Preprints should not be cited

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Preprints represent a crude document providing information that has yet to be critically scrutinized by peers. Usually approved for publication within as little as 24 h after initial screening by an advisory board member, preprints represent a quick-and-easy way to publish raw data. Although one of the objectives of preprints is to allow the wider public and academic peer pool to offer critique on that raw document, in most cases, authors who publish preprints usually go on to submit the same to a regular journal, thus passing it through traditional peer review. There are no detailed data on how frequently comments have been made on preprints, nor how accurately authors have edited preprints following suggestions and criticisms made on the preprint feedback page or discussion page. Thus, a clear argument that the content of preprints has been improved by early public exposure, as is passionately - and possibly falsely - being promoted by preprint proponents such as the Center for Open Science (COS) and ASAPbio, cannot be made. What can be argued in favour of preprints is that, through their link to social media, ideas in these crude papers gain heightened visibility, which may or may not be a positive thing. For example, a preprint led by the former Chair of the Committee on Publication Ethics (COPE), Virginia Barbour, which suggested scrapping retractions in exchange for manuscript versioning1, was criticized by a science watchdog², Leonid Schneider³. Although Barbour et al.1 might argue that their next version of the preprint - which has not been corrected for several months now despite knowledge of dozens of flaws pointed out by Klaas Van Dijk and the critical responses from the public would spur them to improve that manuscript, it can also be argued that these authors may have used the preprint platform bioRxiv, to phish for ideas which they did not originally have. It can also be argued that such crudely written documents, which do not constitute original research, but which are in fact crude policy statements, possibly with the intent of creating new COPE-based guidelines, should not be cited until formally reviewed and published, i.e. pre-

prints serve as a useful initial pre-peer review step within a fortified traditional peer review publishing model⁴. Incidentally, policy papers were not an acceptable manuscript type at *bioRxiv* in March of 2017, but suddenly became acceptable as such in May 2017, indicating that preprint servers such as *bioRxiv* represent an academic danger because they may change their policies easily to accommodate the policy-related desires of influential groups such as COPE, without indicating such changes in policy to the public in an open, honest and transparent manner.

Consequently, preprints cannot be generally considered as reliable sources of information, nor can preprint servers be considered to be bastions of academic excellence or even reliable scholarly sources. For these reasons, preprints should generally not be cited, unless they are being academically critiqued. This is because, in most established preprint servers, a digital object identifier (DOI) is assigned to preprints, precisely to make them citable. Consequently, the argument can be made that citing preprints is equivalent to citing unscholarly work, or at least scholarly work that has not been rigorously vetted, screened and scrutinized by experts, or peer reviewers. It is a known fact that several 'predatory' open access (OA) journals are famed for the publication of unscholarly work without peer review, an action that could be, in some cases, equated with editorial fraud and academic misconduct, especially if peer review is promised, but not delivered. Similarly, the citation of preprints when these have not been fully academically scrutinized, may constitute predatory publishing behaviour, by taking advantage of a weak and unscrutinized system to push through scientifically unvetted ideas and data. Preprints may therefore constitute a new layer of risk to academics, even while they are being aggressively - or passionately, because there are hidden interests - promoted by ASAPbio and its allies, as a solution to speeding up a traditionally slow publication process⁵.

A market has now developed for preprints. In most cases, the publication of preprints is free, but this is not the case

for PeerJ or f1000 Research that charge sizeable fees for publishing a preprint, which is ultimately destined for publication on these preprint servers. Preprints have thus become an integral part of the exploitative OA market, an extension of the pay-to-publish-or-perish model⁶, and thus simply another aspect of academic publishing waiting to be abused and exploited. Clearly with their eyes on this potentially profitable preprint market, several funding agencies have started to establish their own preprint servers for exclusive use by their own researchers, such as Wellcome Open Research for Wellcome Trust-funded researchers, while others yet have seen a gap in this market, and are clearly exploiting it to their advantage, such as an explosion of 10 or more new topic-based preprint servers launched by COS. The imminent preprint market and the competition that it is now spurring is also inducing unhealthy competition and rivalry, in what has been dubbed 'the preprint wars'⁷.

Academics must approach the citation of preprints with great caution, only doing so when offering critique, such as on PubPeer. Although ideas within preprints may be of value or practical use, they should first be properly vetted through traditional peer review, or open peer review for maximized transparency, before they can serve as legitimate academic sources of information.

Incidentally, a preprint⁸ published recently (early August 2017) by the author of this paper was originally submitted to bioRxiv, and even though it was a discussion paper on policies, thus itself serving as a policy paper, it was personally rejected by John R. Inglis, a co-founder of bioRxiv at Cold Spring Harbor Laboratory in New York, basing that rejection on the fact that the author was critical of bioRxiv. Within 24 hours of the rejection by bioRxiv, the exact same preprint was accepted by MDPI's preprint.org. This small case study highlights how unregulated and thus academically dangerous the current state of preprints are, based on highly variable, and even biased, selection criteria. The very ills of traditional peer review that preprints were supposed to 'cure', have now been substituted by a potentially even more dangerous publishing alternative. For these reasons, preprints should not be cited, unless to critique, or to exemplify a point, such as in this paper.

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COMMENTARY

Mainstreaming corporate engagement for progress towards the future – Sustainable Development Goals 2030

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Sustainability in other words means 'accountability' towards environment and humanity at large. To address the pressing global challenges over the next 15 years, the world officially began implementation of the 2030 Agenda for Sustainable Development based on the 17 transformative Sustainable Development Goals (SDGs). The Government of India adopted and signed the SDGs as a road map for people and the planet to build on the success of the Millennium Development Goals and in ensuring social, economic and environmental progress worldwide. The Goals not only seek to address social issues like poverty eradication and malnutrition, but also to incorporate and balance the three dimensions of sustainable development - economic, social and environmental - towards an inclusive global vision.

SDGs underscore the role of business not to be just transformational for its own growth, but for addressing a country's overall development strategies. Although the SDG framework gives an overarching and a large perspective, it is influenced by mico-level action on the ground. It is with this aim of creating the discourse around corporate role for achieving SDGs, as well as for designing policies that would empower the corporate sector's commitment to delivering, SDGs were planned.

At the onset of the SDG negotiations, the UN formally brought the private sector into the dialogue and expanded on their role on issues related to environmental protection with a collective vision to tailor SDGs at national, sub-national and local levels. In order to do this, it was considered to rework reasonable and to have an enabling funding mechanism, thereby contributing to a resourceful cycle for sustainable development agenda.

However, to support the 2030 Agenda and SDGs, the corporate sector with its comparable and multi-pronged approach can address the following issues:

- (1) Alleviating national and global crisis the private sector has a greater than ever role to play in eliminating or alleviating the global and national crisis. SDGs will show new ways for businesses to modify their framework for accommodating 'priority change' for society. Some leading corporates like the Tata Group have already begun to do this.
- (2) Creating market opportunities for the private sector – involvement in the process of accomplishing SDGs will bring them long-term and sustainable mileage through doing sustainable business and building markets.
- (3) Building sustainable business models private players who get engaged with SDGs will adhere to the new national and international policies. Apart from this, the SDG strategies will help companies to cope with new environmental challenges and threats related to the availability of raw materials, regulations on carbon emissions, climate change, fiscal crisis, etc.

(4) Streamlining corporate governance/ Corporate Social Responsibility (CSR) with SDGs – corporates are substantially doing enough to meet their CSR requirements in direct or indirect form by aiding and providing education, sanitation, environment, public health, etc. SDGs also revolve around these common social, environmental or economic problems. In fact, SDGs are enablers by which corporates can map and measure their contribution towards these goals.

Taking this forward, a discourse on 'SDGs - A Call to Private Sector Action' held at the Federation of Indian Chambers of Commerce and Industry, New Delhi laid a lot of emphasis on the need to have robust Public Private Partnership (PPP) to denote a leverage point for scaling up the impact of sustainability practices. To make PPP an effective tool which improves service delivery, efficacy, leading to sustainable growth, it is vital to identify viable PPP models. It was also emphasized that strong enabling institutions to manage, create, access and direct PPP are important in ensuring enhancement in the quality and costefficiency of a given service. For example, SDG 11 on Sustainable Cities and Communities with a target to reduce the adverse per capita environmental impact of cities, including by paying special attention to municipal and other waste management by 2030, clearly stresses on managing waste. For example, it is increasingly being recognized that the