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The Last Author Can Disappear When a Reference Changes Style

Molly Bell · Jared Scott · Sean Barnes

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When a printed list is used as author evidence

A reference entry can do its job as a locator with only the first author and a DOI. The same entry is sometimes used for another purpose, such as counting the named authors of papers in a bibliography. A person reading a reference list can usually recognize that an abbreviated entry stands for a larger byline. Software that extracts visible names still receives only the authors actually rendered. A style can therefore alter the resulting roster while linking to exactly the same set of publications. The research problem is to quantify how much the visible set changes on fixed publication records, which positions go unrepresented, and how the result depends on the length of the deposited byline.

Yi et al. (2024), DOI 10.1038/s41392-024-02052-3, give one concrete example from a 2024 Crossref record with 14 authors deposited in sequence. The reference renders all 14 name positions under the APA 7 bibliography style, the first six under Elsevier Vancouver, and the first alone under Nature. The DOI string stays the same in the input. Even the difference between retaining the last name and dropping it can occur without a change in bibliographic identity. This example contributes a documented ordered name count rather than any information from the published article itself.

Research question. For a fixed set of public Crossref DOI records, how much do these three executable reference-list styles change the number and positions of the names a reader can recover? We compare the share of deposited author positions visible in the rendered reference, the number of references affected by a truncation rule, and the visibility of the last position in records with at least two author entries. We also compare journal frames and byline length bands to determine whether an overall percentage hides the role of the underlying name-count distribution.

Author order and publication metadata answer different questions

Print reference styles have long used a shortened name list for readability. Thoma et al. (2023) discuss how a shortening convention also changes which contributors are named in the references that cite a paper. Wager (2009) distinguishes recognition and responsibility as reasons for recording authorship, and Resnik et al. (2016) examine journal policies that govern such records. Marušić et al. (2011) synthesize evidence on differences in the meaning and practice of authorship across disciplines. This study tests a narrower transformation. The eligible population consists of deposited byline entries for a set of DOIs. No assumption about how an editor or publisher decided who belonged on any of those bylines is needed to compare their rendered name counts.

Author order can carry information, but a given position has no universal role. Wren et al. (2007) surveyed how readers interpret byline position. Tscharntke et al. (2007) discuss the connection between

ordering and contribution credit, while Waltman (2012) describes disciplinary variation in alphabetical ordering. Mongeon et al. (2017) investigate properties of middle authors and partial alphabetization. These results motivate tracing the location of lost names. We therefore calculate first and last name retention using positions in the registered list. The final position identifies the end of a byline, while any conjecture about seniority, corresponding authorship or contribution remains unsupported by name order alone.

Brand et al. (2015) and Allen et al. (2014) argue for more structured ways to describe scholarly contributions than a byline alone. Sauermann and Haeussler (2017) examine how contribution disclosures relate to authorship. The CRediT standard supplies a vocabulary for documenting roles (National Information Standards Organization, 2022). In the present comparison, roles are outside the metadata projection. The unit being counted is an author position, including a collective designation if it appears as a discrete deposited author entry. It need not correspond to a resolvable person, and several positions across publications can belong to the same person. We do not merge them.

Long bylines create a larger distinction between a single named entry and the record that supplied it. Cronin (2001) describes how extensive collaboration has produced very long lists of authors. Wuchty et al. (2007) measure the growing place of teams in scientific publication, and Milojević (2014) examines team formation and size distributions. These factors suggest that the observed effect of a style will depend on the mix of bylines in the selected journals. In particular, equal article counts in two inventories would provide no assurance that the same percentage of name positions remains visible. A long deposited list supplies more positions that a style can suppress.

Replaying the published style instructions

The persistent DOI serves as the item identifier in the comparison (Paskin, 2010). The surrounding Crossref work record supplies the author array and the publication date fields, with the public deposit model described by Crossref (n.d.) and Hendricks et al. (2020). We queried the 2024 publication-date window and the journal-article record type from the journal endpoints for ISSN 2059-3635 (*Signal Transduction and Targeted Therapy*), 2399-3650 (*Communications Physics*), and 2397-3366 (*Nature Astronomy*). We used the first journal for the target example and added the other two as contrasted publication frames, to observe how the same formatting rules behave on other byline distributions. The collection followed the complete cursor sequences and checked each returned count and DOI for uniqueness. Only names or literal contributor labels, their sequence, identifiers, and publication-year fields entered the archive.

Every DOI is a separate observation. A returned record is eligible if it has at least one deposited author entity and every entry can supply a literal or personal name string. Some registrations provide no author array. We report their counts separately because an absent array is a property of the deposit, while a lost position in a rendered reference requires an observed position to start with. The deposited author array establishes the observed positions for this study. Identity and contribution would require additional evidence. A person with several publications may contribute a separate position to each row without being identified across rows.

We applied the public APA 7, Elsevier Vancouver and Nature style files from the official Citation Style Language repository (Citation Style Language Project, n.d.-b). The files give parameters controlling the number of names that trigger truncation and the prefix of the list retained after truncation. The CSL specification distinguishes rules scoped to the bibliography from rules scoped to inline citations (Citation Style Language Project, n.d.-a). The APA manual retains all names through 20 and uses the first 19 followed by the last contributor for 21 or more (American Psychological Association, 2020). The archived

Nature file retains all positions through five, with only position one named once the sixth position is present. Nature's formatting guidance separately describes how to handle long name lists (Nature, n.d.). The archived Elsevier Vancouver file retains all positions through six and the first six once the byline reaches seven. In bibliographic XML the special abbreviation can itself be marked separately from a personal name (National Information Standards Organization, 2024). We count only actual name positions in the output.

Rendering used citeproc-js version 2.4.63 and the saved English locale. Bennett (n.d.) documents how the renderer receives input records, initializes style and locale, and returns bibliography entries. The analysis exercised the output of the renderer, rather than only deriving a count from the numerical thresholds. To recover positions even when surnames are repeated or shortened, we attached an audit marker to each name's family or literal string. The marker kept the observed name array length and order unchanged. The original style files were unchanged. We supplied DOI, journal, date, and byline with the journal article type. The input projection leaves the article title blank. This keeps the experiment limited to the name rendering and avoids conflating it with title or article retrieval. The output marker sequence was compared with the position sequence specified by the corresponding bibliography settings for each DOI. We also rendered the target's undisturbed names as a check on the presence of the abbreviation in the two capped styles.

The outcome is measured both per article and per deposited position. A reference is truncated if it displays fewer name positions than the source array contains. The position-retention share is the total number of rendered positions divided by the total number deposited. Longer bylines contribute more positions to that fraction. We compute last-position retention in the multi-entry subset so the first fully observed name on a single-author reference does not also count as evidence about a separately identified final author. The totals describe the collected DOI frames. There is no sampling of manuscripts within each retained frame and no claim of representative cross-field effects.

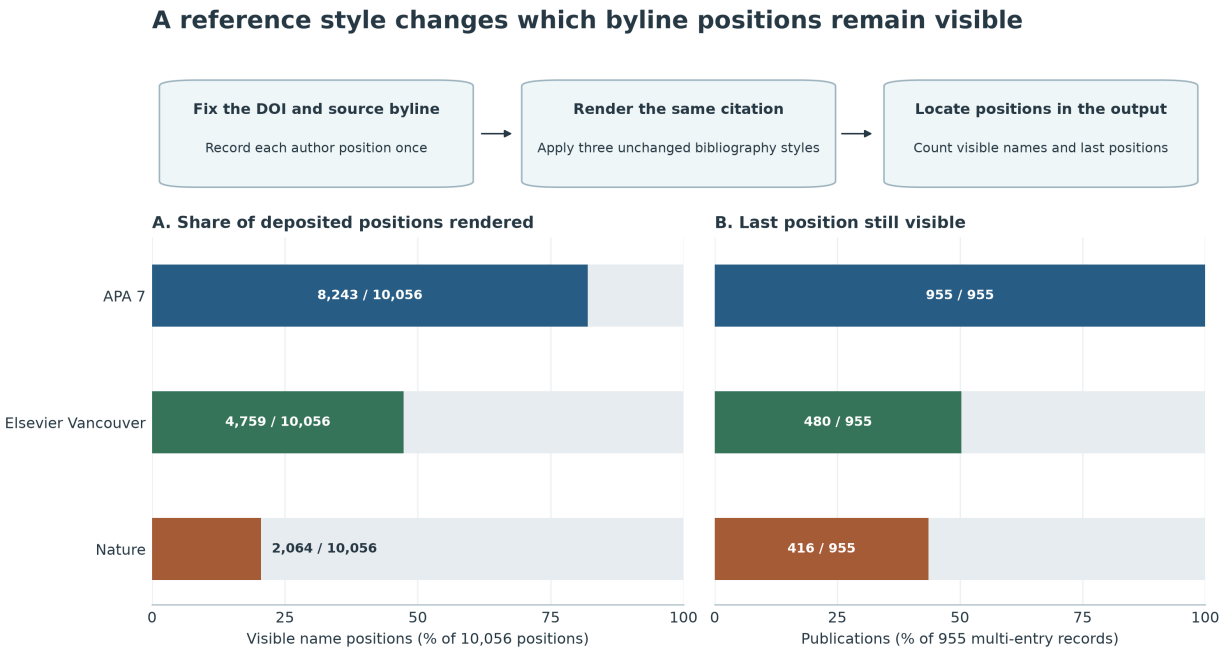


Figure 1. The same DOI and ordered author array feed all three styles. Panel A compares total name positions displayed among 10,056 deposited positions. Panel B gives the number of multi-entry publications with the last listed author still displayed, out of 955 such publications.

Name retention varies on the same DOI records

The publication window returned 1,080 registered journal-article DOIs. At least one author was available for 1,042. The excluded records comprised seven from *Communications Physics* and 31 from *Nature Astronomy*, all without a deposited byline. Every record in the target frame supplied one. Among the eligible records, 955 had two or more deposited authors. The source named 10,056 positions, including three literal author entries. Byline size ranged from one to 313 positions. The same eligible DOI collection was processed under all three styles.

Table 1. Observed person or collective-name positions by rendered style

Bibliography style	Visible positions / deposited positions	Positions retained	References shortened / eligible references	Last entry visible / multi-entry records
APA 7	8,243 / 10,056	81.97%	108 / 1,042	955 / 955
Elsevier Vancouver	4,759 / 10,056	47.32%	475 / 1,042	480 / 955
Nature	2,064 / 10,056	20.53%	539 / 1,042	416 / 955

All three renderers retain the first name position on every reference. APA 7 also retains the last on every multi-entry work, although 108 references omit one or more positions from the interior. It removes 1,813 recorded positions in total. Elsevier Vancouver omits the last position on 475 works, and Nature omits it on 539. These effects describe the visible author names in the bibliography entries, so they can occur even while all content in a separate metadata file remains available to a downstream application.

Table 2. Rendered name positions by deposited byline size

Deposited byline length	DOI records	Source positions	APA 7 positions visible	Elsevier Vancouver visible	Nature visible
One to five	503	1,525	1,525	1,525	1,525
Six	64	384	384	384	64
Seven to twenty	367	4,174	4,174	2,202	367
More than twenty	108	3,973	2,160	648	108

Bylines with one to five authors accounted for 503 works. These references retain every name under all three styles. An additional 64 works supplied exactly six author names. Nature retained one name for each of those works, while the other two retained all six. The 108 records above 20 made up 10.36% of eligible works and contained 39.51% of deposited positions. In that band APA 7 retained an average of 20 names per reference, Elsevier Vancouver six, and Nature one. A count of affected records gives each DOI one vote. A count of affected positions gives these long bylines a larger influence, which is why a style that shortens roughly one in ten references can remove close to one in five positions.

The journal comparisons also change under different styles. APA 7 retained 91.00% of *Signal Transduction and Targeted Therapy* positions and 83.42% of *Communications Physics* positions. Elsevier Vancouver reversed that ranking, retaining 45.72% and 60.56%, respectively. *Nature Astronomy* fell to 68.14% of deposited positions in APA 7 and 34.98% in Elsevier Vancouver. These differences emerge from each journal's mix of source lengths interacting with threshold and truncation settings. A ranking of visible name retention for these journals is therefore conditional on the selected format, even though each journal's underlying DOI list is fixed.

The three observed position sets are nested within each DOI. Every position visible under Nature is also visible under Elsevier Vancouver. Every position visible under Elsevier Vancouver is present under APA 7. The change from Elsevier Vancouver to Nature reduces the number of visible positions by 2,695. Of this difference, 320 come from the 64 exactly-six-entry records and 2,375 come from the 475 records with seven or more entries. The former group contributes a change in whether the bibliography is shortened at all. In the latter group both styles already shorten the source list, and the change is in how many positions survive. A binary flag for any truncation therefore distinguishes only part of the difference between these two renderings.

What name counts from references can tell a reader

Citation indexing grew from the possibility of tracing bibliographic links across publications (Garfield, 1955). De Solla Price (1965) uses reference connections to describe networks of scientific papers. The input to a network of named coauthors, by comparison, must describe which authors participated together. Perianes-Rodriguez et al. (2016) compare counting rules for bibliometric networks, which require specifying the units entering each tie or weight. Our measurements expose an earlier dependency in that workflow. A name roster read from formatted references can already have removed author positions before a link or fractional weight is calculated. The study does not estimate the graph changes caused by the omission, since that would require resolving identities across papers. It documents a measured input loss relevant to such work.

A report on name visibility should give the denominator, the output style, and the byline population. A reference rendered under these conditions can be adequate for finding a DOI even if it omits much of the original name array. Stvilia et al. (2007) frame quality as an assessment tied to a use, and different users can reasonably evaluate the same display for different purposes. Making measurement inputs and provenance durable is also part of the reusable data practices emphasized by Wilkinson et al. (2016). A program intended to preserve authors for counting can keep the DOI and structured author order with its formatted reference. This retains the inputs needed for later review when the presentation style changes.

The study follows three executable style files and one rendering engine. A publisher may use a different file, renderer, version, local override or house convention. We analyze public Crossref deposits, and the journals' original article bylines were not independently annotated. A bibliography drawn from different journals may contain a different distribution of long lists and hence a different fraction of positions exposed. We do not assign any normative status to an omitted name. The observable question is whether that name position remains in the rendered output.

Conclusion

For the same 1,042 DOIs, the three styles expose markedly different sets of deposited author positions. The differences concentrate in longer bylines and change the share of multi-entry records whose last position remains visible. A formatted reference and a structured roster can serve different functions for the same publication. Matching the DOI and preserving the deposited name array keeps both functions available.

Data and reproducibility

The saved, timestamped Crossref projection contains publication identifiers, ordered bylines and date fields. The executable style files, locale and renderer are preserved with checksums. The replay produces the aggregate outcomes and a position-level trace by DOI, which supplies both tables and the figure.

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