Editorial: The Benefits and Challenges to Academic Publishing in a World of Artificial Intelligence

Robert Ackrill[1]*, Lerato Dixon[1], Chunping Liu[1] and Piers Thompson[1]

Abstract

As an academic community, Artificial Intelligence (AI) has turned our world upside down in almost all respects in recent years. It assists us in undertaking research, delivering teaching and designing our assessments, but at the same time it creates massive hurdles in terms of ensuring the authenticity of academic work. As journal editors we now face a further challenge on top of those previously experienced with regard to maintaining the integrity, ethics and robustness of the research we publish: the uses and possible abuses of AI in content creation. *In this editorial we examine the benefits that AI has brought, but also the dark sides that must now be considered. We propose some directions forward that as an academic community may be essential for our survival in a world of ever-greater demands on our time in the context of funding cuts.*

Introduction

The speed that generative AI has developed and become widely and cheaply available, if not already, soon will lead to huge changes in the manner that many jobs are accomplished and the skills required (Morandini *et al* 2023). It may also affect the identities that employees have within the workplace (Strich *et al* 2021; Mirbabaie *et al* 2022). Although relatively recent research might suggest the impact of AI in terms of substituting for labour is relatively low, this is likely to be a reflection of data lags (Acemoglu *et al* 2022). In the education sector there are hopes that it can both streamline tasks which are required for delivery and be a key element of education itself (Chan 2023), as well as forcing education to adapt to provide the skills required to use AI in the workplace and life more broadly (Markauskaite *et al* 2022); but there is also recognition that there are limitations (Holmes and Tuomi 2022). Like the areas noted above, AI's potential for influencing research in higher education and beyond is also clear and may have both positive effects, in terms of improving efficiencies in data analysis and writing, but also negative effects, in terms of research quality, as well as raising concerns

regarding research ethics and integrity (Alasadi and Baiz 2023; Hosseini *et al* 2024).

As editors of this journal, we recognise that there is a need to adapt to the nature of research, both in terms of the topics that are of interest to our readership, but also the manner in which the research is undertaken. For example, it would be very odd if *Economic Issues* were not to accept econometric papers or those that employ experimental approaches. Similarly, we have a much wider geographical spread of authors, reviewers, readers and editorial board members than in the past. We acknowledged this pattern of change as long ago as 1996, when we changed the title of the journal from the *British Review of Economic Issues* to its current title. We refer to these changes because the advance of AI is likely to have implications just as substantial for how *Economic Issues* and other journals respond, as it is likely to interact with these previous patterns. It is also starting to disrupt these patterns, with the technology appearing to move at an ever-faster pace.

In this editorial, we therefore consider the ramifications of greater use of AI in academic research and, in particular, how this affects journals such as *Economic Issues* through all stakeholders (authors, readers, and editors). We attempt to identify the benefits that might be yielded from AI for these groups, as well as the difficulties that they bring. We attempt to consider how such abuses of AI in research might be mitigated, particularly from the perspective of smaller journals such as *Economic Issues*, backed in our case by an educational charity with limited financial resources, but also in the case of others that may be supported by a smaller learned society or an education institution. We then attempt to draw some conclusions about the influence of AI in journal publishing in the near future and what publishers of all kinds may wish to consider as a group for the longer term.

Ways that AI can Support the Publication of Research

It is probably fair to suggest that the capabilities of AI are evolving at a much faster pace than many colleagues in academia appreciate or feel competent or comfortable engaging with. Studies in various fields have already shown that it is possible to use AI throughout the writing process of a paper (Scott-Kennel *et al* 2025). Some of the benefits of AI-use in the writing process could be of particular benefit for journals seeking to expand their geographical authorship and in encouraging less experienced academics to submit their work, where language problems may have been a barrier that prevented the publication of strong underlying research (Hosseini *et al* 2024). In the past, *Economic Issues* has occasionally received submissions where the quality of the written English has been a barrier to effective review. Where AI is used by authors who are non-native English speakers, to support them in the clarity of the written English, this will grant them access to a much wider audience. With academic writing dominated by the English language, for better or worse, this can offer greater equality to global audiences.

One aspect of paper writing that authors have often wished to offload to others is the review of the literature and the writing of the literature review. As authors of systematic literature reviews will testify, the process of identifying the relevant literature and drawing out key themes is time-consuming when done in a comprehensive fashion (Shaffril *et al* 2021). Although a systematic literature review is not required to be included in all papers, the principles of identifying the relevant literature and ascertaining its quality and themes for the purposes of assisting in research design would be expected (Harris 2019; Snyder 2019). Where AI can assist in this is in helping to identify the appropriate literature and relevant themes (Wagner *et al* 2022; Bolaños *et al* 2024). It has even been suggested that with research output increasing globally, it is impractical for humans to undertake a full literature review of all outputs that are relevant. This can lead to a bias towards outputs in the top ranked journals, but AI can provide a tool to assist and process the huge amounts of data present in the literature (Larsen *et al* 2019).

Within the review of literature, Wagner *et al* (2022) suggest that beyond search and screening of literature there is potential for: an assessment of the quality of the outputs identified; and data extraction and interpretation from the literature, but this tends to focus on the more descriptive. It therefore still currently falls short of the ability to under the critique of literature that is central to any robust literature review, as 'human critical thinking and creativity are still vital and remain a core responsibility of the researchers' (Bolaños *et al* 2024 p 259). However, Wagner *et al* (2022) note that where more mechanical activities can be given to AI, this frees up time for the more creative value adding elements of interpretation, intuition, and expertise (Tsafnat *et al* 2014).

Wagner *et al* (2022) highlight that there is also potential for initial problem formulation, which should help authors to identify true rather than claimed gaps in knowledge to avoid desk rejection (Ogbuabor and Eigbiremolen 2016; Hadap and Khatri 2024). There is also the potential to identify where authors can contribute to particular debates within those spheres they feel are most important, academic, wider population, policy makers etc (Andre and Falk 2021). Journal policies will often make this clear, such as *Economic Issues* encouraging submissions that '…contribute to public discussion and which are applicable to the practical concerns of decision-makers.', and editors through communications to prospective authors (Rivard 2014). In practice, however, many submissions do not match the requirements of the journals to which they are submitted. From the perspective of journal editors, in combination with the potential for more complete and thorough reviews of the existing literature discussed above, it might be hoped that the use of AI will mean fewer submissions being received that replicate existing work, as authors will become less reliant on keyword searches identifying all work, or missing streams of relevant literature in journals associated with other fields of work (Mallett *et al* 2012). Equally, editors could also use the AI tools available to them to provide an initial assessment if the paper makes a sufficient contribution

above and beyond the existing literature. This means that AI has the potential to strengthen and speed up the desk rejection process. Handling Associate Editors will be able to concentrate on a smaller number of higher potential papers and similarly the workload on referees will be reduced.

Econometric analysis has been influenced by machine learning and AI for longer than the more recent tools associated with paper writing and literature searches. Its potential is clear when considering the large datasets that are becoming available (Woloszyn and Bukowski 2025). In addition AI has the potential to create datasets that would have previously required high levels of staff time, such as creating quantitative variables from unstructured data (Miric *et al* 2022). Simple uses of AI can vary from cleaning data, writing code for packages such as Python and even providing a basic interpretation of the results (Asmaa 2025). All these uses of AI have the potential to reduce simple errors in writing code, or mistakes made when converting data from different sources into a compatible form. Moreover, AI also the potential to allow analysis that goes beyond traditional econometric techniques.

As with literature searches, the potential to at least partly automate the process of identifying relevant variables and relationships to model can reduce the potential for subjective choices by researchers (Hendry and Doornik 2014). It opens up the possibility of identifying more complex relationships that are not immediately apparent (Woloszyn and Bukowski 2025). It also has the potential to overcome many of the assumptions that need to be made about the relationships investigated (Hai and Van Tuan 2024). For journal editors the explicit use of such tools can help authors to refute referees' comments that suggest the inclusion of a further control, which may often be just as subjective a preference as the decision to not include it in the first place, and the necessary re-estimation that might have far reaching consequences for the narrative of the paper, all of which reduces the timeliness of research being published. In these circumstances, academic integrity is imperative.

While the opinions and inputs of referees should be respected, it is also important to appreciate that the selection of some articles, variables, and models may simply be a referee's preference. Recourse by authors to AI in responding to referees' comments also, therefore, requires a shift in the mindset of referees and editors when determining the adequacy or merit in such responses. As discussed further below, transparency in the uses to which AI is put is likely to be a central feature in the acceptability of AI-use in research. In this context. It simply represents an extension of the question of transparency over the initial choices made around data, methods, etc. that authors should, ideally, already be reflecting on and including in their papers.

How AI can be Abused to the Detriment of Quality Research Outputs

As with students' growing use of AI in the writing of their assignments, most academics would agree that there are uses in research which are perfectly acceptable and others which are not, but there is a grey area between these.

For example, as with students' assessments, most would be comfortable with colleagues using AI to improve grammar and spelling in research writing. Indeed, tools such as Grammarly can already do this. However, in the same manner that we would not accept our students putting the assignment brief into an AI system and submitting the outcome with no further input, most would feel that a completely AI generated research output was not appropriate. However, between these extremes there are many potential uses of AI, so which of these are the most problematic (ab)uses of AI from the perspective of journal editors? We can return to a number of the uses identified in the previous section to consider how the manner that AI might be used in assisting with both the underlying research and the actual writing of papers to consider the consequences for journals below, ranking these from being of low concern to high concern with regards to the academic integrity of published works.

Journal editors and their chosen referees are often aware that the literature review has been 'copied and pasted' from authors' prior work, or subcontracted to others, such as research assistants and doctoral students, where work such as this or other elements of the research can be affected by issues of power and a perception in the wider community that they are the 'hired hand' (Macfarlane 2017). Even if this is done well, this raises concerns about not recognising legitimate authorship claims or claiming authorship of others' work. There is evidence that such activities vary from country to country in terms of the extent to which they are seen as acceptable (Macfarlane 2017; Li and Cornelis 2018). Although more junior members of staff or doctoral candidates may fear the consequences of expressing how they have been exploited, AI tools (currently) have no such capabilities. As such their contributions can be taken without any acknowledgement or, perhaps paradoxically, without any debate over authorship (Dasborough 2024; Tingelhoff *et al* 2025).

However, such approaches often result in editors or referees either rejecting papers or requesting that the authors seek to use the literature and rewrite their review to identify the particular gap or puzzle in existing knowledge that will be investigated by the current paper (Dwivedi *et al* 2022). While neither recycling previous literature reviews, nor getting others to write the literature review, are desirable and should result in at least one additional round of revisions for authors, delaying the time from submission to acceptance, one may have greater ramifications for the underlying research. Given that theoretical or empirical contributions should be informed by the existing literature, subcontracting the literature review may imply a greater problem. Where the authors 'reuse' their previous literature reviews there would be a grounding in the literature, but this still faces the issue of not accounting for the latest developments in the field (Dwivedi *et al* 2022). AI unfortunately has a greater potential to result in the former situation where there is a complete lack of engagement with the existing literature, rather than a lack of updating with the latest advances by the authors. It has also been suggested that unlike human cognition, which is theory-based causal reasoning, the existing capabilities of AI, based around

probabilities, tend to make the knowledge generated by the review of existing literature backward-looking rather than forward-looking (Felin and Holweg 2024).

It is also recognised that AI is capable of creating citations and lists of references that are fictional (Athaluri *et al* 2023) as well as misinterpreting the research within the cited work (Chelli *et al* 2024). In general, it is noted that AI does not necessarily improve the performance of a task if there is poor interaction between humans and AI, leading to over-reliance on the AI (Passi and Vorvoreanu 2022). This might be linked back to Wagner *et al*'s (2022) consideration that AI's quality assessment and certain types of data extraction from the existing literature are still relatively limited. As such, when screening studies for inclusion in systematic literature reviews, AI tools specifically designed for the purpose are still suggested to be best complementing manual screening efforts rather than replacing it completely (van Mossel *et al* 2025).

The use of machine learning and AI in econometric analysis, while being less of a recent contribution, still comes with its own problems, with many commonalities shared with the issues associated with the literature review. AI tools should be seen as complementary to the researcher's own knowledge and expertise. The ability of AI to consider huge amounts of data and identify potential relationships within the data, to a degree that is beyond human cognitive capabilities clearly brings benefits, but as we teach our students, correlation is not causality. Any relationship identified by AI should still be examined for its economic rationale and reasoning (Woloszyn and Bukowski 2025). As implied above, the problem is when AI in econometric analysis is utilised as a short-cut without any sense checking. Given that the more complex the model developed the more sensitive it may be to small changes, the inclusion of any spurious relationship between control variables (with one another or the dependent variable), which may change as more data becomes available, may have fundamental ramifications for the key relationships found, casting doubt on the quality of the research and its implications (Giudici *et al* 2025). This is a concern for all research, but especially where the findings might be used to inform commercial or policy decision-making, for example. Woloszyn and Bukowski (2025) also highlight the issue of data quality. Just because AI can handle a much larger number of variables and relationships between them, if the data for particular variables is of lower quality, should this data should be included in the analysis?

Studies with data or analysis errors can often be published as editors, referees and the researchers themselves, are human and will not pick up every mistake made, but we hope that those that remain are minor and have limited ramifications for the key findings of studies. With AI tools, the sheer complexity of the datasets and relationships being modelled make the identification of all errors by human editors, referees and the authors themselves perhaps an impossible task for some studies. Errors are perhaps more likely to be missed where AI tools are used, as the researchers are effectively one step away from

the choices being taken, even if they have to determine the parameters within which the AI tool will operate. This problem is compounded where AI tools are being used precisely for those large data-based analyses that are, as suggested above, beyond human cognitive capabilities. Where AI is abused as a short-cut it is again much more likely that there will be an error, with the weight of identifying this error falling on the editor and referees who do not have access to the data or code.

This raises the possibility that editors will have to retract flawed work at a later date in larger numbers as diligent researchers that follow will find inconsistencies with their own work and will gradually pick up the issues with the published work. The problem is that the damage may already have been done: policies based on flawed results may have been put into practice, wasting corporate or taxpayer money, or having other negative consequences for the economy and society. Further, for journals the reputational damage could also be severe and diminish readership, citations and possibly even subscriptions.

Given the demands placed on young or time constrained academics (Cao *et al* 2025), relying too heavily on AI's outputs, rather than using it as a complementary tool, will weaken the quality of the research, and potentially undermine the development of independent scholarly judgement. Regardless of the potential impact on equality there are ethical considerations of authors effectively claiming AI's work as their own, which we would all agree is unacceptable if the unrecognised contributor were another human.

In summary, many of the benefits of AI in research can have consequences for the quality of research, when the manner of use does not complement traditional expectations but rather provides a short cut taken without adequate oversight. For editors of journals this has particular consequences for our traditional peer review approach to judging the potential for work to be included in a journal, as it allows the quantity of research outputs to increase without the accompanying maintenance of quality. Journals are already facing issues of salami slicing where projects' research contributions are split up and published in multiple outlets rather than unified to provide a greater contribution to knowledge. This comes from the pressure of academic life to publish in ever greater quantities for promotion and tenure, but also risks self-plagiarism (Hazen *et al* 2016). What AI brings is a much greater efficiency with which poor quality research submissions can be generated.

Methods of Mitigation

As implied above, we do not feel that our role as editors is to limit or ban appropriate uses of AI, especially as we believe that the use of AI will become ever-more commonplace. As discussed above, the tools of AI have the potential to both improve the efficiency of conducting research and also to allow analysis to be undertaken in a timely manner that is beyond the cognitive abilities of humans. It also can support greater inclusivity in the academic field by broadening those who are able to participate in research exchange in what for

many will not be their first language. However, as also highlighted, there is the potential for AI to be abused in a manner that puts the quality of research published at risk, and thus reducing trust in scientific endeavour, at a time when such issues are become much more prevalent (Hyde 2025; Sinatra 2025). It is on reducing this risk that this section focuses.

Where AI perhaps differs compared to other tools used in publishing is that as the name suggests, it falls somewhere between being a tool and being an additional author. It is from this perspective that AI ought to be considered. There is an expectation that those who are named as authors have contributed in a substantial manner to the research that means they are considered to have an ownership stake in the final product; and, equally, that those making a substantial contribution will be named as authors (Osborne and Holland 2009; Publishing Editorial Team The Royal Society 2022). However, there is growing understanding of what such a contribution might look like and the ways in which authorship issues might be abused – either by including someone who has not made a substantial contribution, or by excluding someone who has (Publishing Editorial Team The Royal Society 2022). One widely accepted taxonomy is the Contributor Role Taxonomy, or CRediT: https://credit.niso.org/. Such abuses can include passing off the work of others as one's own, senior researchers pressurising junior colleagues to include them as authors, or paper mills selling author slots for those feeling under pressure to publish. As editors of journals, one method we have of overcoming this issue has been the introduction by some of the need to include a contribution statement, perhaps based on the CRediT taxonomy, which although not perfect at least requires the dishonesty to be explicitly stated. Moreover, it offers the possibility of empowering those who recognise and experience authorship abuses to raise these concerns even before a paper is submitted to a journal.

What we need to consider is why AI should be treated any differently to any other author. If AI has been used its contribution should be stated like any other contributor, but it may be problematic to consider AI as an author as it cannot currently take responsibility for its contribution or give final approval (Moffatt and Hall 2024). Given the potential for AI to incorporate errors, without the ability to take responsibility for its own work, AI's coauthors must therefore take responsibility for any errors that their artificial collaborator makes (Hosseini *et al* 2024). It is also argued that as AI has been trained on others' work, which it is does not acknowledge or was given permission to use for this purpose in most cases, material it produces cannot be copyrighted and therefore legally cannot be considered an author (Lee 2023). In a perfect world it would be nice to think that those who have used AI as a complete shortcut would recognise their own contribution as being minimal and would remove themselves as authors from the paper. In these cases, some argue ethically papers where the 'lead author' is effectively AI (there may be some remaining human coauthors), should not be published given the impact this has on stretching an already under-pressure publishing ecosystem and in squeezing out human authors

who need to publish for the sake of their careers (Resnik and Hosseini 2023). Back in reality this cannot be expected, but including contribution statements that explicitly require acknowledgement of AI's contribution would be a step towards a more transparent culture around the use of AI (Hosseini *et al* 2024). It would still, however, require editors and referees to police the dishonest.

It appears that there are many cases of AI being used to assist in writing papers that are at best not transparently acknowledged and at worst may lead to issues of concern relating to quality. The evidence for this can be found in what is all too likely to be the tip of the iceberg, where AI's use is clearly visible in the published work. Joelving (2023) describes the investigative work of Guillaume Cabanac who identifies many cases of papers where the term 'Regenerative response' has been found in papers. This is the button in ChatGPT for requesting AI to rework an answer, implying that the authors have used AI to write parts of the paper and simply copied and pasted it in, along with the button. As an editorial community we should become aware of such clues that indicate the abuse of AI. If a contribution statement is required with submissions and AI has not been acknowledged as explicitly requested, then manuscripts could be rejected from the review process. However, as the Cabanac approach identifies 92 papers with clear evidence of undisclosed AI use, along with 2 peer reviews and 1 author response to peer reviews (Retraction Watch 2025), the publishing community has demonstrably not so far been effective in identifying even the most obvious evidence of uncredited AI use. For this, education and training to boost awareness and understanding of the warning signs, such as the meaning of regenerative response in the context of AI, are critical.

In terms of concerns about the extent that the literature has been truly reviewed and used to inform the research, one job of the reviewers, as experts in the field, that is growing in importance is to review the references in order to make sure they look credible. If they do not recognise a paper, it is easy nowadays to see if a reference is genuine. Moreover, referees can very quickly identify references to articles that are clearly unrelated to the topic in question. We would also suggest, however, that a detailed analysis of references is the job of the proofreader. Recent experiences with *Economic Issues* suggest that it does not take long to determine whether a given referenced item not only exists but is relevant to the present research, with Google Scholar and academic databases (such as Business Source Ultimate and EconLit) facilitating this process. As journals, increasingly, ask for DOIs/URLs to be included in references, this task is becoming easier – and quicker still.

From the literature review, how exactly does the research in the rest of the paper relate not only to the literature reviewed, but those forward-looking analytical threads that should be expected from the review? Do the data sources look relevant? How do the methods of data analysis align – are they methods used in previous research, or are novel techniques employed? How are the findings compared and contrasted? How are the methods of data collection

described, both for qualitative and quantitative methods? Open Research increasingly involves making the datasets (again, qualitative and quantitative) available – but when, if at all, would any researcher reuse such data to test reproducibility?

As well as our traditional peer review approaches, journals must start to embrace the potential of AI to check the submissions they have received. It can be argued that the current peer review system is already at breaking point in places, where the capacity of editors and referees to check the number of papers being submitted is becoming overwhelming (Hazen *et al* 2016; Resnik and Hosseini 2023), coupled with the growing challenges of finding colleagues to agree to referee papers given the multiple competing claims of academics' time. At *Economic Issues*, as is the case with most journals, we assess the quality of papers within the editorial board before sending them out to referees. While it can be demoralising for authors to receive a desk rejection, it offers a rapid response to authors whose papers can never be published in their current form because, for example, they do not fit the scope of the journal; are too poorly written (Hazen *et al* 2016); or have other fundamental errors. Although there are dangers in relying on AI to produce research proposals or identify gaps to investigate, as the presence of a research gap does not automatically make it worthy of investigation, AI can still assist us in identifying other papers that have dealt with similar research questions to ascertain if there really is a novel contribution, although human checks are still required (Soriano *et al* 2024). An increasing culture of rewarding authors in terms of career progression through quantity rather than quality (citations and publications) may lead to AI being used to generate even greater numbers of incremental papers in mainstream areas. To counter this, journals can place a greater importance on creativity and innovation for acceptance for publication (Lund *et al* 2023).

However, there remain limits to the extent that AI can assist in the peer review process as it is currently limited in its ability to identify creativity, novelty and scientific merit given its contributions are based on existing content (Wiechert *et al* 2024). It is then, and remains, up to the referees and editors to determine the extent to which the paper and its claimed contribution are sufficient for consideration for publication. Where reviewers, or for that matter editors, go beyond this and rely on AI to undertake the whole decision making process, this will result in poor quality reviews that provide general rather than specific comments and limited recommendations for ways forward to develop the paper (Donker 2023). Given the potential consequences for scholars' careers where papers are wrongly rejected or not directed to make appropriate revisions, Mollaki (2024) suggests that policies controlling the extent referees use AI are insufficient and bans from the peer review process need to be considered, and not just for a single journal.

In a similar manner to the use of other anti-plagiarism software such as that used routinely in many universities for students' work, it is vital that the opinions of AI continue only to assist editors and that we make the final

decision, as there can be a perfectly legitimate reason why a submitted paper may appear to make a similar contribution to an existing published work. A contribution may still be present, but has not been articulated in an explicit and clear manner. For example, a paper may offer a response to an academic puzzle that is not, strictly, a 'gap' in the literature; thus a paper that explores contradictory findings on a topic in the existing literature would not be addressing a gap but an overlap! However, if AI can help assist and supplement the role of the desk review editor, that some journals have adopted, to identify where this is the case and ask for revisions before the output enters the review process it can reduce the pressure on overworked referees to read between the lines.

For experimental and econometric analysis, the move towards open research with datasets, experimental designs and where appropriate programme code made available, could be one manner that journals can protect themselves from the danger of high levels of retractions. Editors, referees and the authors themselves cannot be expected to be perfect and identify all errors. Rather we perhaps need to allow a greater role for publication of studies that look to reproduce, replicate and/or refine prior analysis. This might be a separate section of journals and where such studies are published a clear link on the website of the original paper could be provided to the new updated version. It also provides the greater transparency that is essential if shortcomings in research integrity are to be exposed. The comparable issue with qualitative research would see the relevant data – interview transcripts, survey data, etc. – being made available, but also there would need to be a clear statement in the paper as to the basis by which the data analysis has been conducted, in terms of ontology, epistemology, and axiology. The nature of reproduction and replication in qualitative research is quite different to that in quantitative research, but transparency over the different facets of the chosen research methodology can act as a bulwark against inappropriate academic practice.

Mitigation of the risks from AI to academic integrity of published work, therefore, requires a combination of honesty, trust, vigilance and transparency. As editors of and referees for journals we can contribute to the achievement of these both directly and indirectly. Generally, those most heavily engaged in refereeing and editorial work are more senior academics, which provides us with some influence with regard to creating a culture that promotes honesty and trust, including with supporting and training junior colleagues within our own institutions. We cannot immediately change a culture of 'publish or perish' based around quantity rather than quality. However, we can act as role models through our own publishing strategies. Also within our own institutions, we can look to encourage cultural change by discussing appraisal processes and policies for the allocation of research hours with management. As research leaders and mentors, we can explain the dangers of predatory or near-predatory journals. More directly through our journals we can resist pressure to increase the number of pages within volumes, or number of volumes unless the number

of quality submissions really merits this. As discussed above, we can also consider the need for different types of paper, those that ensure the quality of existing research through replication studies may paradoxically make a more worthy contribution to academic research than those making small incremental empirical or theoretical advances. Cultural change of this type, although a long term and very ambitious mission, would reduce the incentives to abuse AI, but promote the careful and appropriate of AI to increase the quality of research insights.

More direct actions we can take relate to vigilance. As described above editors can assist referees by providing guidance on spotting the signs of AI abuse as well as drawing on AI itself to assist with screening of submissions. In terms of transparency the move to open research discussed above, as well as comprehensive contribution statements that recognise AI's inputs, will be key. A requirement for a separate contribution statement focused on AI alone at the point of submission, alongside clear guidance to assist authors complete this by identifying and breaking down how AI has been used, will help identify issues. Such AI contribution statements can also be part of the work to change culture by making authors consider the need to disaggregate the roles played by AI in undertaking research and writing the paper. Thinking of undertaking research with the assistance of AI in this manner would hopefully reduce the danger of errors arising where the guiding hand of human authors has been released from AI. It will also make authors think carefully about what they have contributed in terms of how they have guided or put AI to work, so that they are honest with themselves about the extent they deserve an authorship.

Conclusions – How AI can be Accommodated in Academic Publishing

Academic publication has always relied on trust to underpin the belief that the research was conducted as described and that the results are honestly reported. AI has elevated concerns around research, given the rapidly-growing power and abilities of AI to undertake more and more text generation as well as, increasingly, data analysis. At the very least, there needs to be transparency from authors as to whether, and how, AI has been used in the production of a given paper. In one regard, this represents a natural extension to well-established conventions around research ethics and integrity.

Crucial to this, just as with the education of our students, is the acceptance that AI can have positive as well as negative uses and the process of learning not only how to use AI, but also when. The challenge will be to understand – in a way that is universally accepted – where the boundaries lie. For example, preparing a paper with imperfect English and having AI software improve that English might be seen as fundamentally different from using AI to write the narrative *ab initio*, based on a few concepts and data points.

What about, for example, the writing of a literature review? To the extent that, currently at least, AI is limited to reviewing what is already available, reviewers and editors will need to be vigilant in looking for clarity and – that,

word again: transparency – over what was done and how. Taking two simple examples, both critical and systematic literature reviews require more than just a restatement of what others have already said, so a clear statement of the specific approach to how the review of the literature was itself structured is imperative. Any literature review also needs to be forward looking, setting the baseline from which the present research starts.

In some regards, therefore, the challenges faced by AI are similar or directly comparable to many of the challenges faced previously – where trust is central, but where transparency offers at least a degree of reassurance. As experience with reviewing papers in an AI world grows, we can learn to look out for question marks around how the literature is reviewed, how the data are presented and analysed, and how the paper as a whole hangs together with a coherent narrative. The challenge with AI is whether our learning can keep up with the pace of development of ever-more capable AI software. Are we moving into a space where we reject papers about which we have concerns, but which have not been generated, fundamentally, by AI processes but by hands-on research? The pace of development of AI, ultimately, means that we cannot possibly provide definitive answers to these questions. All we can do is to remain vigilant and hope that, through trust, honesty and transparency, we as editors and referees get it right – at least most of the time.

Contribution Statement

Robert Ackrill: Conceptualisation (equal); Investigation (equal); writing – original draft preparation (equal); writing – review and editing (lead);
Lerato Dixon: Conceptualisation (equal); writing – original draft preparation (supporting); writing – review and editing (supporting);
Chunping Liu: Conceptualisation (equal); writing – review and editing (supporting);
Piers Thompson: Conceptualisation (equal); Investigation (equal); writing – original draft preparation (equal); writing – review and editing (supporting).

Endnotes

1. Department of Economics, Nottingham Business School, Nottingham Trent University, 50 Shakespeare Street, Nottingham, NG1 4FQ

* Corresponding Author: robert.ackrill@ntu.ac.uk

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