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ABSTRACT

Text recycling, the reuse of material from one's own previously published writing in a new text without attribution, is a common academic writing practice that is not yet well understood. While some studies of text recycling in academic writing have been published, no previous study has focused on scholars' attitudes toward text recycling. This article presents results from a survey of over 300 journal editors and editorial board members from 86 top English-language journals in 16 different academic fields regarding text recycling in scholarly articles. Responses indicate that a large majority of academic gatekeepers believe text recycling is allowable in some circumstances; however, there is a lack of clear consensus about when text recycling is or is not appropriate. Opinions varied according to the source of the recycled material, its structural location and rhetorical purpose, and conditions of authorship conditions—as well as by the level of experience as a journal editor. Our study suggests the need for further research on text recycling utilizing focus groups and interviews.

Introduction

Concerns about plagiarism have been ubiquitous since at least the 1800s (Howard 1999), and educational institutions have generally condemned the practice as an especially egregious form of "academic dishonesty" equivalent to *thievery*–stealing another's intellectual property and claiming it as one's own.[1] But what if the "plagiarizer" and the original author are the same person? What if a writer repurposes his or her own previously published text–a passage, a paragraph, a section–for use in a different context or a different venue? Is this still plagiarism, and should the practice carry the same ethical stigma? Does it depend on the amount of text used? The source of the original text? The genre? The discipline?

The reuse of one's *own* writing, especially writing that has been previously published or shared in a public forum (sometimes called "self-plagiarism"),[2] is more ethically complicated than the inappropriate use of secondary source

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materials. Though the practice has often been described as just a variant *form* of plagiarism, opinions about the acceptability of such textual reuse and repurposing vary widely. For example, Thurman et al. (2016), writing in the *American Journal of Obstetrics and Gynecology*, claim that the very concept of self-plagiarism is a "misnomer" (a term that is also used by Andreescu 2013) and that there are at least four acceptable uses of textual duplication in scientific literature in particular: 1) in textbook chapters and non-peer-reviewed articles; 2) in background and methods sections; 3) when permission is given for reuse; and 4) when abstracts are turned into articles. Susan Blum (2013) calls the idea of self-plagiarism "ridiculous," and several research studies (Bretag and Carapiet 2007; Dubois 1988; Flowerdew and Li 2007; Sun 2013) have demonstrated that authors in the physical sciences, medical sciences, and social sciences reuse portions of their previously published texts with some regularity. Some professional guidelines, such as those of BioMed Central/Committee on Publication Ethics (2017) and the American Psychological Association (2010) also state that recycling text in some situations is an acceptable practice.

By contrast, other scholars have taken firm stances against all forms of what is commonly called self-plagiarism and textual reuse. Bonnell et al. (2012), for instance, argue that self-plagiarism "overworks an already over-loaded peer-review and editorial system, generates a poor reputation for one's self and one's group, may result in copyright infringement, may and likely will conclude with getting caught, and, in the most serious cases, manuscripts will be retracted and featured on the RetractionWatchWebsite" (pp. 1–2). Ben Martin (2013), too, finds self-plagiarism unethical, though he limits the definition of self-plagiarism to cases where "an author (or co-authors) [reproduce] text, ideas, data, findings or other material from one or more earlier (or contemporaneous) papers by the same author(s) *without explicitly citing or otherwise acknowledging those other papers*, thereby misleading the reader (and in particular referees and editors) as to the level of originality of that paper" (emphasis in original, p. 1008).[3]

Adding to the ethical complexity, some academic writers prefer not to accept or condemn the practice unilaterally, opting instead to make nuanced distinctions between appropriate and inappropriate forms of textual reuse in different contexts. In a recent issue of the *Journal of Second Language Writing*, for example, John Flowerdew (2015) notes that "when plagiaristic practices are considered [in the sciences], a distinction is made between the copying of language and the copying of ideas, the latter being considered a much more serious infringement on disciplinary practice. This is in contrast to the humanities, where great importance is placed on the way an issue is discursively constructed, in addition to the content of the argument." Bretag and Mahmud (2009) also point out that in academia, some forms of text recycling are condoned and encouraged, such as when authors present a

paper at a conference and then revise it as a journal article. Though it is generally assumed that the journal version will be substantially different from the conference paper after having gone through the process of peer review, "it is not uncommon for conference papers and journal articles to be virtually identical. Collberg and Kobourov (2005) examined the publications found on computer science web sites from 50 university departments in the United States and found substantial evidence of text recycling, particularly between conference papers and published journal articles" (p. 196). The general acceptability of this practice in academia, across a variety of disciplinary fields, raises complex questions about the ethical criteria being applied to make that judgment. Is it because the original venue for sharing the text was primarily oral, presented to a small audience, and considered a "work in progress"? Is it because conference presentations are not typically published (except at conferences where published proceedings are the norm)? In order to answer some of these questions, we will be focusing on the practice of "text recycling" in this study, with that term being defined in the following way:

> Text recycling is the reuse of textual material (prose or visuals) from one document in a new document where (1) the material in the new document is identical to that of the source or substantively equivalent in both form and content; (2) the material serves the same rhetorical function in both documents; and (3) at least one author of the new document is also an author of the prior document (unless the source contains a statement explicitly granting permission for its contents to be recycled). (Moskovitz, forthcoming)

The challenge, of course, comes not just in determining exactly what conventions are in play with regard to text recycling and what features might be common identifiers of a particular discourse community, but also in ascertaining the wide range of potentially significant variables that might impact perceptions and judgments about the acceptability of text recycling in different contexts. A few of these variables might include the following:

> *Demographics*: To what extent might age, gender, education, and professional experience, for example, inflect one's beliefs about text recycling? Are highly experienced scholars either more or less likely to condemn text recycling than their less experienced colleagues? Does experience as a journal editor matter?

> *Source Material and Genre*: How might the source of the recycled text matter? If researchers describe the demographics of their research study in a grant proposal, can they reuse the description in a conference presentation or publication? What about recycling material from a journal article when writing a book-length monograph on the same topic?

> *Structural Location and Rhetorical Function*: Is it more ethical and acceptable to recycle some parts of a research paper than others? Some professional organizations (e.g., COPE) state that recycling some amount of material from a Methods section is generally acceptable.[4] Does that apply to all parts of Methods sections in

all disciplinary fields? And what about literature reviews of relevant research? Discussion sections? Abstracts? Conclusions?

Authorial Contexts: A large proportion of contemporary scholarly publications are coauthored. Large-scale research studies in STEM fields are especially likely to involve dozens of researchers from multiple institutions.[5] If, say, different groups of researchers from the same research team write two articles using similar methods, can they reuse material from the previous piece? What criteria might be used to determine the ethicality of such text recycling?

Previous studies of text recycling have focused on efforts to detect its presence in published writing and to articulate definitions or best practices to help guide academic writers. The questions posed above, which guide our study, seek primarily to understand academic writers' *attitudes* towards text recycling. This is an entirely new area of inquiry. We believe knowledge about academic writers' attitudes toward text recycling is crucial to fully understanding their practices. It will also be essential to any future efforts designed to support or change those practices.

The present study investigates the attitudes of one important subgroup of academic writers—editors and editorial board members of top academic journals. We designed a survey to measure attitudes toward text recycling and solicited responses from across a variety of academic fields. In doing so, we sought to identify the criteria they prioritize when deciding whether a particular type of text recycling is acceptable. Because journal editors and board members are generally recognized as well-published scholars in their disciplines, we felt they would be most familiar with their field's discourse practices, expectations, and conventions, particularly with regard to the multiple dimensions and contours of text recycling. Further, as active researchers and reviewers themselves, we believed this group of participants would not only be aware of the extent to which text recycling takes place in their fields and the ethical standards that apply, but that they are likely to use that knowledge actively when making judgments about the written work that is submitted to them for publication.

Methods

Our study is based upon an IRB-approved survey of editors and editorial members from top academic journals in multiple disciplines. An invitation to participate in the Qualtrics-based survey was distributed via email to participants' professional email accounts. No material incentive to participate was offered. Following an informed consent, the survey asked several questions about personal and professional demographics, and then solicited opinions about various text recycling situations and scenarios. All questions were multiple choice except for a final open-

ended question that allowed participants to share their thoughts on text recycling in more detail.

Selection of participants

We targeted journal editors and editorial board members from 84 top journals in 16 academic fields. To ensure broad disciplinary diversity, we first selected five specific fields from each of three broad academic divisions: STEM (science, technology, engineering, and math); social sciences; and humanities and arts (see Table 1 for a list of fields). We chose well-established fields with an eye toward diversity within each area. In addition to these fields, we queried scholars in our own field of writing studies.

To determine our survey sample, we selected five top English-language[6] journals from each of the fifteen initial fields. To determine top journals we relied on two existing scoring methods. For journals in STEM and social science fields, we selected the top journals as ranked by 2015 Eigenfactor scores from Web of Science's Journal Citation Reports by selecting all categories that explicitly named each discipline. ("Chemistry," for example, included the subjects applied chemistry, inorganic and nuclear chemistry, medicinal chemistry, etc.)

Eigenfactor scores are generally recognized as a top journal ranking metric. Among the advantages Eigenfactor algorithm offers are that it looks at a network of citations, attempts to account for disciplines' different citation practices, and looks at five-year citation data (http://www.eigenfactor.org/about.php).

For journals in the humanities and arts we selected top journals using SCImago's Journal Rank indicator scores for 2015. SCImago draws data from the SCOPUS database, an Elsevier-owned competitor to Web of Science (Guerrero-Bote and Moya-Anegón, 2012), and at present it covers citations over a three-year period. We used the subject area "Arts and Humanities" with subject categories as shown in Table 1 and excluded journals that had published fewer than 20 articles in 2015 (since that can inflate rankings), replacing them with the next-highest ranked journals that had published 20 or more articles in 2015.

Table 1. Fields targeted in our study, not including writing studies.

STEM	Social Science	Humanities
Biology	Anthropology	Classics
Chemistry	Economics	Music
Computer science	History	Philosophy
Engineering	Psychology	Religious studies
Physics	Sociology	Visual arts and performing arts

While journal impact measures are known to have limitations, these metrics were sufficient to achieve our goal of identifying major journals for each field and avoiding possible biases from less systematic approaches. The process yielded 74 journals, whose editors and editorial board members we queried.[7]

In addition, we queried editors and board members from writing studies. We contacted a greater proportion of scholars in this field because they are more likely to be familiar with existing scholarly debates about plagiarism, attribution, and intertextuality in academic writing. This group is most likely to be involved in institutional efforts to support academic writers and writing, so their opinions were of particular interest. Because there was not an independent journal ranking system for this field, and because the three of us are specialists in this area of inquiry, we collaborated to create a list of well-respected journals that cut across major subfields. We selected *College Composition and Communication; College English; Computers in Composition; JAC; Journal of Second Language Writing; Kairos; Technical Communication Quarterly*; the *WAC Journal; WPA*; and the *Writing Center Journal*.

For each journal, contact information for editors and editorial board members was collected online. To avoid overrepresentation from journals with large boards, we set a limit of 20 people per journal, selected in the order listed on the journal's website. (Some journals had different names for their editorial boards, such as associate editors or advisory committee.) We avoided contacting technical editors or copyeditors whose role would be limited to technical and stylistic matters. We obtained contact information for 1,580 scholars, all of whom were sent an e-mail invitation to participate in the text recycling study, as well as a follow-up reminder to participate.

Survey approach

The survey had two primary sections. The first section asked about respondents' professional background (including such matters as area of scholarship, academic rank, experience as board member, and editor) and demographic information such as gender, age, and country of birth. The remainder of the survey asked about text recycling. Because the term could be unfamiliar to some respondents, we began this section with a definition, as follows:

> The term "text recycling" as used here means reusing the exact (or nearly exact) language from one's own earlier document with NO indication that the text was reused (no quotation marks, footnote, or citation identifying the reused text as such).

One example of text recycling would be a scholar copying and pasting material from the literature review of their grant proposal when writing the literature review for an article that derived from that grant. Another example could be a scholar reusing language from the Methods section of their prior study in a new study using the same methods. The next questions ask for your opinion regarding text recycling.

From your perspective as a journal editor or editorial board member, consider the acceptability of text recycling in published work within your field.

The second section consisted of multiple choice questions organized around three aspects of text recycling in the context of writing a journal article in one's field: source of recycled material, location and rhetorical purpose of the recycled material, and conditions of authorship. A final open-ended question asked respondents to reflect on their reasoning in responding to the multiple-choice questions.

Results and Discussion

The sample

Demographics

Of the 316 people who responded to the survey, representing a 20% response rate, 62% self-identified as male, 38% female, with a single respondent indicating a different gender identity. Given that our survey focused on Anglophone journals, it is no surprise to see the majority of respondents were born in Anglophone nations (92.7%): United States (58.2%), E.U. Nations (21.1%), U.K. (8.0%), and Canada (4.2%).

The vast majority (92.2%) of respondents indicated a faculty rank of Associate Professor or higher, and 61.4% were Full Professors. Though it is not surprising that those editing or on the editorial boards of journals hold senior rank, it is worth noting that in this way our results are not representative of academic writers in general, as that group would include a sizable number of assistant professors, non-regular-rank faculty, postdoctoral researchers, and graduate students.

While our study was not focused on studying demographic effects, we did look for correlations between respondents' gender, age, and rank, and responses to the question, "Do you believe that text recycling is always unacceptable?" While such analysis was limited, our data did not show associations. The mean ages of those who responded "yes" ($n = 43$) and "no" ($n = 219$) were nearly equal, with both having mean ages of approximately 54 years. The proportions of males and females responding "no" were 82.2% and 85.0%, respectively. Similarly, we saw little correlation with rank: associate, full, and emeritus Professors had similar rates of "no" responses, ranging from 80% to 84%.

Disciplinary affiliation

Given that discourse conventions are known to differ by discipline, our survey asked participants to select from a number of academic meta-disciplinary categories (e.g., humanities, qualitative social sciences, life sciences) to identify their primary area(s) of research/scholarship, with no limit on the number of categories they could select. From this list, 202 selected a single area, 51 selected two, 10 selected three, and 4 selected four.

To analyze our data by discipline, we initially selected eight clusters of related disciplines: (1) humanities, (2) qualitative social sciences, (3) quantitative social sciences, (4) natural sciences and engineering, (5) business, (6) health sciences, (7) law, and (8) other. As shown in Table 2, our sample includes the greatest number of social scientists, followed by humanists, natural scientists, and engineers. We received fewer than 20 responses from scholars designating affiliations with business, health sciences, law, or other fields, none of which were specifically targeted in our sampling frame; therefore, we limited our analyses to the other four clusters, which we label HUM (humanities), SSQUAL (qualitative social sciences), SSQUANT (quantitative social sciences), and SCI/E (natural sciences and engineering).

It is important to note that findings in this study related to the analysis of discipline may doubly, triply, or quadruply represent the answers given by respondents who chose affiliation with more than one discipline. For example, if we are analyzing differences of opinion between qualitative and quantitative social scientists, respondents who designated themselves as both qualitative and quantitative social scientists would have their responses counted for both groups. We chose not to ask respondents to select a "primary" affiliation since some scholars would have difficulty doing so.

Because our findings related to disciplinary affiliation are integrally connected to a number of other issues we investigated, we present discipline-related findings within specific subsections below.

Table 2. Respondents' area of study.

Area of study	times selected	% of total selections
Social science—quantitative	85	23.0%
Social science—qualitative/interpretive	66	17.9%
Social Science—total	**151**	**40.9%**
Humanities	**115**	**31.2%**
Natural science—life sciences	31	8.4%
Natural science—physical sciences	17	4.6%
Natural science—total	**48**	**13.0%**
Engineering	**21**	**5.7%**
Business	**12**	**3.3%**
Health sciences	**11**	**3.0%**
Law	**4**	**1.1%**
Other	**7**	**1.9%**

Editorial experience

Our respondents reported a substantial amount of experience with the editorial aspects of academic publishing. As shown in Table 3, over 70% of respondents have served on boards of at least three journals, and over 37% have served on at least five editorial boards.

Many of our respondents indicated having experience as an editor. As shown in Table 4, 121 (44.1%) respondents reported having been editor of at least one academic journal. Of that group, 28.1% had held such a role for two or more journals. Experience as journal editor differed by disciplinary cluster. SSQUAL had the lowest proportion of respondents having some editorial experience (31.2%) and SCI/E the greatest (50.8%).

Overall opinions about text recycling

Text recycling occurs in a wide variety of situations. In order to keep the survey to a manageable size, we limited our questions primarily to specific situations to those involving the production of a single type of document: a journal article in one's field. However, we did ask one question to investigate respondents' overall beliefs about text recycling which was not specifically about journal articles: "Do you believe text recycling is always unacceptable?" This question was placed in the latter half of the survey, after respondents had had the opportunity to think about a variety of text recycling situations and to reflect upon their acceptability. In response, 83.6% of survey participants indicated that text recycling was *not* "always unacceptable"—and thus would be acceptable in some situations. The placement of this question may be important, because we have seen preliminary evidence in other contexts that scholars who initially present themselves as strongly opposed to text recycling in theory revise their positions after considering common scenarios.

To investigate whether experience as a journal board member or editor was associated with beliefs about text recycling (see Tables 3 and 4), we ran crosstabs for this question for these parameters. We found that the number of editorial boards on which respondents had served did not substantively

Table 3. Editorial board experience of survey respondents.

Editorial board positions held	1	2	3	4	5 or more
Responses	32 (11.9%)	45 (16.6%)	58 (21.4%)	35 (12.9%)	101 (37.3%)

Table 4. Journal editing (editor or editor-in-chief) experience of respondents.

Editor positions held	0	1	2	3	4	5
Responses	153 (55.8%)	87 (31.2%)	21 (7.6%)	8 (2.9%)	2 (.7%)	3 (1.1%)

affect their overall views toward text recycling. In contrast, we found editorial experience did seem correlated with stricter view on text recycling. As shown in Figure 1, 33% of respondents who edited two or more journals believe text recycling is always inappropriate (right) compared with 12.0% for those with no editor experience (left).

Disciplinary variation

Responses to the question asking whether text recycling was "always unacceptable" were fairly consistent across disciplinary clusters, as shown in Figure 2. Overall, 16.4 of respondents deemed text recycling to be always unacceptable. By discipline, SSQUAL was most permissive, with 9.7%
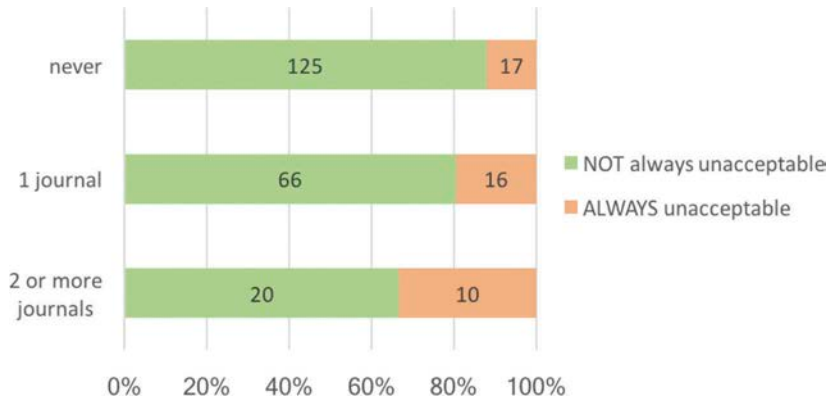

Figure 1. Responses to the prompt, "Is text recycling always unacceptable?" as a function of editor experience. Note: Editor experience here is the number of different journals for which the respondent has served as an editor, not length of time in those positions.
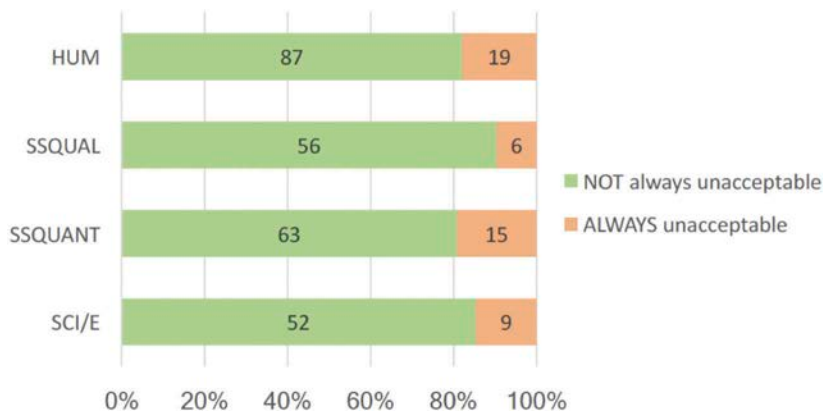

Figure 2. Responses to the prompt, "Is text recycling always unacceptable?" by disciplinary cluster. Note: HUM (humanities), SSQUAL (qualitative social sciences), SSQUANT (quantitative social sciences), and SCI/E (natural sciences and engineering).

declaring text recycling to be always unacceptable, followed by 14.8% in SCI/E, 17.9% in HUM, and 19.2% in SSQUANT. While our data indicate that some specific beliefs about text recycling may correlate with disciplinary affiliation (see below), responses to the general question about whether text recycling is always unacceptable did not reveal a clear disciplinary association.

Discussion

Responses to this single question produced some surprising results. On the one hand, while we had anticipated a notable difference in attitudes about text recycling by disciplinary affiliation, our data suggest these differences were minimal. On the other hand, we did not expect that experience as an editor would be such a notable variable. We were also struck by the large proportion of respondents who felt that recycling was appropriate in at least some specific circumstances. Based on these results, we might reasonably expect that there are other important factors affecting scholars' beliefs that have not yet been identified.

The effect of editorship raises interesting questions about underlying reasons for these differences: Are those with extensive editor experience more concerned about copyright violations than those without? Are they more aware of recent debates about text recycling? Has their editorial experience made them more risk-averse regarding anything that might lead to accusations of plagiarism?

Source of recycled text

We asked respondents to consider the acceptability of text recycling (when drafting a journal article in their field) for different types of source texts: conference poster, conference paper, conference proceedings, grant proposal, grant reports (both internal and external), and a published journal article. Respondents were offered three possible responses: can recycle without limits, can recycle with some limitations, or should not recycle. Because journal articles (along with books, in some fields) are generally the most highly regarded medium of scholarly communication, we assumed that standards for recycling would be most restrictive for this genre.

As presented in Figure 3, responses differed substantially with source type. There was broad consensus that some amount of text recycling is permissible for certain sources, specifically conference papers, conference posters, grant proposals, and grant reports. In fact, for the first three of these, at least 2/3 of respondents reported that authors should be able to recycle from these genres without limit. In contrast, there was strong consensus that *unlimited* recycling was not appropriate for conference proceedings and published journal articles. For conference proceedings, most respondents (68%) said that
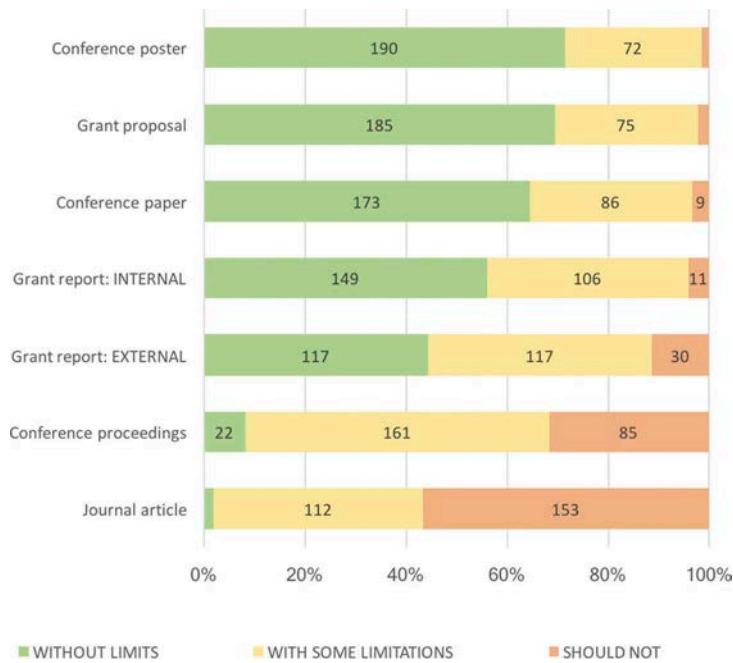
Figure 3. Acceptability of text recycling for different types of source texts.

recycling was acceptable with limits, while 32% said text recycling from proceedings was not appropriate. As for recycling from one's published journal articles, 57% of respondents indicated that such material should not be recycled, 41% said that recycling with limitations was acceptable, and fewer than 2% said that unlimited recycling was permissible.

Disciplinary variation

As noted above, there was broad consensus that, when writing a journal article, some amount of recycling from grant proposals, posters, conference papers, and internal grant reports was acceptable. For each of these genres, the proportion of respondents who felt recycling was *never* appropriate differed across disciplinary clusters by less than 5%, with notable differences only for the *amount* of recycling considered acceptable. For grant reports and posters, there was also little difference by discipline: the proportion of those who said that *unlimited* recycling was acceptable ranged from 55–58% for internal grant reports and from 68% to 73% for posters. Thus, while there were differences in how respondents viewed unlimited versus limited recycling for these two genres, these differences do not seem to be a direct function of discipline. Disciplinary differences for unlimited versus limited recycling were somewhat larger for grant proposals and conference papers: for proposals, the proportion of respondents who selected "without limits"

ranged from 65% (HUM) to 78% (SSQUAL); for conference papers the range was from 48% (SCI/E) to 72% (HUM). Responses for the situation in which the source of recycled material is one's previously published journal article were remarkably consistent across disciplinary clusters: responses of "should not" recycle ranged from 56.8% to 59.7% by cluster, while responses of "with some limitations" ranged from 36.7% to 42.0%.

Discussion

Our findings suggest that in judging whether any instance of text recycling is acceptable, the source of the recycled material is an important factor. Few respondents were in favor of unlimited recycling from journal articles or conference proceedings, while a large proportion were fine with unlimited recycling from conference papers, grant proposals, and conference posters. These findings suggest that the closer a text is to being considered as "published," the less acceptable it is as a source of recycled material. However, there are some disciplinary differences regarding what counts as "published." For example, in some fields, such as computer science, conference proceedings are the highest level of publication, whereas in some engineering fields authors routinely revise conference proceedings papers and submit them as journal articles. While our study does not provide data regarding *why* publication would matter, we speculate that some kinds of scholarly writing are considered to be "work in progress" or "interim genres." Thus, even while these genres are shared publicly, they function as drafts building toward formally published pieces. The tendency to make these interim versions public may involve a tension—especially in STEM fields— between staking one's intellectual claims as early as possible and getting a fully developed manuscript into publication.

Two findings here are worth noting. First, even among gatekeepers at top academic journals, a large proportion (43%) say that recycling from one's previously published journal articles can sometimes be acceptable. And second, while there was substantive disagreement regarding the acceptability of this practice, this disagreement did not align with disciplinary affiliation. Contrary to our expectations, scientists as a group were, in general, neither more nor less permissive about recycling between journal articles than were humanists or social scientists.

Structural location and rhetorical function

Much academic writing is organized into various distinguishable sections, which may be regularized and explicitly denoted in some fields, while in others it is flexible and only implicitly suggested. We again asked respondents to indicate whether recycling was acceptable without limits, acceptable with limits, or not acceptable from the following parts of a journal article:
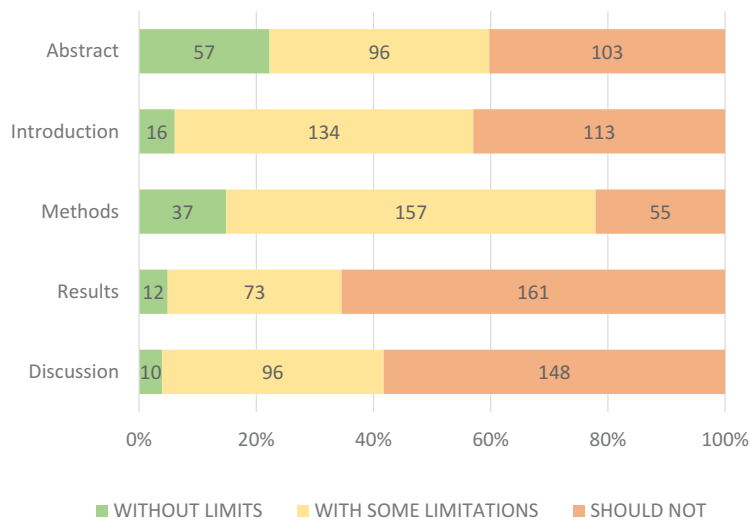
Figure 4. Acceptability of text recycling for different sections of journal article.

abstract, introduction, review of previous research, theory, methods, results, and discussion. We encouraged respondents to select "not applicable" when they felt this section was not relevant in their fields. Looking at responses regarding the major IMRD (Introduction, Methods, Results, Discussion) article sections, we see differences in degree of acceptability.

As shown in Figure 4, recycling was most acceptable in the methods section, where 63.1% of respondents thought text recycling with some limits was allowable; 14.9% thought unlimited recycling in this section was allowable, and 22.1% thought language discussing methods should not be recycled.

In the introduction, 57% thought recycling was allowable—51.0% with limits, and 6.0% without limits. The majority were opposed to recycling in the results and discussion sections, but a substantial portion still indicated an acceptance of limited forms of recycling in both. Not surprisingly, the results section, which many readers expect to contain the most original, novel material in an article, received the highest rating of "should not" text recycle of all seven sections surveyed. But even in the results section, we still see 29.7% of respondents accepting text recycling with limits and 4.9% accepting recycling without limits.

Responses regarding recycling in abstracts showed a notable lack of consensus: 22.5% of respondents chose "without limits," compared with 37.2% for limited recycling and 40.3% for "should not."

Consider the binary of those who disapprove of any amount of recycling versus those who approve—either with or without limits. With the exception of Methods, the minority response for each section is at least a third of the total, demonstrating a notable lack of consensus. And even for Methods, the minority view was greater than 20%.
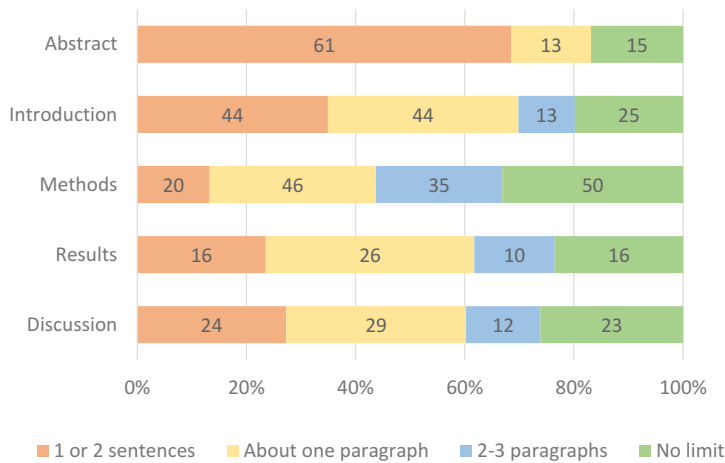
Figure 5. Amount of text acceptable to recycle by section for journal article. Those who stated that recycling was acceptable either "without limits" or "with some limitations" in earlier question were given the prompt: "What is the maximum amount of material it would be acceptable to recycle in these sections?"

We were also interested in how *much* recycling was acceptable. Respondents who indicated in the previously discussed question that text recycling would be acceptable in some circumstances were then asked about the acceptable quantity of recycled text for each section of an IMRD structured article (Figure 5). Over 60% of respondents said that recycling a paragraph or more could be acceptable for all four sections. We don't know what other limitations they might also put on recycling that could have the effect of reducing length, but as an isolated variable, there is a high tolerance among those who do not forbid text recycling for recycling of sizable chunks of text. (Because this question did not explicitly state that the source of recycled material was from a journal article, it is possible that some respondents were imagining recycling from a different genre.)

Table 5. Acceptability of text recycling to accomplish various rhetorical objectives.

Rhetorical purpose	acceptable without limits	acceptable with some limitations	not acceptable
describing the site/subjects of a research study	33.9%	55.7%	10.4%
describing the methodology	24.2%	63.1%	12.7%
justifying the methodology	15.7%	61.0%	23.3%
describing the theoretical/interpretative framework	8.9%	64.8%	26.3%
justifying the theoretical/interpretative framework	7.4%	58.7%	33.9%
interpreting results and/or findings	3.7%	37.7%	58.6%

Rhetorical function

In addition to asking respondents about the structural location of recycling in a journal article, we asked a separate question about the rhetorical purpose of the recycling. We knew that articles in some fields did not use clearly defined IMRD sections, and we were also interested in whether and how structural location and rhetorical purpose of recycled text might relate. We asked about six common rhetorical moves that academic writers make in journal articles across disciplines, and the results are presented in Table 5.

Here we see that, when we look at structural locations and rhetorical purposes that would typically align, studying rhetorical purpose can give us more specific data than just looking at structural location. For example, we reported above that for the methods section, 26.0% think text recycling is never acceptable. However, when we asked respondents to directly consider rhetorical purposes that might be included in a methods section, responses to the choice of recycling "never acceptable" were in some cases noticeably lower: describing sites and subjects: 10.4%; describing methodology: 12.7%; and justifying chosen methodology: 23.3%. It seems that future study of text recycling would benefit from examining attitudes about the rhetorical purpose of the recycling in addition to structural location and seeking to understand relationships between opinions about both. Ultimately, guidelines for text recycling might need to address both.

Disciplinary variation

Responses regarding structural location varied notably by disciplinary cluster for some sections and not for others. Disciplinary differences were least for the Introduction, Methods, and Discussion sections, with differences between clusters for "should not recycle" responses ranging from 13%–16%;
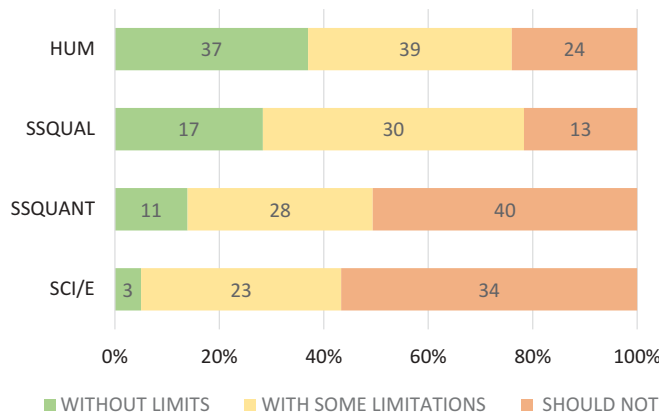

Figure 6. Acceptability of text recycling in abstracts by disciplinary cluster. HUM (humanities), SSQUAL (qualitative social sciences), SSQUANT (quantitative social sciences), and SCI/E (natural sciences and engineering).

somewhat more disciplinary variation was seen for the Review of Previous Research, Theory, and Results sections, with differences between 20%-24%. The greatest variability was for abstracts, as shown in Figure 6 below. Recycling was designated as off limits by less than 25% of respondents in HUM and SSQUAL, as compared with over 50% for SSQUANT and SCI/E clusters, a difference of over 25%. It should be noted that in SSQUANT and SCI/E fields, abstracts are commonly published as stand-alone texts, and almost every article is accompanied by an author-written abstract, whereas in HUM and SSQUAL fields, publication of stand-alone abstracts is uncommon and articles are often published without abstracts.

For all sections except Methods, STEM fields were most restrictive and qualitative social sciences the most permissive of text recycling. For Methods, HUM was the most restrictive (29% "should not recycle") and SSQUAL the least (15%). This also happened to be the section for which respondents were most lenient overall. In comparison, responses for questions regarding the rhetorical function of recycling were more consistent across disciplinary clusters. Disciplinary differences in "should not recycle" responses ranged from a low of 8% for describing the site/subjects to 18% for describing theoretical/interpretive framework. Paralleling the questions about structural location, qualitative social sciences were most lenient and STEM fields most restrictive—except for "describing the methodology," for which humanities were most restrictive.

Discussion

Structural location and rhetorical purpose appear to be meaningful factors in attitudes toward text recycling. We saw, for example, greater permissiveness for recycling in Methods sections and in the act of describing methods than for Discussion sections or when interpreting results. These differences may reflect underlying sensibilities regarding whether textual materials feel more "descriptive" (e.g., design of an instrument) or more "interpretive" (e.g., what data collected by that instrument mean). These differences may also reflect, within scientific fields at least, concerns about reproducibility: scientists may worry that changing the wording in the Methods section may introduce ambiguities into research protocols. Further research should attempt to understand the rationales behind these differing opinions.

As reported above, one key finding in this section is that answers to questions about the rhetorical purpose of recycling are a useful, and perhaps necessary, supplement to those about structural location. Rhetorical purpose has not been specifically considered in discussions or guidelines about text recycling, and it deserves further scrutiny and consideration.

Authorship

In the survey questions discussed above, the issue of authorship—whether single or multiple—was not mentioned. Following the question of whether text recycling was "always unacceptable," we moved to the issue of multiple authorship. Those who responded "no" to this question (meaning that text recycling is sometimes acceptable) were asked whether it could still be acceptable for five situations involving multiple authors, as follows:

(A) The source text and the new text have identical authors.
(B) The source text and new text share at least one author and any other authors have given permission.
(C) The source text and new text share at least one author and any other authors have not been asked for permission.
(D) The authors of the new text are members of a "lab" or long-term research project that produced the earlier text, but some of the authors of the new text were not authors of the earlier text.
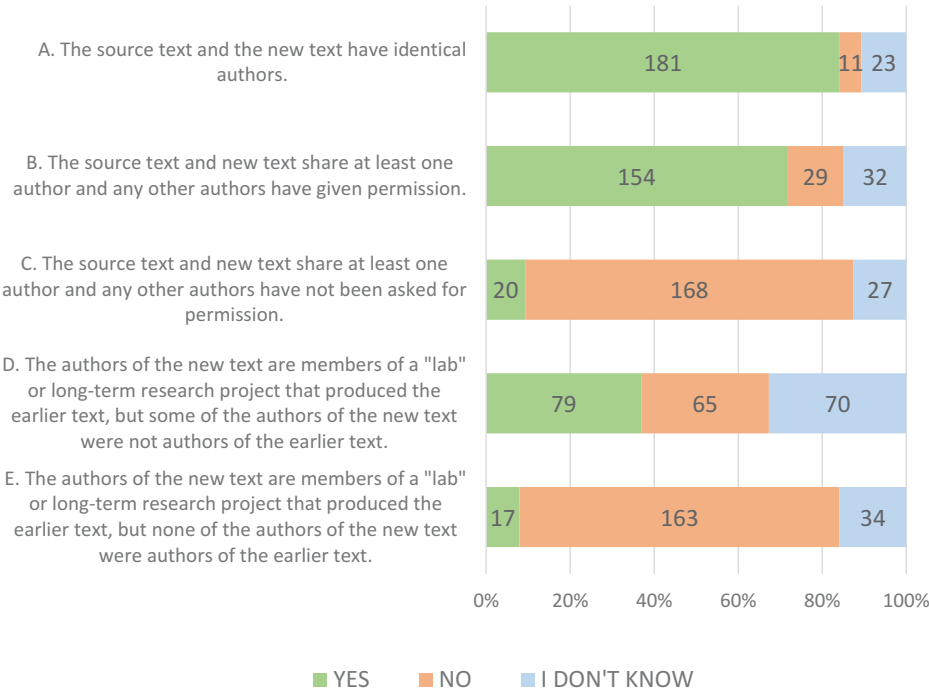

Figure 7. Acceptability of text recycling for different conditions of authorship. Those who stated that recycling was acceptable either "without limits" or "with some limitations" in earlier question were given the prompt: "Would text recycling that would be permissible in a single-authored paper still be permissible in the following authorship scenarios?"

(E) The authors of the new text are members of a "lab" or long-term research project that produced the earlier text, but none of the authors of the new text were authors of the earlier text.

Respondents were offered three choices: "yes" (still acceptable), "no" (no longer acceptable), and "I don't know." Responses to these scenarios are presented in Figure 7.

For the situation A, in which the authors are identical, 84% chose "still acceptable," while 5.1% chose not acceptable, and 10.8% selected "I don't know." For situation B, with one shared author and permission given by the others, 71.6% said that recycling was still acceptable, while a similar proportion, 78.1%, said it was no longer acceptable in situation C, without such permission.

We were interested in how the context of a lab, where research projects overlap and extend across long periods of time, affects ideas about text recycling. Respondents were most divided on situation D, where members of a lab are reusing a text that some, but not all, helped to author; approximately 1/3 selected "no," "yes," and "I don't know." If *none* of the authors of the new text were authors of the original source in the same lab, Situation E, 76% said that recycling was unacceptable even if they all worked in the lab that produced the source.

Disciplinary variation

Responses for situations A and B differed little across disciplinary clusters. All possible responses differed by less than 10% across clusters, with "no longer acceptable" responses ranging from 2–10% for A and 11–20% for B. For situation C, HUM and SSQUAL were more restrictive with "no longer acceptable" response rates of 86% and 87% respectively, while SCI/E was most lenient at 70%.

Situation D produced the most complex responses in terms of discipline. Responses of "no longer acceptable" ranged from 24% (HUM) to 38% (SSQUAL), while "still acceptable" responses varied notably across all four groups: HUM, 26%; SSQUAL, 33%; SSQUANT, 44%; and SCI/E, 50%. Responses of "I don't know" were far more frequent and more varied for this scenario than any of the others: HUM, 50%; SSQUAL, 29%; SSQUANT, 22%; and SCI/E, 16%. These responses appear to correlate with the commonness of co-authorship in each cluster.

For situation E, "no longer acceptable" responses differed by only 8% across clusters; however, "still acceptable" responses varied by 14%, with a low of 2% for SSQUAL and a high of 16% for SCI/E. "I don't know" responses varied by 15%, being highest for HUM at 23%.

Discussion

Multiple authorship introduces additional complications to the ethics of text recycling. Such complications may rarely occur for scholars whose work is almost always single-authored, as is frequently the case in the humanities and some social sciences. In other contexts, however, research groups regularly compose texts with five or more authors in an environment where new scholars are frequently joining and departing the group, and such questions potentially become much more complex.

It is not surprising that respondents who believed that recycling could sometimes be appropriate tended to be fine with multi-author situations in which the authors of the source text and new text are identical, as this situation does not appear to introduce any new ethical issues or complications. For the more complicated situations in which there were differences in authorship between the source and new text, responses were notably different depending on whether permissions had been given. This might suggest that respondents were more concerned with intellectual "theft" than with possible misrepresentations of either the authors' scholarly output or the originality of the text, as the latter would not be affected by the giving of permissions. It is worth noting that while obtaining permissions for such situations might not be problematic for scholars in humanities or social science fields, this may not be so for those in the sciences and engineering, where the number of authors on papers is routinely above 10 and, in some specializations, can number in the hundreds. A related issue for STEM scholars is that authorship can involve different types of contributions, so some authors may not be directly involved in the drafting process.

Finally, we did see some real disciplinary difference for situation D and, to a lesser extent, E, that seems likely due to the fact that scholars in the humanities and qualitative social sciences are less likely to work in labs or established, long-term research groups that change membership over time. Those without such experience are more conservative about text recycling in this context or more likely to admit they do not know what the practice should be. Further research into relationships between complex shared authorship and text recycling should collect more detailed data about subjects' own experiences of joint authorship.

Open-ended response

Our survey focused on opinions on text recycling in various situations, rather than the underlying rationales for those opinions. To gain some preliminary insight into respondents' rationales, we concluded the survey with a single open-ended response question. This question stated that we were interested in respondents' "thinking about their responses" and asked, "what principles

guided [their] thinking" in each of the major areas of the survey. We received 220 answers to this question, many of them multiple paragraphs.

Discussion

In analyzing these responses, we discovered some patterns that may be useful in further research. We identified many of the open-ended responses as falling within three philosophical positions, which we have dubbed "hardliners," "contextualists," and "pragmatists."

Hardliners are those who may accept recycling from "unpublished" (variously defined) documents into published ones, but who think recycling from a published journal article into a new journal article is never appropriate. One respondent exemplifies this stance when they write: "Any published text can never be recycled. Text from an internal grant application can be recycled. The structural location or rhetorical function of the recycled material don't matter; it's simply the source that matters—if the source is a prior publication, then it's simply unacceptable to ever recycle."[8]

Why is that? It seems to involve a commitment to the beliefs that all scholarly writing should be original and its ideas should be as traceable to their origins as possible. Another respondent echoes the value of originality and the rules designed to protect it:

> [Text recycling] is never appropriate if you are "text recycling from previously published work or work that is under review somewhere else. It violates the code of ethics of the American Sociological Association. It is deceptive in that authors submit articles under the understanding that it is all original material. Some articles may use some of the same variables or they may employ the same methodology as a previously published article. But the author should not simply cut and paste from previously published work.

This respondent believes that even methods that are consistent across papers should be freshly written for the sake of originality, and they wish to adhere to rules that endorse this value. Another respondent clearly spells out that transparence of provenance is paramount:

> For me the issue is attribution and provenance, not ownership. Uncited recycling might be thought permissible under a theory of ownership: I wrote it once, so that I should be able to write it again. OK, but if you are writing in a scholarly context then you are obliged to make it easy for readers to track assertions back to their origins. And if you do not cite those you fail this basic scholarly requirement. So, I can see someone making the argument for acceptability, but I wouldn't.

> The only place in which I think it is acceptable to reuse text without citation is when the original venue is not public or not longterm addressable/quotable.

This scholar clearly understands and has considered another way of thinking about this problem—the ownership theory—but they reject it. For them, scholarly writers are obligated foremost to attribute text.

The **contextualists**, in contrast, are less dogmatic, believing that text recycling between published texts is generally undesirable but acknowledging that some particular uses of text recycling can be appropriate. Many respondents highlighted the utility of recycling in writing that describes methodology. One writes, "I think the Methods section can be recycled. Anything else should be unique to the new paper." Another expands on this idea: "My view is that recycled text is generally not acceptable, except in methodological description (typically the materials and methods section of biological papers). This applies to ALL published text." Another respondent provides some rationale for this: "Mostly, text recycling should be reserved for materials and methods section. If you have come up with a clear, concise way to describe your methodology, it is almost counter-productive to force you to 'reinvent the wheel' every time you publish on it." Here, we see evidence that a number scholars see a structural location, methods, where originality is not so important as accuracy, creating a logical reason to recycle texts that makes better sense both for authors and readers. While they share the value of originality and clear provenance that the hardliners espouse, contextualists see a practical and even intellectual reasons for text recycling in certain specific contexts. If hardliners are putting their commitment to principles of originality and attribution first, then the contextualists seem different in also weighing the experiences of the author and the reader. Thus, the hardliner will rewrite methods out of fidelity to a value of originality in academic writing, but the contextualist will consider recycling language about the same methods, because it improves both authors' and readers' experiences to have consistency across texts. As one respondent clearly explained, "There are only a finite number of ways to say 'participants were randomly assigned to one of two conditions.' Why make authors write a convoluted paraphrase each time?"

Other scholars expand this same logic to different parts of a paper beyond just the methodology. For example, another respondent writes:

> Many papers which are part of a long term research project share some foundational assumptions which aren't necessarily obvious to every reader. If the author or authors have produced some text summarizing these assumptions that they are happy with, they shouldn't be required to produce a worse altered version just to avoid a charge of text recycling. But it should be restricted to these kinds of "setup" issues to recycle substantive conclusions is to fraudulently misrepresent old work as new.

"Foundational assumptions" implies something different from methods. This passage suggests that the group of contextualists is probably a fairly big tent, because there are a variety of opinions about what contexts create the appropriate conditions for text recycling. Still, there is a shared

value within the group that the default position remains to prioritize originality and clear attribution and avoid text recycling.

Pragmatists, conversely, suggest the need for ideological break with scholarly writing's dogmatic commitment to originality in prose. We didn't see truly radical statements against the value of originality and transparent citation in our results—one could hardly expect to find such sentiments among the gatekeepers of the top English-language academic journals. What we did see were some departures in how these values were understood or how important they might be among many possible priorities academic writers could have. Put another way, if contextualists default to text recycling as forbidden with some exceptions, the pragmatists tend to think of it as acceptable with some exceptions. One respondent explains at length:

> Single author recycling is always acceptable, with some limitations. It is acceptable because a lot of thinking goes into composing interesting textual material, and because it doesn't make much sense to change wording just to change wording: If something is stated correctly and interestingly, there is no reason to change it when expressing the same ideas in a new, but germane text. Using self-citations often feels awkward is burdens the text. There are limitations, however, in the sense that the source of the recycled material, if lengthy, should be acknowledged somewhere, for instance by stating in the acknowledgments section that the new text is adapted from an earlier publication. In my view these principles apply regardless of the section of an article, but obviously, they are more important for sections such as the introduction or the discussion sections than for methods, which need to be precise and afford no creative writing. The question of multiple authorship is much more problematic. In general, I think that little or no material should be recycled in those contexts, or else special care should be taken to fully acknowledge the recycling.

Here, the scholar implies limits on the default value of originality in prose in academic writing. If you formulate something well in one place, why must it be reformulated in other venues where some version of the same information is logically called for? Scholarly expectations of originality seem to be an insufficient reason to this writer. Self-citations are bemoaned as awkward, even as this respondent still clearly values transparency and eschews subterfuge. In sum, they emphasize practicality and the desire to save labor. Both of these values were echoed by other respondents. One respondent who still articulated clear limits for text recycling said the expedience of text recycling makes it "a matter of survival" and a "way to work around the impossible demands placed on us by marketised academia." Another respondent more calmly emphasized the sensibleness of much text recycling, given the labor it saves:

> Overall, my principles seem to say: you worked on building a research agenda, developing projects, seeking, and mentoring others in your group—so there are

many parts of that work that are portable, they overlap in their intended purpose, and some may be recycled—that seems reasonable and ethical. This is less about ownership than it is about what makes sense—especially in terms of labor. The main principle for me in all of this work is recycling your work/co-authored work is fine if it is performing a function that does not require new or original input and if any prior use + previous authors are acknowledged.

This response suggests that pragmatists value original thought as well as transparency, just as their colleagues do. However, they do not see text recycling as being at odds with those values.

Future work on text recycling would benefit from seeking to verify the existence of these three philosophies of text recycling. If they persist in future studies, we should seek to better understand them and their origins.

Implications and conclusions

Our study suggests that while experienced scholars across disciplines share beliefs about text recycling in some contexts, they disagree about its appropriateness in others. We need to recognize, therefore, that many academic gatekeepers will find text recycling to be acceptable in situations that some of their gatekeeping colleagues will not.

Our survey revealed a number of additional surprising results. Contrary to our expectations, there were no consistent associations between discipline and attitudes about text recycling as a general practice. On the other hand, disciplinary affiliation does appear to play a role in attitudes about recycling in specific situations, such as in writing abstracts. Editorial experience, too, seemed to play a notable role in such attitudes, as there was an association between respondents' amount of experience as journal editors and being more restrictive in their views on text recycling. Since journal policies are heavily influenced by the views of their editors, this finding suggests that journal policies on recycling may be more restrictive than the general sensibilities of scholars in their fields.

While our study offers new insights into the ethics of text recycling as a discursive practice, it also reveals challenges inherent in investigating beliefs about text recycling. For one thing, scholars rarely have formal training on the topic and published guidance on the topic is limited. We suspect that many respondents based their opinions about text recycling on their own experiences as authors or editors, and we do not yet know the extent to which our data reflect deeply held beliefs versus positions that evolved during the taking of survey for respondents who were seriously considering these issues for the first time. A second challenge is the inherent complexity of text recycling. Whether any specific case of text recycling is considered appropriate is contingent on many intertwined factors (see Moskovitz, forthcoming), and no survey of reasonable length can adequately capture all of these

variables. The relevance of such factors is apparent, for example, in responses to questions about co-authorship. Many respondents said they "didn't know" whether text recycling was appropriate for some of these situations. For some, this uncertainty may be due to their disciplinary contexts, as many scholars in the humanities may never have worked in a collaborative research environment and thus not know what is appropriate for that situation.

Such challenges were apparent to us when respondents gave answers in later parts of the survey that seemed at odds with earlier answers. For example, when asked about the appropriateness of text recycling in Methods sections, 20% of the respondents said it was unacceptable. Yet, when asked to indicate whether it was acceptable to recycle text when describing the subjects of a study or when describing a methodology, responses of "unacceptable" were only about half that amount. These differences could reflect attitudes that were evolving as respondents worked their way through the survey (and some responses to the open-ended question did, in fact, suggest that the survey had been a reflective learning experience for a number of the participants), and yet it could also be that respondents were imagining somewhat different situations for different prompts.

Our survey clearly demonstrates the need for further research into the nature and structure of belief systems regarding text recycling through interview-based studies built on the findings of surveys like ours. Interviews would allow us to better understand, for example, why researchers hold the positions they do, including the assumptions and beliefs that guide their opinions, and how their understandings of disciplinary practices and conventions inform their views. Important questions about training and mentoring should be addressed as well, such as whether researchers come to their beliefs about text recycling through formal training, personal experiences, professional/academic mentoring, or some other means. Related to these questions are those regarding individuals' *conviction* and *practice*: How firmly do they hold their beliefs about text recycling and, by implication, how willing they are to be flexible depending on context and circumstance? To what degree are stated positions consistent with scholars' own practices? Further research should also investigate recycling from "school" texts including course assignments, seminar papers, theses, and dissertations—given that these present important and common ethical and pragmatic challenges.

And this brings us to training. While training in research ethics including plagiarism is standard in many fields, this study suggests that more focused attention should be paid to text recycling in Responsible Conduct of Research programs and other educational offerings for research ethics. Such training should not consist solely of teaching researchers formalized rules of practice, but should include focused discussions of contexts and scenarios that would allow for a

richer, more nuanced awareness of the critical issues involved in making decisions about the appropriateness of text recycling in specific situations. Given differences among and across disciplines, a single, prescriptive set of formal rules about the ethics of text recycling is unlikely to be useful. Instead, researchers, editors, and instructors all need guidelines tailored to the genres and contexts specific to their areas of inquiry. To develop the educational materials and professional guidelines scholars need for making sound decisions about text recycling in their own communities of practice, we need a better understanding of how different research communities view the ethics of text recycling in various situations, as well as how ethical standards are formed and shared in scholarly communities.

Notes

1. In recent years, research has continued its investigations into the "crisis" of student plagiarism, focusing on such topics as the frequency with which undergraduate and graduate students plagiarize (Brown, 1995; Flowerdew and Li, 2007; Park, 2003), the impact of online technologies (Flowerdew and Li, 2007; Scanlon, 2003), the reasons why students choose to plagiarize (Chen and Chou, 2017; Childers & Bruton, 2016; Granitz & Loewy, 2007; Sutherland-Smith, 2005), and the degree to which different cultural codes and social constructions of textual ownership influence plagiarism behaviors (Chien, 2014; Heckler & Forde, 2015; Wheeler, 2014).
2. While the term "self-plagiarism" is widely used, we prefer the ethically neutral term "text recycling." Cary Moskovitz describes the essential problem with the term "self-plagiarism" in this way: "*Self-plagiarism* is increasingly used as a label for [textual] reuse; however, that term is problematic for two reasons: It labels as deviant all occasions of a practice that is often legitimate, and it excludes common examples of replication that do not involve reusing one's own material" (Moskovitz 2016, p. 5).
3. In some fields, such as biomedical studies, text recycling, redundant publication, and "salami slicing" (when researchers publish their results as many small individual papers rather than as a single comprehensive study) have become so pervasive that many editors, journals, and professional organizations have condemned all such practices as unethical (see, for example, the Office of Research Integrity's statement about "Self-Plagiarism" [2017] and BioMed Central's editorial guidelines for text recycling [2017]).
4. "Journal editors should consider publishing a retraction article when: There is significant overlap in the text, generally excluding methods, with sections that are identical or near identical to a previous publication by the same author(s)" (https://publicatio nethics.org/text-recycling-guidelines).
5. A 2015 article by Aad et al. (2015) about the Large Hadron Collider in *Physical Review Letters*, in fact, credited 5,154 co-authors. This practice is sometimes referred to as "hyperauthorship."
6. We only included journals for which all published articles contain an English-language version. This eliminated two multi-lingual international journals in the field of classics. We made this choice in order to eliminate the variable of language from our study and to avoid sending the survey to someone whose work on a journal is primarily or exclusively on submissions in a language other than English. We did include journals

based outside of Anglophone countries when the journal was published entirely in English.
7. *NANO Letters* was classified as a top journal in both chemistry and physics.
8. All quotations in this section from survey respondents are reproduced exactly, preserving mistakes, inaccuracies, and irregularities in grammar, spelling, and syntax.

Acknowledgments

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