

The Tsetse Fly Perched on the Scrotum: Publishing Problems in Academic Journals

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Abstract

South Africa's research incentive system rewards faculty members and affiliates for publishing in outlets that are "accredited" by the Department of Higher Education and Training. This arguably perverse incentive makes academic research a potentially aggressive numbers game. It is compounded by factors such as undue delay in peer review, difficulty in securing expert evaluators, and poor understanding of who constitutes a "peer". Despite the "publish or perish" pressure on researchers and the prohibition of the parallel submission of manuscripts by many journals, there is negligible research on publishing problems in South African journals. Informed by a literature survey, editorial experience and conversations with colleagues, this article seeks a dialogue about these problems, which it characterises as a tsetse fly perched on the scrotum. On the one hand, the current incentive system commodifies outputs and diverts attention from building knowledge with socially responsive research to building the financial coffers of universities and authors. On the other hand, inappropriate editorial interpretations of a "peer" and the gratis nature of peer evaluation encumber the publishing process. We argue that this situation erodes academic excellence, encourages the growth of predatory journals, and potentially harms national development.

Keywords

Peer review; perverse research incentives; higher education; South Africa.

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1 Introduction

In this age of political correctness, some people might find the word “scrotum” offensive in a non-medical paper. But the scrotum is a sensitive part of the human anatomy. An African proverb says that when a tsetse fly perches on one’s scrotum, it should either be waved away (to return later) or killed with caution (to avoid causing damage to its host).¹ The sensitivity of the scrotum in this situation describes the peculiar problems plaguing knowledge production in academic journals.² This article seeks to initiate a conversation about these problems, which coalesce on the tripartite issues of undue delay in peer evaluation, non-uniform standards of review, and a perverse incentive research funding system.³ Embedded in the first problem is the increasing difficulty that editors face in convincing academics to accept peer evaluation.⁴ Frustrated editors are sometimes forced to compromise peer review standards in order to find alternative reviewers and avoid inordinate delay in the publication process. As a global survey shows, many reviewers submit late, rushed or substandard evaluation reports.⁵ Although these issues generate much complaint among authors and journal editors, they do not generate much remedial action.⁶

In South Africa, the lack of remedial action probably owes much to the nature of higher education funding. Notably, the funding of public universities occurs significantly through an incentive system that is aimed at promoting scientific publishing. This system is traceable to various policies introduced by the erstwhile Department of National Education from 1985.⁷

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¹ The tsetse fly is a large, biting fly mostly found in tropical Africa. As an obligate parasite, it lives by feeding on the blood of vertebrate animals. Its bite is usually painful, and can develop into a red sore called a chancre. It causes fever, severe headaches, irritability, extreme fatigue, swollen lymph nodes, and aching muscles and joints, which are common symptoms of sleeping sickness.

² By South African journals, we mean primarily law and humanities journals.

³ A perverse incentive is one that produces an unintended and undesirable result that contradicts the intentions of its designers. For analysis, see Tomaselli 2018 *South African Journal of Science* 1-6.

⁴ Farham 2020 *South African Journal of Science* 1-2.

⁵ Publons 2018 <https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf>.

⁶ Larivière, Haustein and Mongeon 2015 *PLoS ONE* 1-15.

⁷ For analysis, see Mouton and Boshoff 2008 *De Jure* 596-597.

They laid the foundation for rewarding research produced in public higher education institutions by faculty and their affiliates such as fellows, students, and honorary appointees. Significantly, research that is deemed worthy of reward must be published in outlets that are "accredited" by the Department of Higher Education and Training (DHET).⁸ Under this incentive system, peer evaluation is the fundamental mechanism for measuring research quality. However, peer evaluation suffers from three interlinked problems. We explain them seriatim in order to set the stage for the structuring of this article.

Firstly, there is no standard definition of who constitutes a "peer" for the purpose of peer evaluation. Is a "peer" someone at the same academic/industry career level as the author or is it anyone with the same subject expertise? Many journals appear to select peer reviewers largely based on subject expertise and availability. We examine the disadvantages of this approach in Part Three of this article.

Secondly, the current research incentive system commodifies knowledge production by turning it into an unhealthy competitive numbers game.⁹ In their quest for increased research subsidy, many universities have adopted hiring and promotion strategies that resemble political rent-seeking.¹⁰ Specifically, the incentive system is said to promote quantity over quality, thereby creating unrealistic expectations from academics, many of whom are already overburdened with teaching, supervision and administrative duties.¹¹ It also overburdens editorial committees, who are compelled to – figuratively – sieve the wheat from the chaff of numerous manuscript submissions.

⁸ Accredited journals satisfy specified criteria that qualify them for subsidisation by the DHET. To qualify, the journals must:

- a) have an editorial board reflective of expertise in the relevant subject area, with over two-thirds drawn from beyond a single institution;
- b) have at least 75% of contributions from multiple institutions;
- c) be peer reviewed;
- d) aim to disseminate results that support high level learning, teaching and research;
- e) possess an International Standard Serial Number (ISSN);
- f) be published at the frequency it is intended to be published;
- g) be distributed beyond a single institution; and
- h) include English abstracts if their language of publication is not English.

⁹ Tomaselli 2018 *South African Journal of Science* 1-6.

¹⁰ Muller described rent-seeking as "the process whereby private organizations or individuals expend resources to obtain actions from state institutions that allow these private actors to earn 'rents' in excess of what they would earn in the hypothetical scenario of a competitive market." See Muller 2017 *International Journal of Educational Development* 58.

¹¹ Muller 2017 *International Journal of Educational Development* 58.

Thirdly, there is disturbing delay in the publication process of journals, which arises mainly from the slow pace of peer evaluation.¹² This is a common issue in the JUTA annual Managing Editors' Forum. From discussions in these forums and interactions with journal editors, the waiting time in most accredited South African law journals from the submission of a paper to its publication ranges from six to ten months. Obviously, this estimation is dependent on the availability of reviewers, their interest in the subject matter concerned, and their relationship with journal editors.¹³ For prestigious journals such as the *Potchefstroom Electronic Law Journal*, the *African Human Rights Law Journal*, and the *South African Law Journal*, the average waiting time is considerably longer. In cases of undue delay, the article's subject matter could undergo substantial changes that rob it of relevancy.

Undue delay in journal publishing is aggravated by the inability of authors to make parallel submissions. Obviously, there are good reasons for the prohibition of parallel submissions.¹⁴ However, if authors have to wait nearly one year for their paper to be reviewed, only for it to be eventually rejected, they would have to submit it to another journal with a potentially similar turnaround period. By the time an affected paper is published, its findings might have become outdated. Given the "publish or perish" pressure on academics, undue delay is bad for early career researchers.

Despite the problems plaguing journal publications in South Africa, they attract comparatively very little research. Based on editorial management experience, anecdotal conversations with colleagues and content analysis of relevant policies, this paper characterises these problems as a tsetse fly perched on the scrotum. Here, quality research is the scrotum, which must be preserved while dealing with the tsetse fly that troubles it. Following this introduction we examine the key issues surrounding the research subsidy system of the DHET, beginning with a brief historical background of journal publishing and government funding of research. Part Three of the article presents the case for peer evaluation by describing its purpose, nature, and limitations. Against the backdrop of international best practice we deconstruct peer evaluation and explore the thorny issue of incentivising peer reviewers. Part Four examines the chief problems with the peer review

¹² Björk and Solomon 2013 *Journal of Informetrics* 914-923.

¹³ To quote a major study, "quite often, editors may take weeks or even months for a desk rejection. This seems unacceptable and may point to a less than efficient organization of the editorial process. If editors take much time to inform authors that they are not interested in the manuscript, they probably will also be rather slow in other aspects of manuscript handling, such as assigning reviewers and processing review reports." See Huisman and Smits 2017 *Scientometrics* 634.

¹⁴ These are notably the avoidance of wasted work by reviewers and the prevention of lottery-like submissions.

process. Part Five concludes with recommendations for stakeholders such as the DHET and universities.

2 Historical context of law publishing

The state of law journal publishing deserves attention, not least because of its historical development. In fact, the *South African Law Journal* (SALJ) is one of "the oldest of its kind in the world".¹⁵ Established in 1884 the first parts of its 17 volumes were published by the African Book Company Limited of Grahamstown (1901-1909) under the title *Cape Law Journal*.¹⁶ The SALJ has received contributions from foreign legal luminaries such as Lord Denning, Frank Michelman, Kent Roach, William Wade and Reinhard Zimmermann.

However, as a pioneer the SALJ did not inspire many followers until around the 1960s. In the circa seventy years following its launch only nine law journals were established, with many of them fizzling out soon afterwards.¹⁷ This number grew in the late 1980s and exploded in the 1990s. As Schulze showed, the explosion resulted from two factors. The first was the rising number of law students, teachers and researchers in higher education institutions; the second was the payment of research publication incentives by the DHET.¹⁸ This payment requires contextualisation because of its significance for journal publishing.

2.1 Research subsidy: past and present

As pointed out earlier, South Africa began to systematise its research promotion policies from 1985. The most notable are the White Paper 3 of 1997, which sought to transform higher education, and the National Plan for Higher Education of 2001, which provides the framework and mechanisms for the White Paper's objectives.¹⁹ In 2003 the then Department of Education released a revised policy on research outputs titled "Policy and

¹⁵ However, Schulze believes that the *South African Law Journal* is the second oldest English language law journal, behind the *University of Pennsylvania Law Review*. See Schulze 2013 *Fundamina* 61-105.

¹⁶ Its name was changed to the *South African Law Journal* in 1901. See generally Kahn 1983 SALJ 594-641.

¹⁷ These are the *Natal Law Quarterly* (1902-1907), the *Natal Law Journal* (1905-1908), the *Natal Law Magazine* (1908-1909), the *Union Law Review* (1910-1911), the *South African Law Times* (1932-1936), the *Journal for Contemporary Roman-Dutch Law* (1937 to date), the *Annual Survey of South African Law* (1947 to date), *The Taxpayer* (1952 to date) and *Butterworths South African Law Review* (1954-1957), which transformed into *Acta Juridica* in 1958.

¹⁸ Schulze 2013 *Fundamina* 62-63.

¹⁹ Department of Education 1997 <https://www.gov.za/documents/programme-transformation-higher-education-education-white-paper-3-0>; Ministry of Education 2001 <https://www.justice.gov.za/commissions/feeshet/docs/2001-NationalPlanForHigherEducation.pdf>.

Procedures for Measurement of Research Outputs of Public Higher Education Institutions" (hereafter "new policy").²⁰

On 10 October 2003 the new funding framework was gazetted in terms of the *Higher Education Act 101 of 1997*.²¹ Prior to its commencement in 2004/2005 four formulae were used for funding universities.²² The foremost formula is the so-called South African Post-Secondary Education Information System (SAPSE), which was used in varying forms from 1984 to 2003.²³ The SAPSE was based on institutional expenses and the costs of student training. Thus,

the allocation of funds was linked to the generation of an 'ideal income' for individual institutions based on the determination of actual costs, irrespective of affordability criteria or whether the costs are linked to ... teaching, research and community service.²⁴

Under the SAPSE, research subsidy was calculated on a 50-50 weighting of costs and benefits, which was differentiated on the costs of research and student training and the quantum of publications and student graduation respectively.²⁵ Conversely, the new funding framework is goal and performance-oriented. It aims to fund the delivery of teaching, research activities, and expenses linked to institutional three-year "rolling" plans. It has two main elements.

The first is grants designated for specific purposes; the second is undesignated amounts (block grants) covering operational costs that are linked to teaching and research. Block grants consist of four sub-categories, which are allocated as follows:

- Teaching input (full-time student enrolments and associated research training)
- Teaching output (graduation of non-research students and related training)
- Research output (accredited publications and postgraduate graduations)
- Institutional factors (development projects).

²⁰ Department of Education 2003 <https://www.dhet.gov.za/Policy%20and%20Development%20Support/Policy%20and%20procedures%20for%20measurement%20of%20Research%20output%20of%20Public%20Higher%20Education%20Institutions.pdf>.

²¹ GN R1427 in GG 25527 of 10 October 2003.

²² For a summary account of these funding models, see Steyn and De Villiers "Public Funding of Higher Education" 13-24.

²³ Steyn and De Villiers "Public Funding of Higher Education" 13.

²⁴ Steyn and De Villiers "Public Funding of Higher Education" 31.

²⁵ Woodiwiss 2012 *Cardiovascular Journal of Africa* 422; Lawrence 2003 *Nature* 259-261.

However, the research output grant is differentiated on specific units. For example, at the outset of the new policy, a publication in an accredited journal and the graduation of a master's degree student by research constitutes a unit; the graduation of a master's by course work and mini-dissertation is 0.5 unit, and the graduation of a PhD student is three units. With the new policy, incentive funding for research outputs appears to be pre-set, since the government determines the total budget for higher education in a given year. Thus, if institutions increase their research outputs in a given year, the monetary value of their output units correspondingly decreases.²⁶

Partly to ensure the better implementation of the new funding framework, the Department of Education was split in 2009 into the Department of Basic Education and the Department of Higher Education and Training. The DHET is responsible for administering the research subsidy system, which assists higher education institutions to produce or manage journals in South Africa.

2.2 Current funding model

In 2015 the Research Outputs Policy replaced the Policy for Measurement of Research Outputs of Public Higher Education Institutions of 2003.²⁷ Section 2.2 aims "to encourage research productivity by rewarding quality research output at public higher education institutions". It clarifies this aim:

The policy is not intended to measure all output, but to enhance productivity by recognising the major types of research output produced by higher education institutions and further use appropriate proxies to determine the quality of such output.²⁸

Essentially, faculty members and affiliates are rewarded for publishing in outlets that are "accredited" by the DHET.²⁹ This incentivised funding model has been described as the country's "largest single pool of research funding, worth an estimated 2.4 billion South African rand (US\$160 million) each year".³⁰ However, it has serious negative consequences that policymakers did not intend.

²⁶ Council on Higher Education *State of Higher Education* 1-98; Walwyn 2008 *South African Journal of Higher Education* 708-724.

²⁷ GN 188 in GG 38552 of 11 March 2015 (Research Outputs Policy, 2015).

²⁸ Research Outputs Policy, 2015 4.

²⁹ Although the permutations vary, universities receive about R120,000 (\$6,600) for every article published in an accredited journal. The author of the article receives a portion of this sum, as determined by the university. See Vaughan 2008 *South African Journal of Science* 91-96. Also see ASSAf 2006 <https://research.assaf.org.za/handle/20.500.11911/49>.

³⁰ Wild 2020 <https://www.nature.com/articles/d41586-020-03483-y>.

2.3 *Perils of perverse incentives*

Research incentives motivate some academics to privilege quantity over quality in their research outputs, even if it means publishing in outlets that hardly adhere to rigorous peer review. The DHET's forensic assessment of the University of Fort Hare in 2019 found that it paid over R86 million in research incentive money into the personal bank accounts of academics between 2014 and 2019.³¹ The University's income from research outputs was about R45 million per annum, of which about R18 million per annum was paid out directly to researchers. Fourteen professors were each paid extra income of over R1m in this way. This forensic report shows the dangers of perverse incentives – that is how academic quality could be sacrificed on the altar of throughput. Admittedly, all incentives may have inherent unintended consequences. However, where "incentives have been monetised and authors are directly and individually rewarded for their publications",³² then financial rewards could becloud understandings of the social value of research activity. This reasoning probably explains the rise in low quality publications that lack scientific rigour.

Woodiwiss reviewed the literature on reactions to the DHET's new funding system for research publications in this context.³³ She found that unless incentivised research has a direct correlation with the quality of publications, it usually results in perverse effects. These effects are notably the spreading of data over several publications instead of fitting them into a single publication (salami-slicing), increased publications in local journals rather than international outlets, and publishing in "predatory" or low-quality journals with questionable peer review processes.³⁴ According to a report commissioned by the InterAcademy Partnership, there are three drivers of predatory practices.³⁵ These are "the monetisation and commercialisation of academic research output, including an academic publishing system that can risk putting proprietary and commercial interests ahead of research integrity", flawed research assessment/evaluation, and "challenges and deficiencies in the peer-review system", especially "the lack of transparency ... and the lack of training, capacity and recognition of peer-reviewers".³⁶ Thus, incentivised research creates pressure to increase the number of

³¹ Department of Higher Education and Training 2019 https://www.gov.za/sites/default/files/gcis_document/201912/42902gon1592.pdf 37.

³² Muthama and McKenna 2020 *Education as Change* 3.

³³ Woodiwiss 2012 *Cardiovascular Journal of Africa* 424.

³⁴ Woodiwiss 2012 *Cardiovascular Journal of Africa* 424. Predatory journals are those that misrepresent their publishing practices by claiming to be legitimate scholarly journals. For example, they may falsely claim to conduct double blind peer review.

³⁵ InterAcademy Partnership 2022 <https://www.interacademies.org/project/predatory-publishing>.

³⁶ InterAcademy Partnership 2022 <https://www.interacademies.org/project/predatory-publishing> 61.

publications instead of enhancing knowledge through socially responsive research. Predatory journals take advantage of this situation to flourish.

Recent data indicate the number of predatory journals at being over 15,500.³⁷ This number is rising in Africa. For example, a 2014 revision of Beall's classification of predatory journals found that 4,246 South African articles were published in 48 predatory or borderline predatory journals, with the greatest increase occurring since 2011.³⁸ Driven by the quest for research incentives, many professors have published in the *Mediterranean Journal of Social Sciences*, whose questionable peer review practices make it a borderline predatory journal. In what follows, we conceptualise peer review to show why incentivised research is problematic for journal publishing.

3 The nature of peer review

Peer review may be described as the subjection of scholarly work to evaluation by others who are considered experts in the same field.³⁹ It is an ancient practice that dates back circa 1100 years to ancient Greece. Its modern form is "largely recognised to have begun in 1776 with the publication of *Philosophical Transactions* by the Royal Society", and has been widely observed in more or less the same style ever since.⁴⁰ The first detailed description of a peer-review process is attributed to the *Ethics of the Physician*, a book authored by Syrian physician, Ishap bin Ali Al Rahwi (CE 854-931).⁴¹ It describes the duty of a visiting physician to make duplicate notes of the patient's condition on each visit. These notes would then be examined by a local council of physicians to determine whether the physician had lived up to the expected standards of medical care.

The reasons for peer evaluation are pretty obvious: it improves the quality of manuscripts and safeguards the scientific rigour of published research. Embedded in the latter function is the duty of editors to promote objectivity by assigning the assessment of submitted research to independent persons who often have a vested interest in the research field. By assessing the legitimacy and scientific rigour of research, peer evaluation ensures that only quality research is published in recognised outlets. Furthermore, evaluators provide valuable feedback to authors, which helps them to

³⁷ Cabells Scholarly Analytics Date unknown <https://www2.cabells.com/about-predatory>.

³⁸ Mouton and Valentine 2017 *South African Journal of Science* 1-9.

³⁹ Fenn 1997 *Construction Management and Economics* 383-385.

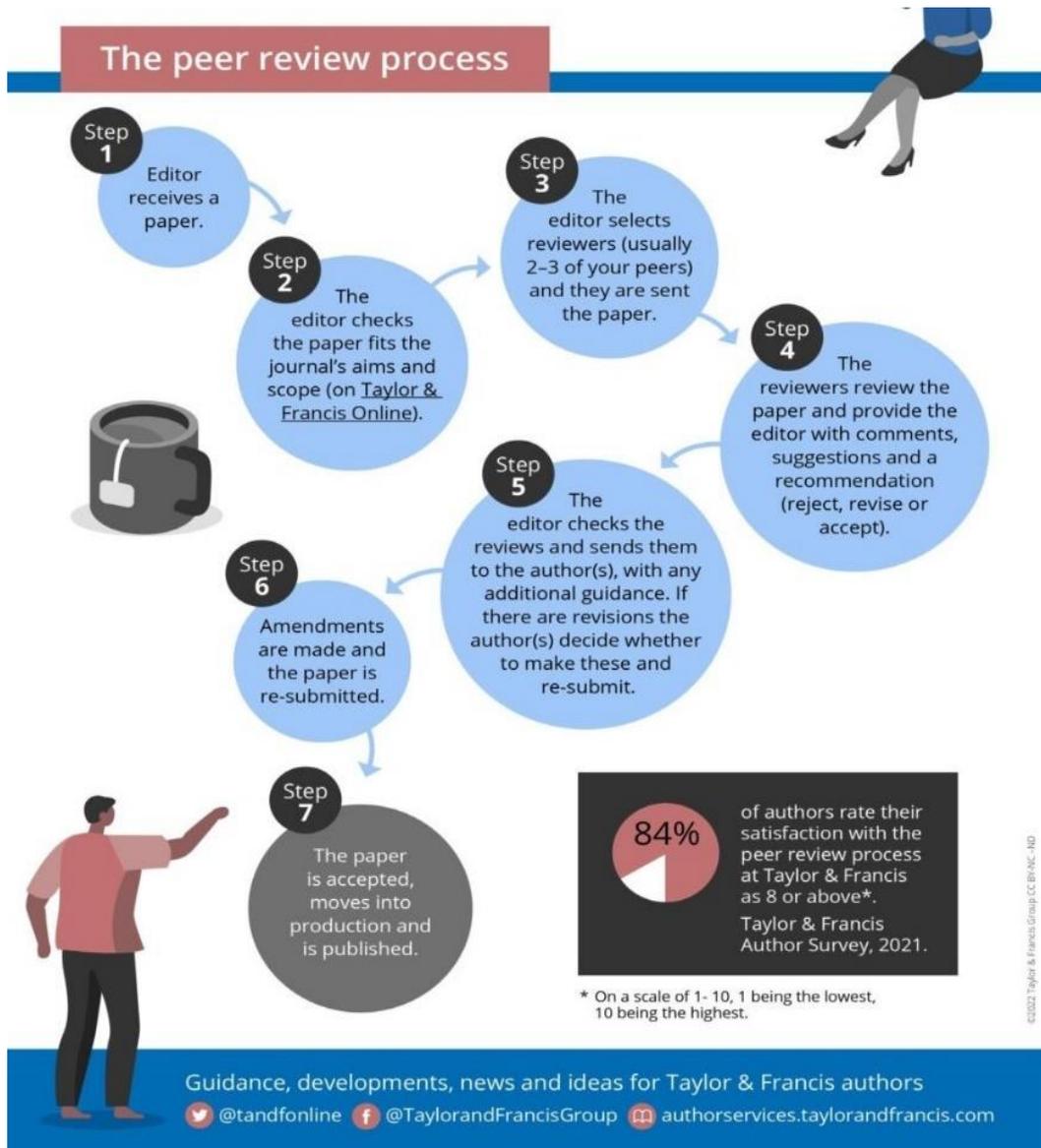
⁴⁰ Publons 2018 <https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf> 5. But Spier claims that the modern form of peer review was introduced in 1731 by the Royal Society of Edinburgh. See Spier 2002 *Trends in Biotechnology* 357-358.

⁴¹ Spier 2002 *Trends in Biotechnology* 357, citing Al Kawi 1997 *Annals of Saudi Medicine* 277-278.

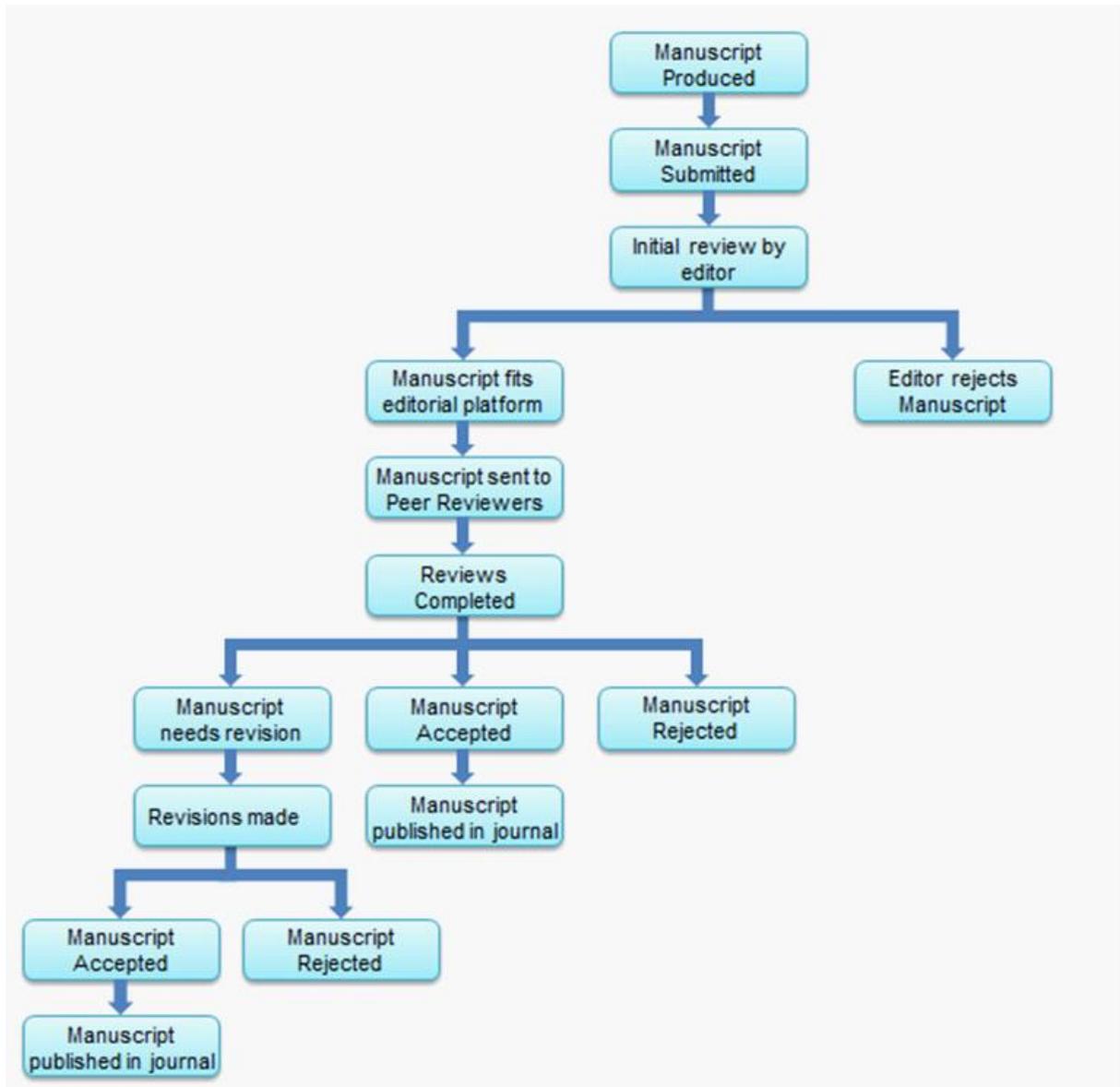
correct errors, clarify ambiguities and improve the quality of their papers. Finally, peer review signifies both intellectual confidence and humility, since it implies that an author's ideas are fallible and therefore open to critique.

The process leading up to peer evaluation is well known. The figures below describe the steps involved in this process.

Figure 1 [Taylor and Francis website]⁴²



⁴² Taylor and Francis Date unknown <https://authorservices.taylorandfrancis.com/publishing-your-research/peer-review/>.

Figure 2 [Trajectory of peer review]

3.1 Stages of peer review

The above figures suggest that there are three broad stages in the peer review process. In stage one, after concluding their research authors prepare a manuscript that describes the purpose, design and findings of their study. Then they submit this manuscript to an outlet such as a book publisher or a journal that specialises in or accommodates the subject of

their research. In many scientific journals the manuscript is subjected to an enquiry known widely as desk review.⁴³

Desk review is an initial evaluation by the editor-in-chief, managing editor or an associate editor with relevant expertise. This initial evaluation may result in a "desk rejection" on the ground of non-fit with the scope of the journal, plagiarism, serious lack of scientific merit, or a fatal flaw that makes the paper unfit for publication. Desk rejection accounts for over half of unsuccessful articles submitted to journals.⁴⁴ In fact, in prestigious journals such as *Nature* and the *British Medical Journal* this figure is close to 90%.⁴⁵ Depending on the nature of the rejection, the editor(s) usually explain the reason(s) for their rejection and suggest alternative journals or ways of strengthening the manuscript.

If, however, the editors are satisfied that the subject matter of the manuscript fits their focus, emanates from a credible source and is not plagiarised, they would initiate stage two. Here, the editors select one or more independent referees to formally evaluate the paper. These referees are usually subject specialists in the concerned field. The editor(s) select them on the basis of their expert knowledge and their objectivity. Then they invite them formally to serve as reviewers, giving or referring them to detailed guidelines for the task. Referees are usually asked to make one of three recommendations: to reject the paper outright, to accept it as it is, or to ask for varying degrees of revision, which culminate in either a resubmission or an editorial review to assess compliance with the review recommendations.⁴⁶

Referees discharge their duties by applying several criteria. These usually coalesce around the scientific rigour of the manuscript and its compliance with the journal's requirements. Scientific rigour includes the validity of the methodology, the persuasiveness or innovativeness of the paper's argument, and the contribution it makes to knowledge in the field. This last element is usually determined by assessing the importance of the research findings. Following the receipt of the referees' recommendations the editors analyse them, reach a decision and communicate this decision to the author. There is no specific way for this communication to take place. However, it usually involves a summary of the reviewers' concerns, an attachment of the full anonymised comments (where relevant), and specific instructions for revisions.

⁴³ Kelly, Sadeghieh and Adeli 2014 *Electronic Journal of the IFCC* 227-243.

⁴⁴ Li *Desk Rejection of Submissions to Academic Journals* 9.

⁴⁵ Harikumar *et al* 2022 *Journal of the American Academy of Dermatology* 1127-1129.

⁴⁶ It is rare for papers to be rejected outright or to be accepted "as is".

In stage three the author revises the paper and resubmits it either for re-review by the referees or for review by the editor(s) for compliance with the reviewers' suggestions. This process is repeated until the editor is satisfied. Significantly, it is not a pleasant process for early career researchers. This is because "[m]any scholars can tell horror stories about revising a paper for years only to have it rejected after multiple rounds of reviews."⁴⁷ Best practice involves easing the resubmission process by asking authors to include a succinct explanation of their revisions, to say why they disagree with some views of the referees and to say how they have addressed the concerns they agree with. It is also helpful to use "track changes" to indicate all revisions to the manuscript.

Generally the system of review, including the number of referees, varies in accordance with the field of study. Most journals use two or three referees. Some of them conduct desk review with two editors, while a few of them use at least three editors in addition to an articles committee.⁴⁸ Editors reserve the right to appoint more reviewers than the number stipulated on their website. Where a journal uses two reviewers, the editors may appoint an arbiter if there is a split decision between the referees. They may also adopt the comments of one referee and discard those of the other.

Regrettably, the process of expert evaluation, author revisions and editorial re-reviews can last for several years before the manuscript is published. This is especially the case where the editor(s) appoint an arbiter. This delay together with the lack of uniform standards in the review process raises problems that we discuss in Part Four of this article. Before we discuss them, we will describe the kinds of peer review.

3.2 Types of peer review

Generally peer review consists of four broad types.⁴⁹ The first is the single anonymous review. Here the names of the authors are hidden from the referees to promote impartial decisions and ensure that the referees are not influenced by the identities of the authors. There are benefits and disadvantages in this type of review. For example, the evidence of a referee may need to be contrasted with that of another referee to reach an objective judgment. Also, a referee could unscrupulously use new information in the manuscript. The website of Elsevier rightly identifies authors' concerns "that

⁴⁷ Williams 2022 *Sociologica* 68.

⁴⁸ An example is the *Harvard Law Review*, a student-run journal that uses an Articles Committee vote.

⁴⁹ This account is adapted from the websites of: Elsevier Date unknown <https://www.elsevier.com/reviewers/what-is-peer-review>; Wiley Author Services Date unknown <https://authorservices.wiley.com/Reviewers/journal-reviewers/what-is-peer-review/index.html>; Taylor and Francis Date unknown <https://authorservices.taylorandfrancis.com/publishing-your-research/peer-review/>.

reviewers in their field could delay publication, giving the reviewers a chance to publish first."⁵⁰ Finally, referees "may use their anonymity as justification for being unnecessarily critical or harsh when commenting on the authors' work."⁵¹

The second type of review is the double anonymous (blind) review. Here, both the reviewer and the author's identities are hidden from each other. Obviously, this is difficult in practice. Usually anonymity is easily achieved in fields of study with numerous active researchers. In specialised fields, however, referees can guess the identity of authors based on the uniqueness of their argument, their writing style, and even the location of their data sites. In the social sciences and humanities referees may also decipher the identity of authors who are engaged in theory-building, since this endeavour necessarily involves considerable self-citation. On a positive note, double blind review tends to restrict reviewer bias, which could arise from an author's gender, reputation, location, academic status and even (lack of) previous publication history. Thus, double blind review ensures that manuscripts are assessed on the basis of their scientific merit rather than the reputation of their authors.

The third type is the triple blind review, a system in which the author's identity is hidden from both the reviewers and the editors. It works by anonymising manuscripts at the submission stage and handling them in a way that minimises editors' potential bias towards the author(s). It is a complex method that requires considerable editorial commitment and suitable software to ensure that submissions do not leave a sufficient electronic footprint to reveal the author's identity.

The final type of peer evaluation is the open review. This is an umbrella term for varying peer review models that seek to ensure

greater transparency during and after the peer review process. The most common definition of open review is when both the reviewer and author are known to each other during the peer review process.⁵²

Models of open peer review include discussion forums for public comments on the merits of a manuscript; the publication of reviewers' names on the article; the publication of the list of reviewers for a given year,⁵³ and the publication of signed or unsigned evaluation reports alongside the article, together with the authors' and editors' responses to these reports. The open review system has some advantages. The notable ones are preventing prejudiced comments, curbing plagiarism and encouraging candid

⁵⁰ Elsevier Date unknown <https://www.elsevier.com/reviewers/what-is-peer-review>.

⁵¹ Elsevier Date unknown <https://www.elsevier.com/reviewers/what-is-peer-review>.

⁵² Elsevier Date unknown <https://www.elsevier.com/reviewers/what-is-peer-review>.

⁵³ An example is *Legal Pluralism and Critical Social Analysis* [formerly the *Journal of Legal Pluralism and Unofficial Law*].

evaluations of research. Its disadvantage is obviously the reviewers' lack of freedom to express their honest opinions due to excessive politeness or fear of retribution.

Most journals adopt a double-blind peer review system. The analysis below uses this type of review to showcase some publishing problems in South African journals.

4 The tsetse fly on the scrotum

Undoubtedly, peer evaluation is crucial to academic publishing. However, it is common to hear that journals cannot find sufficient reviewers.⁵⁴ Unsurprisingly, peer review suffers from an alarming undue delay. There are also problems of inconsistent standards, an absence of reward, and accusations of bias.⁵⁵ Other than these problems a worrying issue is the inability of peer review to deter substandard research from being published. After all, most rejected manuscripts go on to be published in another journal, sometimes without even any revision. Indeed, some articles in reputable journals occasionally contain inaccuracies and ambiguities that seriously question the quality of their evaluation. Also, sometimes editors jettison critique by reviewers on the ground that the critique is biased. Regrettably, the problems with the peer review process are not given the prominence they deserve.

Even though peer review is the gold-standard of research in academia, its problems attract comparatively insignificant research.⁵⁶ As Tennant and Ross-Hellauer observed: "Research on peer review is not particularly well-developed, especially as part of the broader issue of research integrity."⁵⁷ What is more, peer review "often produces conflicting, overlapping or inconclusive results, depending on scale and scope; and seems to suffer from similar biases to much of the rest of the scholarly literature."⁵⁸ Specifically, "there is no established culture of peer review in law journals and no universal system of evaluation that cuts across national borders."⁵⁹ Arguably, the lack of uniformity in the review systems of law journals owes much to varying classifications of law as a member of the humanities or social science disciplines, and as a purely practical subject.⁶⁰

⁵⁴ Willis 2016 *Learned Publishing* 5-7. Recently one of the authors of this article "suffered" a desk rejection because the *Third World Quarterly* could not find suitable reviewers for an article that developed a political economy theory.

⁵⁵ Cheah and Piasecki 2022 *The Lancet* 1601.

⁵⁶ Malički, von Elm and Marušić 2014 *Journal of the American Medical Association* 1065-1067.

⁵⁷ Tennant and Ross-Hellauer 2020 *Research Integrity and Peer Review* 2.

⁵⁸ Tennant and Ross-Hellauer 2020 *Research Integrity and Peer Review* 2.

⁵⁹ Stojanovski *et al* 2021 *Frontiers in Research Metrics and Analytics* 1-2.

⁶⁰ Siems and Mac Sithigh 2012 *CLJ* 651-676.

Certain core issues underpin journal publications in South Africa in this context. We discuss them in no particular order under three separate headings, starting with the conceptualisation of a peer.

4.1 Who is a "peer"?

There is no agreement on who constitutes a "peer" for the purpose of manuscript evaluations.⁶¹ Notably, the ASSAf Code of Best Practice does not define a peer reviewer.⁶² It merely states as follows: "Peer reviewers should preferably be scholars who have not previously co-published with the author(s) ... They must have expertise and competency in the topic."⁶³ On its part, section 2.4 of the Research Outputs Policy of 2015 contains this description:

Peer Review is understood to be the pre-publication refereeing or evaluation of complete manuscripts by independent experts in the field in order to ensure quality and determine whether manuscripts are publishable or not.

The glaring non-definition of a "peer" in policy guides is also evident in forums that focus on problems with peer review.⁶⁴

Only a few law journals offer detailed explanation of their peer review process on their websites, even though this is required by the Code of Best Practice.⁶⁵ By most dictionary descriptions, a peer is someone who possesses equal standing with another, especially in the same social group, based on metrics such as age, status, reputation and similarity of interests.⁶⁶ However, this understanding of a peer is applied narrowly by most journals, since editors usually select reviewers based on their expert knowledge, availability and non-proximal relationship with authors. By implication the data or social context of the research, especially empirical research, may be ignored in the selection of reviewers. This neglect of the contextual elements of research is more pronounced in the increasing difficulty to

⁶¹ But see the criteria outlined by the Academy of Science of South Africa (ASSAf) in ASSAf 2018 <https://research.assaf.org.za/bitstream/handle/20.500.11911/292/NSEF-Code-of-Best-Practice-March-2018.pdf?sequence=1>.

⁶² ASSAf 2018 <https://research.assaf.org.za/bitstream/handle/20.500.11911/292/NSEF-Code-of-Best-Practice-March-2018.pdf?sequence=1>.

⁶³ ASSAf 2018 <https://research.assaf.org.za/bitstream/handle/20.500.11911/292/NSEF-Code-of-Best-Practice-March-2018.pdf?sequence=1> 6.

⁶⁴ An example is a webinar hosted by the ASSAf on 31 July 2020 regarding the peer review process of academic journals. See Tempelhoff 2020 *South African Journal of Science* 1-2.

⁶⁵ The ASSAf Code of Best Practice in Scholarly Journal Publishing, Editing and Peer Review (ASSAf 2018 <https://research.assaf.org.za/bitstream/handle/20.500.11911/292/NSEF-Code-of-Best-Practice-March-2018.pdf?sequence=1> 5 and 6) states, among other things: "Journals must have a peer review policy ... [and] The journal's peer review policy and process must be published on its website."

⁶⁶ For analysis, see Gelfert 2011 *Logos and Episteme* 507-514.

source reviewers from the ranks of overburdened academics.⁶⁷ So, who is a peer?

Arguably, a "peer" should not just be a subject specialist. In a perfect world; it should be an expert who is also knowledgeable about the social context of the research. Importantly, peer reviewers should include someone at the same or near academic career level as the author. There are at least two justifications for this proposal.

Firstly, unlike the pure or exact sciences, law has considerable diversity of themes, principles and standards. While 1+1 will invariably equal two in Mathematics, the legislative regulation of aviation in South Africa differs from its regulation in Togo because of their disparate political histories and economies. Secondly, unless quality would be compromised it is inappropriate to assign the manuscript of a doctoral researcher or a recent doctoral graduate to two established professors simply because they are subject specialists. It is better for one of the reviewers to be an academic who is not above the rank of a senior lecturer, unless the pool of reviewers is so narrow that only the two established professors are available. In that case, it is only fair for the editors to inform the reviewers that the author is an early career scholar.

4.2 Should peer reviewers be remunerated?

Researchers are sometimes paid for reviewing books and other significant research. However, they do not usually receive payment for evaluating papers submitted to journals. Most of the reward for peer review service comes in indirect forms such as inclusion in a journal's annual list of reviewers, receiving complementary online access to the publisher's outputs for a specific time period and receiving a letter or certificate of contribution from the journal editor. Arguably, these forms of recognition pale into insignificance when compared with the work involved in peer review. For example, a study estimated that reviewers globally committed over 100 million unpaid hours to peer evaluation in 2020.⁶⁸ So, should peer reviewers be remunerated for their service?

The jury is somewhat split on this question. The global peer review survey conducted by Publons in 2018 found that 85% of 11,800 participating researchers were in favour of varying rewards for peer review service. Proponents of remunerated review say that journals earn considerable money from subscriptions, article processing charges and university

⁶⁷ According to a study, 75% of journal editors say that finding and convincing reviewers to accept review invitations is the hardest part of their job. See Publons 2018 <https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf> 27.

⁶⁸ Aczel, Szaszi and Holcombe 2021 *Research Integrity and Peer Review* 1-8.

subventions from government.⁶⁹ Thus, there is no financial reason why they should not pay modest honoraria to peer reviewers. They argue that remuneration could increase the pool of available reviewers and increase the representation of global South scholars, especially those who cannot afford to work for free due to their poor wages.⁷⁰ Generally it is said that remuneration could "increase the motivation to review, encourage increased speed and reviews of improved quality, and might even tap into the pool of retired researchers."⁷¹ In fact, one scholar published a manifesto called "The 450 Movement", which argues that \$450 is a reasonable fee for for-profit publishers to pay him per peer review.⁷² At a virtual Researcher to Reader conference on this issue, Brad Fenwick, senior vice president at Taylor & Francis, a for-profit publisher with some 2,700 journals, argued among other things that:

Some editors are well compensated for their efforts. So why would the same approach not be applied to peer reviewers? Universities provide faculty with the freedom to supplement their income as paid consultants and/or by being involved in for-profit businesses. There's no reason that their contribution to the publishing industry should be treated in a lesser fashion.⁷³

On the other hand, the opponents of remunerated peer review claim that payment could taint the intellectual philosophy of knowledge pursuit that underpins research production, in that reviewers could undertake reviews for pecuniary motives. They also claim that remuneration would require increased budgets.⁷⁴ More importantly, assessing an appropriate fee for reviewers would be difficult because manuscripts vary in length, quality and complexity.

4.3 Undue delay in peer review

Undue delay in the peer review process affects every researcher and can have serious consequences for academic careers. To illustrate, Flaherty wrote that when Gale Sinatra, the Stephen H Crocker Professor of Education at the University of Southern California, stepped down as

⁶⁹ For analysis of how article processing charges affect publishing, see Smith *et al* 2022 *Quantitative Science Studies* 1123-1143.

⁷⁰ Publons 2018 <https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf>.

⁷¹ Cheah and Piasecki 2022 *The Lancet* 1601.

⁷² Heathers 2020 <https://jamesheathers.medium.com/the-450-movement-1f86132a29bd>.

⁷³ Brainard 2021 <https://www.science.org/content/article/450-question-should-journals-pay-peer-reviewers>.

⁷⁴ However, it is mainly publishers rather than universities who need to increase their budgets because they reap the financial benefit of publications. For example, over 40 leading scientists recently resigned *en masse* from the editorial board of Elsevier due to what they describe as the greedy failure to reduce publication charges. See Fazackerley 2023 <https://www.theguardian.com/science/2023/may/07/too-greedy-mass-walkout-at-global-science-journal-over-unethical-fees>.

associate editor of the *Journal of Experimental Psychology: Applied*, she stated among other things: "I've had a good run. I've done three journals, [and] I've enjoyed all three of these experiences. But I've peaked out because it's just become too difficult."⁷⁵ She described her struggle

to find reviewers, chasing down late reviews and, worst of all, apologizing to the scholars who understandably want to know if and when their delayed articles will be published. These are often scholars who are looking for jobs, going up for tenure or facing other high-stakes decisions that turn on their publication records.⁷⁶

Part of the problem is, as Altbach and De Wit point out, that too much research is being published due to the existence of wrong research evaluation systems, the over-incentivisation of publication and the prioritisation of research at the expense of teaching in universities.⁷⁷ Many journals give their referees a limited time of one to two months to review manuscripts and submit their reports. Depending on the relationship of the editor with the reviewer, several reminders may be sent and an extension of time may be granted. If these do not work, editors usually invite new reviewers, which adds to the delay. To complicate matters, reviewers may be split in their reports in a manner that necessitates the appointment of a third reviewer to serve as an arbiter.

Arguably, undue delay persists primarily because academics are overburdened and there is little motivation to accept review invitations. Many established academics simply see peer review as a distraction from their busy schedules. Yet everyone agrees that peer review is indispensable to the maintenance of research quality.

5 Concluding remarks

Journal publications are plagued by several interconnected problems such as perverse incentive funding and undue delay in the peer review process. On its part, undue delay is exacerbated by the difficulty editors face in sourcing evaluators who are willing to work for free, as well as questionable interpretations of who constitutes "a peer". We have characterised these problems as a tsetse fly perched on the scrotum. We have argued that the current subsidy system commodifies academic outputs and diverts attention from building the knowledge economy with socially responsive research to building the financial coffers of academics and their employers.

⁷⁵ Flaherty 2022 <https://www.insidehighered.com/news/2022/06/13/peer-review-crisis-creates-problems-journals-and-scholars>.

⁷⁶ Flaherty 2022 <https://www.insidehighered.com/news/2022/06/13/peer-review-crisis-creates-problems-journals-and-scholars>.

⁷⁷ Altbach and De Wit 2018 <https://www.universityworldnews.com/post.php?story=20180905095203579>.

Just as the tsetse fly causes discomfort, publishing problems are bad for academic excellence. If left unaddressed, they could encourage the explosion of predatory journals and poor-quality research that would ultimately harm South Africa's development. So, how should the tsetse fly be handled? Our three proposals below seek to open a debate rather than provide prescriptive policy recommendations.

Our first proposal is for the DHET to address the unintended consequence of its current research subsidy system. To curb perverse incentives it could compel universities to adopt a similar approach in the allocation of publication subsidies to authors. The current system in which the DHET pays about \$7,000 for each journal publication in an approved outlet leaves too much discretionary power to universities. In a 2019 opinion in *Nature*, David Hedding disclosed that in some universities

up to half of this amount is paid directly to faculty members. At least one South African got roughly \$40,000 for research papers published in 2016 — about 60% of a full professor's annual salary. There is no guarantee (or expectation) that a researcher will use this money for research purposes.⁷⁸

Contrastingly, some universities allocate only 1/10th of their research subsidy to authors. Even then, this money is ringfenced for research-related activities and encased with procedural bottlenecks that make it very difficult to access. The result is the lopsided and unfair distribution of subsidies, in which some universities pay huge sums into the salary accounts of academics while others pay considerably less, and/or rigidly control access to subsidies in a way that researchers find immensely frustrating. It would be reasonable for the DHET to issue policy guidelines on the minimum and maximum percentages that universities may pay to authors.

Our second proposal is to incentivise peer evaluation to increase the acceptance of review invitations and reduce undue delay in the review process. It has been established in surveys that the free nature of peer evaluation contributes to the reluctance of academics to accept invitations to review. While we do not prescribe any formula for incentivised peer review, we note an

overwhelming agreement that greater recognition and formalised incentives for peer review would increase willingness to serve as a peer reviewer and would positively impact the efficiency of the peer-review process.⁷⁹

In the 2018 global peer review survey, 85 per cent of the respondents wanted institutions to more explicitly require and recognise peer review for academic advancement purposes. As for payments, there is certainly a strong case for remunerating scholars who review for journals that are not

⁷⁸ Hedding 2019 *Nature* 267-268.

⁷⁹ Rice *et al* 2022 *Research Integrity and Peer Review* 2.

published or run by non-profit organisations.⁸⁰ Arguably, it is morally wrong for reviewers to have to work for free while large commercial publishers earn hefty profits from their free services. Remunerated review would not bring perverse incentives in South Africa because the current subsidy system of the DHET has already commercialised most motivations for academic publishing.

Thirdly, relevant stakeholders such as the DHET, the Academy of Science of South Africa and managing editors' forums should institute editorial guidelines defining who constitutes a peer for the purpose of peer review. They should also consider training for inexperienced scholars on the ethical issues and scientific demands of peer review. On their part, universities could include peer review as an important part of institutional service in promotion criteria. If the relevant institutions take peer review seriously, define a peer, and offer training to early career scholars, it could broaden the pool of available reviewers. The 2018 global survey of peer review shows that 42 per cent of scholars decline review invitations because they are too busy, while 39 per cent of those who accepted invitations have never received any peer-review training.

Finally, the DHET should regularly revise the list of journals that enjoy research subsidies. As of 2022, accredited journals are those listed or indexed in Clarivate Analytics Web of Science (formerly called ISI and Thomson Reuters); the International Bibliography of the Social Sciences (now owned by ProQuest); the DHET list; the "Norwegian list", which is a funding allocation system built on the categorisation of journals, series, and publishers; the Scientific Electronic Library Online of South Africa (SciELO SA); Scopus, the abstract and citation database of Elsevier, and the Directory of Open Access Journals (DOAJ), a community-curated list of open access journals maintained by Infrastructure Services for Open Access. Regrettably, the line between predatory journals and mainstream journals is closing fast. For example, Mouton's 2019 report on the quality of South Africa's research publications found predatory journals among the lists that enjoy DHET subsidy. Most of these low-quality journals originally appeared on the IBSS list.⁸¹

In conclusion, there is a peer review crisis in South Africa, which is exacerbated by perverse incentive funding, a rise in the number of manuscript submissions, and an increasing number of journals. This crisis requires careful handling because peer review is indispensable to quality knowledge production. The measures that could improve the decline of

⁸⁰ Zaharie and Seeber 2018 *Scientometrics* 1587-1609.

⁸¹ Mouton et al 2019 <https://www.dhet.gov.za/Policy%20and%20Development%20Support/REPORT%20ON%20THE%20QUALITY%20OF%20SOUTH%20AFRICA%20%E2%80%99S%20RESEARCH%20PUBLICATIONS.pdf> 1-192.

review invitations, turnaround times, and poor understandings of a "peer" should be explored as a matter of urgency. This is because academic excellence suffers when attention is devoted to building the financial coffers of universities instead of building the knowledge economy through research that responds to pressing social needs.

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List of Abbreviations

ASSAf	Academy of Science of South Africa
CLJ	Cambridge Law Journal
DHET	Department of Higher Education and Training
SALJ	South African Law Journal
SAPSE	South African Post-Secondary Education Information System