, does not imply a lack of responsibility. To continue with Bayne, ‘we should not allow artificial intelligence in education to be driven entirely by corporations or economists or computing and data scientists [and we would add, Artificial Intelligences]– we should be thinking about how we take control as teachers’ (Bayne in Jandrić 2017: 207). As a distinguished faculty member at Columbia University, Isidore Rabi, said when he interrupted the speech of Dwight Eisenhower, when he addressed the faculty as ‘employees of the university’: ‘Mr. President, we are not employees of the university. We are the university.’ (see Neilsen 2019). Teachers, students, and everyone else with an interest in HE therefore needs to take an active role in creating its postdigital social contract in the age of AI. This role necessarily blends theory and practice and arrives at being in the form of critical praxis (Jandrić et al. 2018). We may be posthuman, but that does not mean that we should allow machines to make decisions for us! By the very nature of the social contract, this praxis is open, normative, and collective. In this context, openness implies a refusal to succumb to the discourse of inevitability.

Whilst much has now been written in academic circles regarding postdigital experiences, a postdigital social contract for HE has a responsibility to extend across society. A crucial part of this is dialogue is with cross-sector members of both local and international communities, as well as across disciplines. It is not enough to take an ivory tower approach from within universities, it is necessary to ‘enable cross-sector environments for postdigital inclusion’ (Hayes et al. 2023) in the age of AI. Alongside calls for breaking down opaque terminology whilst ‘transitioning to a world with superintelligence’ (Altman 2023), it is crucial

that those of us in HE also liaise closely now in research with companies, charities, and local governments concerning Human Data Interaction (HDI) and AI to address potential disadvantage for those who are vulnerable in society. It is only through cross-sector partnerships, dialogue, and joint publications that concerns over legibility, agency, negotiability, and indeed resistance can be addressed collectively for the benefits of all, and not some, in society (Hayes et al. 2023).

Neoliberal policy discourse, which sees the only way forward within the confines of capitalism, should be replaced by an open-ended view to the future of humankind that is developed across all sectors. Technological determinism and instrumentalism, or the views that technology leads social and educational change, should be replaced by an open critical philosophy of technology. Following Muldoon (2016), a new social contract should be open to diverse positionalities (rather than see society as homogenous), embracing Mill's concept of 'experiments in living'. Furthermore, openness arrives in many shapes and forms that reach beyond the scope of this article (Peters and Jandrić 2018); any attempts at developing a new social contract should take into account as many of these shapes and forms as possible.

'Social contract theory says that people live together in society in accordance with an agreement that establishes moral and political rules of behavior.' (The University of Texas at Austin 2023) A postdigital social contract for HE in the age of AI is a normative category, so educators, students, and anyone else directly or indirectly involved have a moral duty to actively engage in its critique and development.

Normativity leads to collectivity; one cannot be thought of without the other, as failing to engage with the formation of a new social contract is just an act of agreement with the existing social contract. In our postdigital age, collectivity 'is not a coping strategy, a privilege, or even an option—it is our reality. Our information is mediated, our knowledge is co-constructed, and our instincts and methodologies stem from our personal and social histories.' (Jandrić 2019: 276) At an individual level, this implies a significant shift from the notion of *homo economicus* towards *homo collaborans*:

The assumption of individuality is counter posed by collective intelligence (Lévy, 2015; Peters, 2017; Peters et al., 2016), that can take different forms from collective awareness and consciousness, to collective intelligence, responsibility and action. The assumption of rationality is contradicted in a networked environment as the ontological basis is contained in the relations between entities rather than any one self-sufficient entity that is rationally aware and transparent to itself. ... the assumption of self-interest again tends to be offset or decentred by forms of collective responsibility. (Peters and Jandrić 2018: 342-343)

Much ink has been spilled on collective forms of government, and these discussions reach way beyond the scope of this paper. However, collectivity necessarily implies a determination of boundaries – who belongs to the collective (and can participate in decision-making) and who does not belong to the collective (and cannot participate in decision-making). We, the authors of this article, represent a part of Higher Education. Therefore, we feel the need, and duty, to participate in this debate. By the very nature of a social contract, however, we cannot impose our ideas on others. In this article, therefore, we have laid some theoretical grounding and practical suggestions. We have raised a call for a rich, wide, and critically reflexive cross-sector debate about how a postdigital social contract for HE, in the age of AI, may be collectively developed, as an ongoing postdigital dialogue.

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