



Opinion Paper

ORCID: Issues and concerns about its use for academic purposes and research integrity

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ORCID (Open Researcher and Contributor ID) was launched in 2012 as an initiative to fortify the validity and integrity of academic publishing through author name disambiguation. Less than a decade later, this portal is being actively promoted in an attempt to ensure that academics adhere to this permanent identifier. Without a doubt, a complete, up-to-date and authentic ORCID has value, not only to a researcher, but to the academic community because it allows facilitated online submissions, and links to funding agencies and other profiles. The mandatory requirement of an ORCID account for the submitting or corresponding author, sometimes for all authors, is becoming more common during the submission of manuscripts to ORCID member journals. Not only are there issues pertaining to academic freedom, or unfair treatment of those without an ORCID, there are other highly pertinent, unpalatable, and contentious issues related to ORCID that need greater attention and debate. These include the inconsistent implementation of ORCID among co-authors, the existence of empty or “ghost” ORCID accounts that are uninformative and thus of limited use, and the plausible abuse of ORCIDs to register potentially fake elements. These issues would not only reduce trust in ORCID, which is actively promoted as a tool for maintaining science’s integrity, they may land up weakening a publishing system that was meant to be fortified by this initiative. They may also hurt the reputation of valid ORCID users who share a platform with “ghost” ORCID accounts or with fake authors, or authors whose identities are unverifiable.

Keywords: ORCID; Academic integrity; Identifiers; Author identifiers

Introduction

ORCID, which stands for Open Researcher and Contributor ID (<https://orcid.org/>), launched in late 2012, is based on Delaware.¹ With funding from the Helmsley Foundation², by March 14, 2017, ORCID had rapidly accumulated over 3 million registrants. At that time, the target was set at 3.141 million users, or Greek π (π), a number that it achieved.³ Today, over three and a half years later, ORCID now has over 9.8 million live ORCID IDs.⁴

ORCID’s purported mission and vision, rooted initially in author name disambiguation⁵, was to create a unique 16-digit identifier⁶ for publishing-related entities (e.g., authors, publishers, funders, etc.) that would link them to specific scholarly activities such as research, funding, or publications, encompassing individual and collective enterprises and collaborations.⁷ In summary, ORCID serves primarily for “researcher name disambiguation and automating aspects of grant seeking and manuscript publishing processes”.⁸ ORCID is also a useful integrative information tool for librarians.^{9,10} In research workflows, submission to journals are simplified while

the correct identification of a name through an ORCID ensures the correct attribution of research and other scholarly activities to an academic.¹¹ Discovery may also be facilitated by community standards such as ORCID when widely adopted.¹² Transparency, including of financial operations¹³, and publicly available data are core to this mission.¹⁴

Thus, ORCID facilitates the links between authors, publishers, funders and other relevant elements of academic publishing. For that reason, it is a very useful tool. ORCID is also actively promoted by leading publishers, societies¹⁵ and other academics¹⁶ as a mechanism to fortify academic integrity. Curiously, the Council of Science Editors does not mention ORCID in its 88-page white paper on publication ethics.¹⁷ ORCID is even lauded as a tool that satisfies the “transparent, sustainable and collaborative” characteristics of open science¹⁸, i.e., as a tool for transparency, in particular related to author contributions.¹⁹ Based on a successful pitch that ORCID can serve as the missing link between open access and integrity²⁰, and as a vehicle of trust²¹, ORCID also became available for funders, allowing it

to be formally linked to potential EU funding, via Plan S and/or H2020 projects. In fact, Plan S, set for implementation in 2021, strongly recommends the use of ORCID as a “technical requirement”.²²

However, there are several issues that may hinder the effective use and widespread implementation of ORCID. Academics need to reflect on the issues discussed next, which are actual and hypothetical or potential, and appreciate that their decision to become part of this system is permanent because an ORCID is a permanent (i.e., cannot be deleted) identifier.²³ Thus, as long as this organization remains intact and functional, an academic’s ORCID will never disappear. Although there are tangible benefits of permanence, such as the longevity of a publishing record even beyond death, such functions are already easily achieved through digital preservation of scholarly content, a discussion that will not be held here.

A discussion of actual or possible issues pertaining to ORCID

It is time for academics within the scholarly community to have a frank and open discussion about the actual and possible risks of ORCID and to reflect on why some editors and journals are insisting that corresponding authors, or even all authors, have an ORCID, i.e., as a mandatory requirement, to complete the submission of a paper. Some of these ideas may be purely hypothetical, but they are worth reflection and debate, nonetheless. This is because, very unfortunately, none of these risks seem to be openly discussed, or resolved, by ORCID itself, or by any of its promotional proponents and stakeholders, such as editors, publishers, societies or other academics.^{15,16}

Is ORCID an infringement on academics’ rights? The issue of authors’ rights²⁴ is increasingly important as the publishing industry struggles to deal with fake elements.²⁵ In many publishing venues (i.e., journals), ORCID is still voluntary, but is encouraged, i.e., there is still a fair and democratic choice for submitting authors to decide whether they elect to have an ORCID or not. In those cases, academics correctly have the freedom of choice. There are, however, journals that are making ORCID mandatory for the corresponding author, and in some cases, all authors¹⁹. One example is the “mandated trials” conducted by Springer Nature, which did not appear to confer with the wider community, such as authors, before its implementation, even though those trials were described as “successful”.²⁶ What is the constitutionality of publisher-mandated registries such

as ORCID? A debate, such as that which took place for state-imposed cancer registries²⁷, needs to take place among academia for ORCID. In the case of ORCID, the forced imposition of a value system, without considering individual choices or rights, under the guise of a greater ethical or moral good, may constitute a violation of authors’ rights because it is fundamentally undemocratic.²⁸ Such journals or publishers can argue that this choice that they have made is to circumvent fraud, to prevent fake authors from submitting manuscripts to their journal, and thereby improving the legitimacy and scholarly value of their journal. Even though some might argue that a journal is similar to an establishment with its own rules, promoting exclusivity or exclusive entry or participation for ORCID-only members (authors), this can also be perceived as a form of marginalization or infringement of authors’ rights. Ultimately, editors have editorial independence to request an author to validate their identity if they have reasonable doubt, or sufficient reasons to be concerned about the identity of an individual, but that does require mandating ORCID to achieve that goal. As one example, the corollary of the superficial badges and rewards system for enrolling into ORCID’s “collect-and-connect” program²⁹ suggests that if an academic does not join this system, they are not “connected”, i.e., they are separate, non-inclusive entities. As more and more academics adhere – voluntarily or mandated – to ORCID, which has no opt-out option, increasing pressure, actual or implicit, is placed on those who do not have an ORCID to obtain one. Negative peer group pressure carries the risk of exclusion and a fair opportunity of submitting a paper to an academic journal, through a system that excludes valid academics simply because they do not have an ORCID. There is a wide literature on peer pressure to conform³⁰, but little attention appears to have been paid to this issue in academic publishing, including ORCID.

The issue of privacy also merits some attention. Even though ORCID has a comprehensive privacy policy that is continually being changed and updated³¹, are authors sacrificing their rights or privacy when they sign up for an ORCID? In addition, those who register for and hold an ORCID account can control what information they add, including automatic updates, and what information they conceal, i.e., keep private or make public. This indicates that privacy is an important issue for ORCID. However, it also creates a platform where there is much variation, ranging from individuals, organizations or entities that have no public information (zero or limited transparency),

outdated or incomplete information (mediocre transparency, but unreliable data), or complete and updated data sets (full transparency). This potentially allows the ORCID platform to be populated by fake, false, and empty (“ghost”) ORCIDs, weakening the reliability of the platform, and trust in it, or in its integrity. Even though ORCID has strict rules pertaining to use of the public files¹⁴, there is always a risk that such a large data set can be abused. The only way to disambiguate a valid or real author, peer or editor from a fake one would be to screen them using other disambiguation tools or platforms, each with their own limitations and flaws, such as ResearchGate, Elsevier’s Mendeley, SciENcv, Google Scholar, ResearcherID, ScopusID, and others.^{11,18,32}

Are ORCIDs being used for unscholarly purposes or do fake ORCIDs (i.e., ORCIDs of fake, pseudonymous or anonymous entities) exist? Leopold pointed out that multiple authors were using a single ORCID.³³ Although it is not clear what ethical guidelines are in place to deal with this, Leopold – who was a Committee on Publication Ethics (COPE) Council member from 2017-2020 – labelled such action as “fraud” (p. 1084). Any risk of fraud, no matter how small, can endanger ORCID’s reputation and that of its users. That editorial was published in a Wolters Kluwer Health, Inc. title, *Clinical Orthopaedics and Related Research*[®]. Since Wolters Kluwer Health, Inc. is a COPE member, it would be important for COPE and its members to set out policy related to the use or abuse of ORCIDs, especially during the submission process, but also related to post-publication peer review and other applications, especially where research is funded, because a financial aspect related to author authenticity then exists. Inconsistent community standards may also reduce the legitimacy of ORCID and organizations that employ it.

Empty or incomplete ORCID accounts (“ghost ORCIDs”) have very limited use and are meaningless. The ORCID statistics page⁴ does not indicate how many accounts are unpopulated, but only provides statistics about select items that ORCIDs have. What is clear is that of the now almost 10 million ORCID accounts, there is tremendous variation regarding their content, potentially hundreds or thousands of ORCIDs might have no, incomplete or unverified information although future quantitative studies are needed to assess the extent of this phenomenon. Empty or incomplete ORCIDs are not reliable sources of information. Since those who hold an ORCID account have full control of what they can include, or not, on

their ORCID pages³⁴, this limitation may prove to be ORCID’s Achilles heel. The same page in the footnote indicates that “ORCID is not a social media platform, nor a profile system, nor an online CV or content repository”. However, if information related to an academic is incomplete, then what scholarly value does ORCID have? For example, Memon and Azim³⁵ argued that having an ORCID allows for an academic’s research work to be discovered, but this is not true for “ghost” ORCIDs that are empty (unpopulated), incomplete, or outdated. It can thus be argued that for such ORCIDs, there is a gap in discoverability. How can an editor verify that the individual who claims to be the submitting and corresponding author is truly that individual?

In certain instances, only the corresponding author is required to have an ORCID¹⁹. This indicates that other authors do not require an ORCID, i.e., disambiguation of all co-authors does not occur, and, strictly speaking, only the corresponding author is held accountable. What if one or more authors are fake or are guest or gifted authors? ORCID will achieve absolutely nothing in terms of verification, trust and integrity by forcing only the corresponding author to have an ORCID account because the validity of all other authors is not verified using the same tool, i.e., inconsistent use. ORCID is also absolutely unable to verify the validity of authorship, even though ORCID does not explicitly stated as a function of ORCID. Since the basal premise of authorship is a valid author, the author believes that ORCID is not only an author disambiguation tool, but also, by association, an authorship verification tool. This potential extended use requires additional debate by stakeholders. For example, how is authorship of multiple-author papers, sometimes with dozens, hundreds or thousands of authors verified if only the corresponding author is mandated to have an ORCID?

Should the editors of journals and publishers that are enforcing a mandatory ORCID, but applying this rule and requirement exclusively for authors, be exempt from such a rule? The author believes that in cases where a journal or publisher forcefully imposes the requirement of ORCID on the corresponding author or on some or all authors, then it should also impose the same rule on its editors, for consistency. Not doing so may constitute an act of “ethical exceptionalism”.^{36,37} Moreover, for maximum transparency, editors should also declare their conflicts of interest on their ORCID profiles.³⁸

Limitations, caution, advice, future directions, and conclusions

Although ORCID has solidified, grown and rapidly become larger, the issues mentioned here need wider discussion among stakeholders, academics, authors, editors, publishers, funders and policymakers. Although it is possible to find ample papers^{20,21,39,40} and editorials^{41,42,43} that promote or voice their support of ORCID, none of them appear to have debated the risks raised in this paper. Community standards such as ORCID should only be implemented in an academic community after their input and opinion, but conformity can involve resistance.⁴³ Although ORCID is certainly useful for the disambiguation of some academics' names, especially those with common family names⁴¹, this should not be an automatic or across-the-board requirement for all academics. The goodwill and positive objectives set out by ORCID and its stakeholders are undeniable. So much so that ORCID is being increasingly used as one parameter to determine research transparency and integrity.^{15,45} However, still a fairly low percentage (11-22%) of a number of mainstream publishers across multiple disciplines are requesting, recommending or implementing the use of ORCID.⁴⁵ Inconsistency in the use or implementation of such an important author disambiguation tool by journals and publishers weakens its application as an instrument of transparency and integrity, in much the same way as elements of a *curriculum vitae*⁴⁶, as has been argued in this paper. One of the best ways to appreciate the limitations and weaknesses of ORCID raised in this paper's discussion is by drawing the attention of academics to case studies, such as "Beatriz" (with no family name).⁴⁷ Through case studies, and quantitative studies that can appreciate the level of use and implementation in different journals and publishers, as well as discussion topics on popular academic social network sites such as ResearchGate⁴⁸, it will be clearer to appreciate if the issues raised in this paper are merely theoretical, or if they have more profound practical implications. The issues raised in this paper need to be urgently addressed, rebutted and discussed frankly and openly to determine if ORCID is becoming part of the solution or part of the problem in an increasingly exploitative publishing market.⁴⁹

Conflicts of interest and disclaimer

The author declares no relevant conflicts of interest related to this topic. For reasons expanded upon in

this letter, the author does not have an ORCID account, and has thus been forced, in many instances, to turn to publishing venues that do not have the mandatory ORCID requirement, in order to publish academic and intellectual ideas freely. It is likely that at some point there will be a tipping point, a threshold, where submission to be indexed, reputed or ranked journals will forcefully require authors to apply for an ORCID. At that time, even the author of this paper may be forced to adopt an ORCID.

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