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Epistemic injustice and education in the digital age

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Abstract

The aim of this article is to function as a starting point for combining the study of epistemic injustice in a higher education framework with that of digitalization, including recent developments such as the entrance of AI in higher education. What is identified as the main problem is the power of digital technology and how technologies shape institutional practices of teaching and learning, often in opposition to democratic education aims. The introduction of AI in higher education deepens the mediatization process of higher education, demonstrated by a mainstream oriented usage of AI. In higher education, digital technology shapes practices that are indifferent to the epistemic claims and rights of students, and quite perfectly attuned to the 'practical needs' of digital technology which severely challenges the concept of knowing and also critical thinking in higher education.

Keywords: epistemic injustice; digitalization; technology; higher education; mediatization

1. Introduction

With this special issue we sought to promote the approach of epistemic injustice and contribute to its development in relation to digitalization and higher education. This goal was inspired by the relevance of this approach, to engage with the challenges to democracy associated with the very rapid development of new technologies and especially AI, and to problematize the impact of these technologies on higher education.

The notion of epistemic injustice is described in the seminal study by Miranda Fricker, *Epistemic Injustice, Power and the Ethics of Knowing* (Fricker, 2012) and the contributions that followed (Anderson, 2012; Medina, 2011; Medina, 2012; Polhaus, 2012; Fricker, Medina, Polhaus & Kidd, 2017). With this special issue of the *Journal of Digital Social Research* we want to contribute to the re-actualization and the development of this approach, extending its heuristic potential to the epistemic effects of digitalization. The broader rationale for this effort is to support democratic education by providing professional educators with an intellectual tool to equip future generations with the competences and moral inclination to address the epistemic roots of the current 'crisis' of democracy (Samaržija & Cassam, 2023). This exploration has great potential and it suggests, for example, that contemporary concerns with epistemic trust in political communication (Dahlgren, 2018) pay insufficient attention to issues of social power and to the idea that 'social disadvantage can produce unjust epistemic

disadvantage' (Fricker, 2007, p. 2). In this exploration, the key question of securing the quality of higher education is what ties together epistemic injustice, higher education and digitalization.

Testimonial justice, our possibilities to be trusted as actors, has to do with social power (Fricker 2007). Fricker offered a working definition of social power: "a practically socially situated capacity to control others' actions, where this capacity may be exercised (actively or passively) by particular social agents, or alternatively, it may operate purely structurally" (Fricker, 207, p. 13). The question that arises is what impact social power digital technologies have on the development of epistemic credibility in an educational context. What are the forces that are currently given the most space in a teaching context and what relevance do they have for a fair development of knowledge? Given that power, as Fricker describes it, is not only social but also dispersed, we need to understand the rationale of a just epistemic approach to the daily activities in higher education.

Epistemic injustice in higher education operates in a historical context. Our approach, which includes the development of digitalization, spurs engagement with both old and new forms of injustice. From this perspective, it can be argued that the crisis of democracy results not primarily from the appeal of non-democratic ideologies, but from the inability of democratic regimes to address social injustice and fundamental inequalities that ultimately erode the legitimacy of this form of government. In many respects, the understanding of the mechanisms of epistemic injustice starts by acknowledging the role and quality of education. Epistemic injustice (the over-representations of certain 'situated' knowledges over others) results from epistemic inequalities (the unequal distribution of epistemic competences or the ability to create, access, evaluate, organize and use knowledge). Together, these combine to constitute the grounds for higher education, and thus for the epistemic 'crisis' of democracy: the erosion of the common grounds relating to the creation and justification of knowledge that ultimately supports the effectiveness of democratic regimes. So, while old inequalities such as race, gender and class are largely unresolved, and still affect higher education, new challenges have appeared on the horizon. We regard digitalization as one such development which has brought with it many new types of inequalities that do not necessarily operate according to the same logic as the old inequalities.

We perceive digitalization as an accumulation of problems that have emerged in various domains of life since the convergence from analogic technology. However, when conducting empirical studies, choosing methods and building theory in the field of epistemic injustices in a digitalized higher education framework, we need to take into consideration also other relevant theories and concepts. Digitization, platformization, datafication, and also mediatization all reflect and focus on different aspects of digitalization. In this article we will briefly discuss how to adapt mediatization theory to study the relationship between digitalization of higher education and epistemic injustice.

This introduction is divided in five parts. The first is an overview of the theoretical background of epistemic injustice research. The second describes the problem in relation to the changes in digital technology that constitutes the life world of students in higher education. The third is a short review of the relevant literature about epistemic injustice relevant for developing this approach in the higher education and digitalization. The fourth part presents some initial questions that support future research in the field. The fifth part is a short description of the contributions in this issue including some initial questions that support future research in the field.

2. Theoretical developments

As Dunne argued, although "there has been some work in the area of epistemic injustice in education…, the topic remains relatively underexplored in educational philosophy and theory." (Dunne, 2023, p. 285).

Already a decade ago, discussing the epistemic of education research, Frank argued for the need to 'move away from the language of epistemic diversity and to the language of epistemic injustice'. (Frank, 2013, p. 363). The following year, Horsthemke offered a critical interpretation of Fricker's notion, to argue for the epistemic and ethical value 'that sometimes emanates from being the object of outsider

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critique' for critical and democratic thinking, and critical self-reflection (Horsthemke, 2014, p. 137). Whitt discussed distancing as a defensive mechanism deployed by students when teachers seek to engage them in discussions about epistemic injustice, suggesting, among other things, 'a gradualist approach to epistemic transformation, and [to] remain modest with regard to what we can expect, from our students and ourselves, in a single class or semester' (Whitt, 206, p. 443).

More recently Walker argued for the importance of epistemic justice in democratic life and the key role of education for the development of epistemic capabilities. He pointed to the special role of university education in this undertaking and argued:

> "Educational institutions should undertake hopeful if not perfect work, equipping students with subject and professional knowledge and a range of public reasoning abilities that will enable them to participate fully and meaningfully in education, work and in making a democratic society. Indeed, achieving deeper public reasoning and 'thick' justice depends rather crucially on an education, which takes epistemic justice and the associated epistemic capability, together with the necessary conditions for its development, very seriously." (Walker, 2019, p. 169).

Finally, one should mention the special issue of *Educational Philosophy and Theory*, with six essays dedicated to epistemic justice and education. The goal of that collection, in Dunne's words:

> "Predictably then, … educators might fail to live up to their moral-epistemic obligations. Time-impoverished environments and outcome-driven internalised cultures lead us to sometimes fall short. We fail to account for and exercise due care in relation to the epistemic vulnerabilities of our students ... Where there are human beings trying to sincerely figure out what to accept or believe or do or perform, there is potential for wrong doing. And since normatively-calibrated established etiquettes for interdependent inquiry are still at gestational stage, we still have much to learn about avoiding harms in co-dependent epistemic settings. This special issue attempts to address this lacuna." (Dunne, 2023, 285).

Carter and Meehan argued that targeting 'incompetent trusting' is a 'promising strategy' to mitigate testimonial injustice (Carter & Meehan, 2023, p. 295). Battaly (2023) argued the case to consider epistemic injustice as a systemic cause of 'intrapersonal intellectual servility' and suggested to prioritize strategies that target the former to effectively address the latter. Cassam (2023) used the notion of vice-charging to describe a form of epistemically vicious behaviour, supporting forms of epistemic injustice that targeted vaccine hesitant parents during the Covid-19 crisis. Although not mentioning it explicitly, the notion of epistemic injustice inspired Kidd to argue the effects of the culture of speed on the work of higher education. As he put it:

> "We are increasingly subjected to a culture of speed that, when institutionally manifested and if individually internalised, deprives us of the time, energy, and freedom to happily exercise an important range of virtues integral to higher educational practice" (Kidd, 2023, p. 339).

Finally, Dunne and Kotsonis described the notion of 'epistemic exploitation' and the resulting 'ontic burnout' as the effects of the invitation that educators representing privileged groups direct to 'marginalized knowers' as a way to address epistemic injustice. Their analysis suggested a point that cannot be overstressed:

> "Ontic burnout is not a characterological weakness or defect. The principal causes of burnout reside in the toxic environment and blame worthy epistemic practices themselves—in marginalised knowers being compelled to educate others about the nature and source of oppression. And so, it is the corrupted practice itself—of educators engaging in epistemic exploitation—that must be cast aside, rather than misguided attempts to lay fault or blame at the feet of spokespersons. Blaming the oppressed for suffering ontic burnout would be yet another injustice inflicted on them, albeit a non-epistemic one". (Dunne & Kotsonis, 2023, p. 353).

3. The problem and its relevance

Something profound is at stake in higher education. Along with digitalization, many other global phenomena disrupt life in higher education. To mention a few, university institutions need to address challenges with student mental health (Upsher et al. 2022), learning problems, and respond to anxiety related to climate crisis, gender and race issues, i.e. issues that adds to the number of injustices, and which

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are also more or less visible in the university curricula. So, while sociocultural changes, such as gender awareness or a general sensitivity to wrongdoings trigger debate, problems related to stress caused by digital technology are more difficult to problematize and discuss. This presents a challenge to higher educations since digital platforms and the communication that take place on them affect the discursive knowledge production about society and culture, including injustices. In short: we are more aware of injustices *per se*, but less aware of the contemporary forces that shape what is knowledgeable in the first place.

There are several problems related to digitalization of higher education which affect life in higher education. Before AI, the discussion was about algorithmic structures; a logic that affects a growing number of communicative practices today and which also infringes higher education practices. The black box-rationale of algorithms that does not expose its operational logic, is anything but optimal for critical thinking. With AI and its applications new problems have emerged within higher education (Yan et al., 2023) that relate to our capacity as knowers. On their websites, universities around the world encourage students to use AI, arguing that the technology is already in use in the workplace. Instructions generally include an addition: students should carefully explain when and how they have used AI in their assignment. From an epistemic point of view, it seems probably too much to ask of a young person who is just learning the basics of critical thinking to be able to assess her/his interaction (the 'prompt') or the reliability of AI-generated content. A 'machine' that has the 'answer' or 'solution' to any problem is of course extremely appealing. How can students determine if the chatbot is a 'trustworthy knower'?

One can think of AI as yet another buzzword that will soon fade, or one can consider what this particular digital technology means for epistemic injustice in higher education. What is different with AI compared with other digital technologies is its design, and function. AI has been described as a technology "exclusively and explicitly designed to enhance our capacity as knowers" (Alvarado, 2023, p. 31). So, among many other practical problems that need to be solved within higher education is how students actually perceive and use AI as part of their higher education. Another question is how AI redefines the role of teachers in environments characterized by AI. The growing number of digital technologies, 'innovations' and applications that affect our capacity as knowers, emerge as the core problem, and it is our role as teachers and researchers to respond to these challenges.

In the implicit model underlying our approach, in other words, epistemic injustice, digitalization and education are connected to each other to create both a vicious and virtuous circle: 1) epistemic injustices are reproduced through corporate digitalization and its impact on education; 2) educational intervention and attention to the old and new forms of epistemic injustice associated with digitalization and reproduced through the digitalization of education produce feedback effects to reduce epistemic injustice in education and digitalization.

Consequently, combining epistemic injustice with digitalization allows us to approach the detrimental effects of the corporate appropriation of digitalization on society by studying digital technology, and its pervasive logic that creates what Dotson (2012, p. 24) calls "epistemic oppression" i.e. a weakened position for higher education to define what is knowledgeable. To do this we should acknowledge not only the power of the media, but also include relevant concepts that allows us to explain what, how, when and where injustices emerge in higher education when we use digital technology.

4. Mediatization & epistemic injustice

Our starting point is that the ideological appropriation of the information/digital revolutions (Schiller, 1999; Mosco, 2004; Hindman, 2009; Miller & Vaccari, 2020; Stocchetti, 2020) understood as a historical mediatization process (Hjarvard, 2013; Hepp, 2020), and also the profound changes this appropriation has supported in higher education (Selwyn, 1999; Ferneding, 2003; Biesta, 2010; Selwyn, 2011; Giroux, 2014; Selwyn, 2014; Jandrić et al., 2018; Tække & Paulsen, 2022) have eroded the communicative conditions of democratic politics and exacerbated the crisis of the epistemic grounds of democracy.

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In higher education, digital technology has had an impact on teaching in the shape of assignments, assessments and examinations, but also on processes relating to everyday organization and communication of higher education. Besides the technological takeover (e.g. Selwyn, 2011; Ferneding, 2033), there is a communicative takeover defined by the media, framed as logical seeming sets of affordances, preferences, and algorithmic structures. What has evolved since the introduction of modern mass media, is a gradual shift of power, meaning that the media is affecting the way other institutions adopt their practices to the structures of the media. All organizations have become media organizations when struggling to get attention, meaning that daily duties of institutions circulate around a culture of constant, digital communication.

As an institutional logic and force, mediatization has demonstrated its relevance, for example, in politics, which has adapted to the power and intricate rules of the media (Asp, 1986; Strömbäck, 2008). Similar effects can be seen in the way family institutions not only communicate on a daily basis by using mobile applications, but also in that digital technologies actually shape what kind of families we become when using media (Räisä, 2022). University institutions repeatedly express a need to control their appearance and brand in the public, mediated debate (Ainiala, Räisä & Sjöblom, 2020). When talking about digitalization of higher education, we notice a similar entangling of two processes, that of mediatization processes and that of knowledge production. In short, when education gets embedded in digital technology it adapts the structures and preferences of the media.

Mediatization is a process that started before digitalization, but digitalization has indeed accelerated the normalization of the logics of the media. Whereas digitalization constitutes a technological framework, mediatization, as a mid-range theory (Hjarvard, 2013), has focused on the historical consequences of the changes that technologies inevitably shape. Media logics, in short, are signified by simplification, polarization, emotionalization, i.e. certain practices typical for the short format of mainstream media and which affects the way other institutions organize and perceive themselves (Couldry & Hepp, 2017; Hepp, 2020; Hjarvard, 2013). Despite the methodological challenges that mediatization research has encountered, we need tools to describe and discuss the changes in reference to the media, in this case particularly what are the effects of the media on learning. Mediatization is a process not controlled by any singular actor. From an epistemic point of view, mediatization is a social power that "operates purely structurally" (Fricker, 2007, p. 13), thru a normalization of practices. We may indulge in an uncritical relationship, resign or even wish to totally withdraw from using digital technology (in higher education this is in fact impossible). Despite our attitude or conviction, we are obliged to define our relationship with the media also in a higher education environment, which makes digital technology a motor of sociocultural change, i.e. as a result from a process of mediatization.

To enfold the meaning of digitalization of higher education, we could think about the above-mentioned epistemic vulnerability, marginalized knowers and also the culture of speed. Epistemic injustice in a digitalized, higher education context takes its fuel from the rapid tempo typical for the media, seen in a managerial desire for quantifiable efficiency of higher education organizations. This development is likely to accelerate even more with the introduction of AI in higher education. AI in higher education is problematic since it is, among other things, hazardous for our perception of knowledge. Large language models offer one size fits all, which is the opposite of the open-ended, intellectual mind which is sensitive to particulars and specifics. Also, AI enfold thru an assumed capacity to 'inspire' or to offer 'creative ideas'. Lacking motivation, but also the capacity to surprise, as two qualities of creativity (Rafner et al. 2023; Runco, 2023, p. 3), AI does not offer products 'outside the box'. What it does, is 'hallucinating', deliver fabrications. In human language that would be 'lying', something one would not imagine should be included in a higher education institution. In short, with AI our capacity as knowers is severely challenged because it imposes a logic that will reduce our possibility to know in the first place (Alvarado, 2023).

In sum, mediatization of higher education means that digitalization, i.e. the technology we use within higher education on a daily basis, has shaped not only the way we teach and learn, but even the way we

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imagine ourselves as thinkers and knowers. Digitalization of higher education increases the number of problems related to epistemic injustice and the influence of a logic of knowledge production in which the "new normal" is rather insensitive to the needs of individuals and to the democratic process.

5. Epistemic injustice & digitalization

To apply the notion of epistemic injustice to higher education it is useful to understand the negative impact of the digitalization of higher education on fundamental competences such as functional literacy. By studying literacy as an epistemic competence, we can start to outline what can be done to remedy this state of affair through interventions involving both digitalization and education and towards a form of digital literacy inspired by the epistemic and ethical concerns of the approach of epistemic injustice.

In the implicit model underlying our approach, in other words, epistemic injustice, digitalization and education are connected to each other to create both a vicious and virtuous circle: 1) epistemic injustices are reproduced through corporate digitalization and its impact on education; 2) educational intervention and attention to the old and new forms of epistemic injustice associated with digitalization and reproduced through the digitalization of education produce feedback effects to reduce epistemic injustice in education and digitalization.

In our age, the relevance of this approach is enhanced by the rapid development of digital technologies and AI and the formidable challenges associated with it in higher education.

The main reasons why it is important to apply the notion of epistemic injustice and the approach it describes to the process of digitalization can be presumably summarised as follows:

1) digitalization and the platform economy are influential in establishing forms of epistemic beliefs shaped by the authority of the media that impact the social creation, authorization and circulation of knowledge

2) because, according to some, digitalization or more precisely digital social media, are responsible for the 'post-truth condition' (Kalpokas, 2019)

3) because one influential dimension of digitalization discussed in the article, mediatization, enforces the logic of media on a wide variety of social communication, including politics (Strömbäck & Esser, 2014), but also other sociocultural practices and domains, therefore establishing new forms of 'testimonial' and 'hermeneutic' injustice dependent on this logic

4) last but not least, because digitalization is not an ideologically neutral process, but one that from its onset was inspired and supported by the interest of corporate capitalism (Stocchetti, 2020). This influence is neglected in the debate about the ideological dimension of epistemic injustice and, as for example Spiegel have argued, the 'epistemic injustice' of mainstream epistemic injustice studies consists in neglecting "hermeneutic injustice with regards to class and classism." (Spiegel, 2022, p. 75).

6. Contributions to the Special issue

The essays collected in this special issue contribute to the development of the notion and the approach of epistemic injustice in at least two ways. First, they apply this approach to particulars relating to digitalization and education. Second, and in order to address these particulars, they enrich the conceptual tools of this approach. In so doing, they contribute to bring attention to neglected dimensions of epistemic injustice associated with the digitalization of education and, at the same time, to offer more accurate conceptual tools for critical engagement.

In the first article by Youngman and Patin, the focus is on Library and Information Sciences (LIS). The authors discuss epistemic injustice in this key process for the politics of knowledge through the concept of 'epistemicide' and 'sankofa'. Epistemicide is a notion borrowed from research in philosophy and sociology of knowledge that the authors use to describe "the devaluing, silencing, or annihilation of knowledge encompassing systematic knowledge destruction enacted through cumulative epistemic

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injustices". Sankofa is a word that in the language of the Akan of West Africa means 'to go back and get it'. The important insight emerging from their analysis is about the role of digitalization in LIS to perform reparatory functions for the effects of epistemicide committed through systemic epistemic injustice.

In the second article, Sikka and Proctor discuss instances of epistemic injustice suffered by international post-doctoral students at UK universities as a result of measures deployed in response to the Covid-19 pandemic. In their empirical study, the authors argue for the role of digital technology and online research in support of these student's resilience against the direct and indirect negative effects Covid-19 restrictions on their lives and research work.

In the third article, Oliveira applies the approach of epistemic injustice to the 'global knowledge ecosystem' and argues for the usefulness of the notions of epistemic sovereignty and digital epistemic sovereignty to identify and address the imbalances, asymmetries and the violence associated with it. This analysis in important and timely not only for Latin America but also for the EU since the notion of digital sovereignty is the focus of an ongoing debate here, and it gives an original contribution in arguing the fundamental but neglected relevance of the epistemic dimension of this debate and the risks of 'epistemic colonization' associated with uncritical digitalization.

In the fourth article, Ståhl presents the results of a pilot, empirical study on the strategies students deploy to justify their knowing in relation to information on the internet. The insights that contribute to the development of the approach of epistemic injustice are at least three. First, Ståhl makes a forceful argument for the difficulties associated with the application of Fricker's original concept of epistemic and testimonial injustice to the forms of knowing dependent on internet generated content where the Author is unknown or uneasily discernible. Second, the article shows the role played by epistemic beliefs and the justification strategies respondents felt to deploy to greater or lesser extent, depending on their knowledge of the source and their evaluation of its reliability. Finally, it shows the relevance of further empirical explorations on "testimonial injustice and the epistemic dimension of justification" for the possibility of designing effective interventions to address the negative effects of epistemic injustice in the digital age.

In the last article Mukhongo, engages more directly with the role that digital can play in forms of educational interventions inspired by the goal of increasing learning outcomes in culturally diverse classrooms.

We would like to conclude mentioning at least two important developments that we believe should have a place in the research agenda of this approach. The first is the AI 'revolution' which exacerbates the challenges of digitalization and brings about new and potentially formidable ones. To the extent that AI and related technologies are in essence 'epistemic technologies' (Alvarado, 2023) and still largely unknown, it can only be expected that the spread of this technologies will have an impact of on epistemic (in)justice that the institution of higher education will have to address. The second development is the influence of Neoliberalism, which is becoming, at the same time, more pervasive and more contested. These developments converge in at least two relevant debates that we believe are relevant for the study of epistemic (in)justice in higher education. The first is the influence of ideology in the deliberation about the ethics of AI (Munn, 2023; Bender, 2024, p. 114). The second is the new field of 'epistemology of democracy' (Samaržija & Cassam, 2023) in which concerns for the influence of Neoliberalism on the epistemic crisis of democracy inspire the effort to gain a deeper understanding of and strengthen the 'epistemic infrastructure' of democracy (Herzog, 2024, p. 209). Finally, the concerns from both these debates resonate in the study of the use of AI in education (AIED) (Popinici, 2023) and in the efforts to equip formal education with the conceptual means to play a positive role on both epistemic and ethical grounds (Schiff, 2022). What this means is presumably that if the combination of AI and Neoliberalism brings about formidable epistemic and ethical challenges, the mobilization of a diverse and multidisciplinary public of scholars and practitioners in support of democratic answers should give us all reasons for hope and commitment in times of uncertainty.

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References

Ainiala T., Räisä T., & Sjöblom P. (2020). Mediakeskustelun välittämä Tampereen yliopiston nimenvalintaprosessi osallistujien roolien, positioiden ja argumenttien valossa. (The mediated debate on the naming process of Tampere University in the light of roles, positions and arguments). *Puhe ja Kieli*, (*Speech and Language*) *40*(1), 1–22. https://doi.org/10.23997/pk.95494

Alvarado, R. (2023). AI as an Epistemic Technology. *Science and Engineering Ethics*, *29*(32). https://doi.org/10.1007/s11948-023-00451-3

Anderson, E. (2012). Epistemic Justice as a Virtue of Social Institutions. *Social Epistemology 26*(2), 163–173.

Asp, K. (1986). Mäktiga massmedier. Studier i politisk opinionsbildning. (Powerful mass media. Studies in political opinion formation). Stockholm: Akademilitteratur.

Battaly, H. (2023). Educating for intellectual pride and ameliorating servility in contexts of epistemic injustice . *Educational Philosophy and Theory,ol. 55*(3), 301-314. https://doi.org/10.1080/00131857.2022.2033212

Bender, E. M. (2024). Resisting Dehumanization in the Age of "AI.". *Current Directions in Psychological Science: A Journal of the American Psychological Society, 33*(2), 114–120. https://doi.org/10.1177/09637214231217286

Biesta, G. J. (2010). *Good education in an age of measurement. Ethics, Politics, Democracy.* London: Routledge.

Carter, A. J., & Meehan, D. (2023). Trust, distrust and testimonial justice. Exploration of the 'link between testimonial injustice and trust'. *Educational Philosophy and Theory, 55*(3), 290-300. https://doi.org/10.1080/00131857.2022.2037418

Cassam, Q. (2023). Misunderstanding vaccine hesitancy: A case study in epistemic injustice. *Educational Philosophy and Theory, 55*(3), 315-329. https://doi.org/10.1080/00131857.2021.2006055

Couldry, N., & Hepp, A. (2017). *The mediated construction of reality.* Cambridge: Polity Press.

Dahlgren, P. (2018). Media, Knowledge and Tust: The Deepening Crisis of Democracy. Javnost – The Public, 25(1-2), 20-27. https://doi.org/10.1080/13183222.2018.1418819

Dotson, K. (2012). A Cautionary Tale: On Limiting Epistemic Oppression. *Frontiers: A Journal of Women Studies*, 33(1), 24-47. https://doi.org/10.1080/13183222.2018.1418819

Dunne, G. (2023). Epistemic injustice in education. *Educational Philosophy and Theory, 55*(3). https://doi.org/10.1080/00131857.2022.2139238

Dunne, G., & Kotsonis, A. (2023). Epistemic exploitation in education,. *Educational Philosophy and Theory, Vol. 55*(3), 343-355, https://doi.org/10.1080/00131857.2022.2139238

Ferneding, K. A. (2003). *Questioning Technology. Electronic Technologies and Educational Reform.* New York: Peter Lang.

Frank, J. (2013). Mitigating Against Epistemic Injustice in Educational Research. *Educational Researcher*, 363-370.

Fricker, M. (2007). *Epistemic Injustice. Power and the Ethics of Knowing.* Oxford: Oxford University Press.

Fricker, M., Medina, J., Pohlhaus, G., & Kidd, I. J. (2017). *eds. The Routledge Handbook of Epistemic Injustice.* London: Routledge.

Giroux, H. A. (2014). *Neoliberalisms War on Higher Education.* Chicago: Haymarket Books.

Hepp, A. (2020). *Deep mediatization*. London: Routledge.

Herzog, L. (2024). *Citizen Knowledge. Markets, Experts, and the Infrastructure of Democracy*. Oxford: Oxford UP. https://doi.org/10.1093/oso/9780197681718.001.0001

Hindman, M. (2009). *The Myth of Digital Democracy.* Princeton and Oxford: Princeton University Press.

Hjarvard S. (2013). *The mediatization of culture and society.* New York: Routledge.

Horsthemke, K. (2014). Of ants and men: epistemic injustice, commitment to truth, and the possibility of outsider critique in education. *Ethics and Education, 9*(1), 127-140. https://doi.org/10.1080/17449642.2014.890278

Jandrić, P., Knox, J., Besley, T., Ryberg, T., & Suoranta, J. (2018). Postdigital science and education. *Educational Philosophy and Theory, 50*(10), 893-899.

Kalpokas, I. (2019). *A Political Theory of Post-truth.* Cham: Palgrave, Macmillan.

Kidd, I. J. (2023). Corrupted temporalities, 'cultures of speed', and the possibility of collegiality. *Educational Philosophy and Theory, 55*(3*)*, 330-342, https://doi.org/10.1080/00131857.2021.2017883

Medina, J. (2011). The Relevance of Credibility Excess in a Proportional View of Epistemic Injustice: Differential Epistemic Authority and the Social Imaginary . *Social Epistemology, 25*, 15–35.

Medina, J. (2012). Hermeneutical Injustice and Polyphonic Contextualism: Social Silences and Shared Hermeneutical Responsibilities. *Social Epistemology 26*(2), 201–220.

Miller, M. L., & Vaccari, C. (2020). Digital Threats to democracy: Comparative Lessons and Possible Remedies. *The International Journal of Press/Politics. 25*(3), 333–356. https://doi.org/10.1177/1940161220922323

Mosco, V. (2004). *The Digital Sublime. Myth, Power, and Cyberspace.* Cambridge: The MIT Press.

Munn, L. The uselessness of AI ethics. AI Ethics 3, 869–877 (2023). https://doi.org/10.1007/s43681-022-00209-w

Pohlhaus, G. (2012). Relational Knowing and Epistemic Injustice: Toward a Theory of Willful Hermeneutical Ignorance. *Hypatia, 27*(4), 715–735.

Popenici, S. (2023). *Artificial Intelligence and Learning Futures Critical Narratives of Technology and Imagination in Higher Education*. New York: Routledge

Rafner, J., Beaty, R.E., Kaufman, J. C., Lubart, T. & Sherson, J. (2023). Creativity in the age of generative AI. *Nature Human Behavior 7.* 1836-1838. https://doi.org/10.1038/s41562-023-01751-1

Räisä T. (2022). Family relations: Emotional overload. K. Kopecka-Piech & M. Sobiech, (Eds.). *Mediatisation of Emotional Life.* Routledge. Routledge Research in Cultural and Media Studies, 151-167. https://doi.org/10.4324/9781003254287-13

Runco, M. A. (2024). AI can only produce artificial creativity. *Journal of Creativity, 33*(72). http://dx.doi.org/10.1016/j.yjoc.2023.100063

Samaržija, H., & Cassam, Q. (2023). *The epistemology of democracy.* New York: Routledge.

Schiff, D. (2022). Education for AI, *not* AI for Education: The Role of Education and Ethics in National AI Policy Strategies. *International Journal of Artificial Intelligence in Education*, *32*, 527–563, https://doi.org/10.1007/s40593-021-00270-2

Schiller, D. (1999). *Digital Capitalism: Networking the Global Market System.* Cambridge, Mass: MIT Press.

Selwyn, N. (1999). Educational superhighways - in the public or private interest? *Internet Research , 9*(3), 225-231.

Selwyn, N. (2011). *Schools and Schooling in the Digital Age: A Critical Analysis.* London: Routledge.

Selwyn, N. (2014). *Distrusting educational technology: Critical questions for changing times.* Abingdon Oxon: Routledge.

Spiegel, T. J. (2022). The Epistemic Injustice of Epistemic Injustice. *Social Epistemology Review and Reply Collective 11*(9), 75-90. https://wp.me/p1Bfg0-7dv

Stocchetti, M. (2020). Introduction: Technology, Society and Education. M. Stocchetti, *The Digital Age and Its Discontents. Critical Reflections in Education*, 1-29. Helsinki: Helsinki University Press. https://doi.org/10.33134/HUP-4

Strömbäck, J. & Esser, F. (2014). Mediatization of Politics: Towards a Theoretical Framework. F. Esser, & J. Strömbäck (Eds.), *Mediatization of Politics. Understanding the Transformation of Western Democracy* (pp. 3-28). Basingstoke: Palgrave Macmillan. https://doi.org/10.1057/9781137275844_1

Strömbäck, J. (2008). The four phases of Mediatization: An analysis of the mediatization of politics. *International Journal of Press/Politics, 13*(3), 228-246. https://doi.org/10.1177/1940161208319097

Tække, J., & Paulsen, M. (2022). *A New Perspective on Education in the Digital Age. Teaching, Media and Bildung.* London: Bloomsbury Academic. https://doi.org/10.5040/9781350175426

Upsher R. Nobili A., Hughes G. & Byrom N. (2022). A systematic review of interventions embedded in curriculum to improve university student wellbeing. *Educational Research Review,* https://doi.org/10.1016/j.edurev.2022.100464

Walker, M. (2019). Why epistemic justice matters in and for education. *Asia Pacific Educ. Rev. 20*, 161–170. https://doi.org/10.1007/s12564-019-09601-4

Whitt, M. S. (2016). Other People's Problems: Student Distancing, Epistemic Responsibility, and Injustice. *Studies in Philosophy and Education. 35*, 427–44. https://doi.org/10.1007/s12564-019-09601-4

Yan, L., Sha, L., Zhao, L., Li, Y., Martinez-Maldonado, R., Chen, C, Li, X., Jin., Y. & Gašević, D. (2023). Practical and ethical challenges of large language models in education: A systematic scoping review. *British Journal of Educational Technology*, 55(1), 90-112.

