Observations from NSF Plagiarism Investigations and Strategies to Prevent Plagiarism

AT A GLANCE

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Report No. OIG I-18-0002-PR
March 4, 2022

WHY WE DID THIS REVIEW

Plagiarism — defined by federal policy as the appropriation of another person's ideas, processes, results, or words without giving appropriate credit — is a global problem within the research community. Although the need to prevent plagiarism is widely recognized, how best to do so remains a question. We conducted this review to provide insight into plagiarism as it relates to National Science Foundation-funded research and offer plagiarism prevention strategies to educational institutions based on our experience investigating plagiarism allegations.

WHAT WE FOUND

We analyzed 134 plagiarism cases involving 137 researchers against whom NSF made findings of research misconduct and whose cases closed during fiscal years 2007–2017. These researchers often were employed in junior academic positions, recent degree recipients, educated in non-U.S. institutions, and/or committed plagiarism in multiple NSF proposals. The most common reasons researchers gave for their plagiarism suggested they:

- did not know what constitutes appropriate citation;
- thought they used appropriate citation when they did not;
- did not understand what kinds of text require citation;
- considered appropriate citation less important in certain document sections;
- recklessly incorporated sources into drafts; and/or
- rushed through document preparation.

WHAT WE RECOMMEND

Based on our analysis and investigative experience, we suggest institutions foster a culture of research integrity, develop targeted and descriptive faculty and student training, better support grant writers, and consider more substantive pre-submission requirements for proposals.

FOR FURTHER INFORMATION, CONTACT US AT OIGPUBLICAFFAIRS@NSF.GOV.

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ABBREVIATIONS

FOIA	*Freedom of Information Act*
PI	principal investigator
RCR	Responsible Conduct of Research
ROI	report of investigation

Introduction

The scientific enterprise is based on a foundation of trust. If scientists misplace that trust as a result of unethical or unprofessional conduct, the impact is not limited to the research community — it can undermine the relationship between science and society as a whole.[1] Research suggests that plagiarism — defined by federal policy as "the appropriation of another person's ideas, processes, results, or words without giving appropriate credit"[2] — is a global problem within educational settings and is committed by both students and faculty. Although the need to prevent plagiarism is widely recognized, how best to do so remains a question. We conducted this review to provide insight into plagiarism as it relates to National Science Foundation-funded research and offer plagiarism prevention strategies to educational institutions based on our experience investigating plagiarism allegations.

Background

NSF's policy ([45 CFR 689](#)) defines research misconduct as "fabrication, falsification, or plagiarism in proposing or performing research funded by NSF, reviewing research proposals submitted to NSF, or in reporting research results funded by NSF." A finding of research misconduct requires proof by a preponderance of evidence that the act is a significant departure from accepted practices of the relevant research community and that the act be committed intentionally, knowingly, or recklessly. Honest error is not considered plagiarism.

Our office considers three factors as relevant when assessing "appropriate credit": 1) quotation — whether the copied text is quoted; 2) citation — whether a citation to the source appears in the text with the copied text; and 3) reference — whether the citation directs the reader to a source listed in the document's reference bibliography.[3]

From FYs 2007 to 2017, NSF made 170 research misconduct findings, of which 137 (81%) were plagiarism related. For this review, we examined data contained in the investigation records of these 137 subjects.

NSF OIG's Investigative Process

We receive research misconduct allegations from many sources, including our anonymous hotline, NSF program officers, merit review panelists, and research institutions. We also conduct proactive reviews of funded and declined proposals. When we receive plagiarism allegations, we generally conduct our own inquiries using plagiarism software. If those inquiries do not dispel the allegations, we inform the research institutions of the alleged research misconduct. Institutions, which serve as NSF grantees, generally conduct the research misconduct investigations in line with NSF's research misconduct regulation, which states: "Awardee institutions bear primary responsibility for prevention and detection

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[1] On Being A Scientist: A Guide to Responsible Conduct in Research: Third Edition (2009), p. ix
[2] 65 FR 76260-76264. Federal Register Volume 65, Issue 235 (December 6, 2000). Per the definition, self-plagiarism is not considered plagiarism as it does not constitute the appropriation of content from another person.
[3] OIG Semiannual Report to Congress, March 2009, p. 43

of research misconduct and for the inquiry, investigation, and adjudication of alleged research misconduct."[4]

We generally address substantiated plagiarism cases with reports of investigation (ROI) that explain how the subject's actions meet NSF's criteria for a research misconduct finding. ROIs also contain our recommended consequences for the misconduct. In plagiarism cases, our recommendations take into account the types of and number of sources, as well as the amount of copied material. We also consider other relevant circumstances, such as whether the subject's actions were part of a pattern.

NSF ultimately decides whether to make a research misconduct finding and impose consequences. Such consequences may include:

- An official finding of research misconduct against the subject and a letter of reprimand;
- Taking Responsible Conduct of Research (RCR) training, which generally must occur within 1 year;
- Submission of certifications, which are contemporaneous documents in which subjects state proposals or reports they are submitting to NSF do not contain plagiarized, falsified, or fabricated material;
- Submission of assurances, which are contemporaneous documents in which a responsible official of the subjects' employers state proposals or reports the subjects are submitting to NSF do not contain plagiarized, falsified, or fabricated material;
- Prohibition from service as a reviewer, consultant, or advisor to NSF; and
- Debarment from participation in federal programs.[5]

Observations

For this review, we examined 134 plagiarism cases involving 137 subjects against whom NSF made findings of research misconduct for plagiarism. The 137 subjects, whose cases closed during FYs 2007–2017,[6] were affiliated with 106 unique institutions[7] and their acts of plagiarism occurred in 320 NSF proposals. In this section, we summarize our observations based on these plagiarism investigations, including the subjects' occupational and educational demographics, acts of plagiarism, and reasons for plagiarizing, as well as consequences imposed by their institutions and NSF. Please see Appendix B for expanded results.

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[4] 45 C.F.R. § 689.4(a)

[5] Debarment prevents individuals or entities from participating in government contracts, subcontracts, loans, grants, and other assistance programs for a specified period. See 2 C.F.R. part 180 as implemented by 2 C.F.R. part 2520.

[6] See Appendix A for additional information regarding the review's data and methodology.

[7] In this report, "institution" includes all types of NSF awardee organizations, including universities, colleges, and small businesses, as well as other entities that may collaborate on an award. Twenty-six institutions had more than one case of plagiarism. Of these, 5 institutions were involved in 3 cases, and 21 institutions were involved in 2 cases.

Demographics

Institutions

- Of the 137 subjects in our review, 120 (88%) were from universities and colleges. Sixteen subjects were associated with businesses, which received federal funding through the Small Business Innovation Research and Small Business Technology Transfer programs. The remaining subject was a federal agency employee, who collaborated on a project submitted from a different institution.

Occupation

- Of the 137 subjects, 126 (92%) were employed as academic faculty (113) or company researchers (13). Only 7 subjects (5%) were students or postdocs. The remaining four subjects were company executives (3) and a university official (1). (See Figure 1.)
- Of the 113 subjects who were academic faculty, 69 (61%) were employed in junior academic positions, such as assistant professor (63), which is generally the first academic position Ph.D. recipients or postdocs obtain, or non-tenure track positions, such as adjunct professor or research faculty (6).
- 129 of the 137 subjects (94%) were either principal investigators (PI) or co-PIs (118 PIs and 11 co-PIs) on NSF proposals.
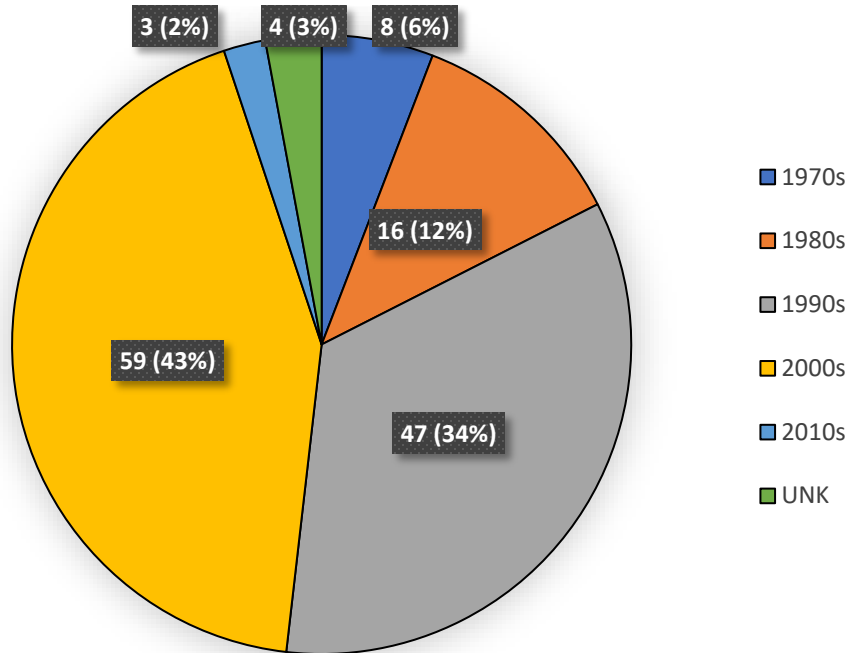
Figure 1. Subjects' Occupation
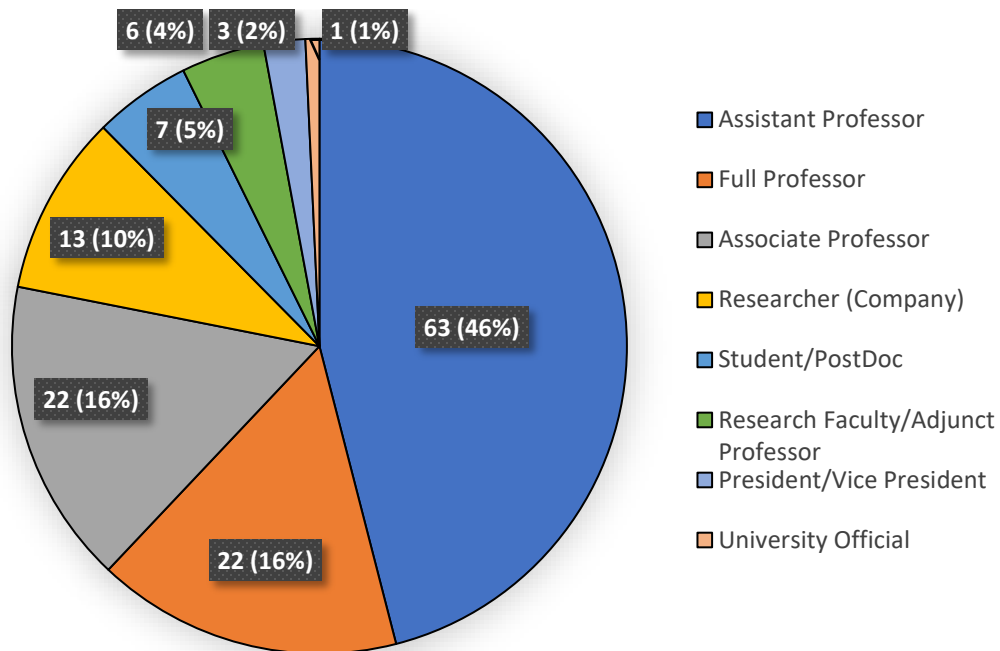
Source: NSF OIG-generated.

Education

- Of the 137 subjects, 59 (43%) received their highest degree from 2000-2009 and 47 (34%) received theirs from 1990-1999. (See Figure 2.)

Figure 2. Year Highest Degree Received

Source: NSF OIG-generated.

- As shown in Figure 3, many subjects received their bachelor's and master's degrees outside of the United States, and their Ph.D. degrees in the United States.[8] Forty-two subjects (31%) received their bachelor's, master's, and Ph.D. degrees from non-US institutions.
- Subjects received their non-U.S. education in 36 different countries; the most frequent countries were China (30 subjects), India (27 subjects), Canada (9 subjects), and Korea (7 subjects).

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[8] Some subjects received multiple bachelor's, master's, or Ph.D. degrees. When at least one bachelor's, master's, or Ph.D. degree was earned in the U.S., we reported subjects as receiving U.S. degrees in that category.

Figure 3. Place of Education
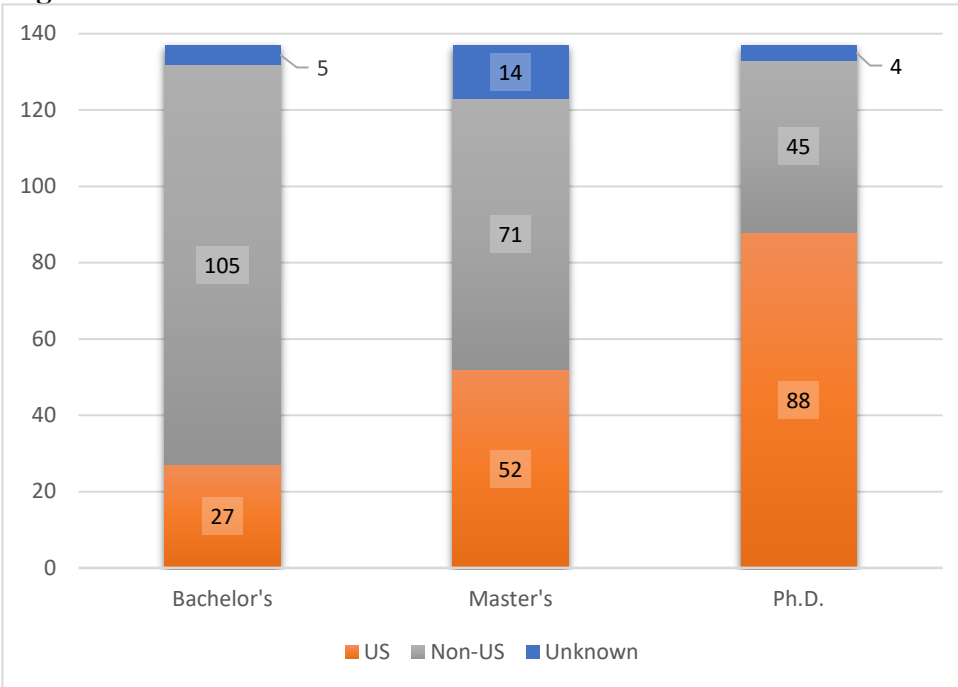
Source: NSF OIG-generated.

Acts of Plagiarism

Plagiarism allegations generally involve plagiarism in NSF proposals or in publications that report NSF-funded research. Subjects in our review submitted numerous proposals but were infrequent grant recipients. Of the 320 NSF proposals included in our review, 240 (75%) were declined, 57 (18%) were awarded, and 23 were withdrawn or returned without review.[9]

- Subjects generally plagiarized in multiple NSF proposals; 75 (55%) committed plagiarism in more than 1 NSF proposal, with 1 doing so in 11 proposals.[10]
- 118 subjects (86%) plagiarized from more than 1 source.
- 104 subjects (76%) plagiarized from papers or proceedings; 59 subjects (43%) plagiarized Internet sources; and 29 subjects (21%) plagiarized others' proposals. See Appendix B for additional information about plagiarism from others' proposals.
- 98 subjects (72%) copied fewer than 200 lines of text,[11] and 73 subjects (53%) copied embedded references.[12]
- 85 subjects (62%) exhibited a pattern of plagiarism, including 5 who committed additional acts of

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[9] For context, in FY 2020, NSF's proposal funding rate was 28%.

[10] We count only those proposals upon which subjects' research misconduct findings were based, not those reviewed for pattern.

[11] Number of lines is determined by counting lines of copied text in documents and subtracting repetitive/non-unique lines. One page is considered approximately 45 lines. One subject did not plagiarize lines of text, but rather one figure.

[12] Embedded references are references contained within source text that is copied with surrounding text. Such plagiarism is more egregious because subjects not only copy others' final product, but also falsely represent themselves as having conducted a literature review.

plagiarism while already under institutional or OIG investigation. Additionally, 83 subjects (61%) plagiarized with a knowing degree of intent, defined as having an awareness of their actions.[13]
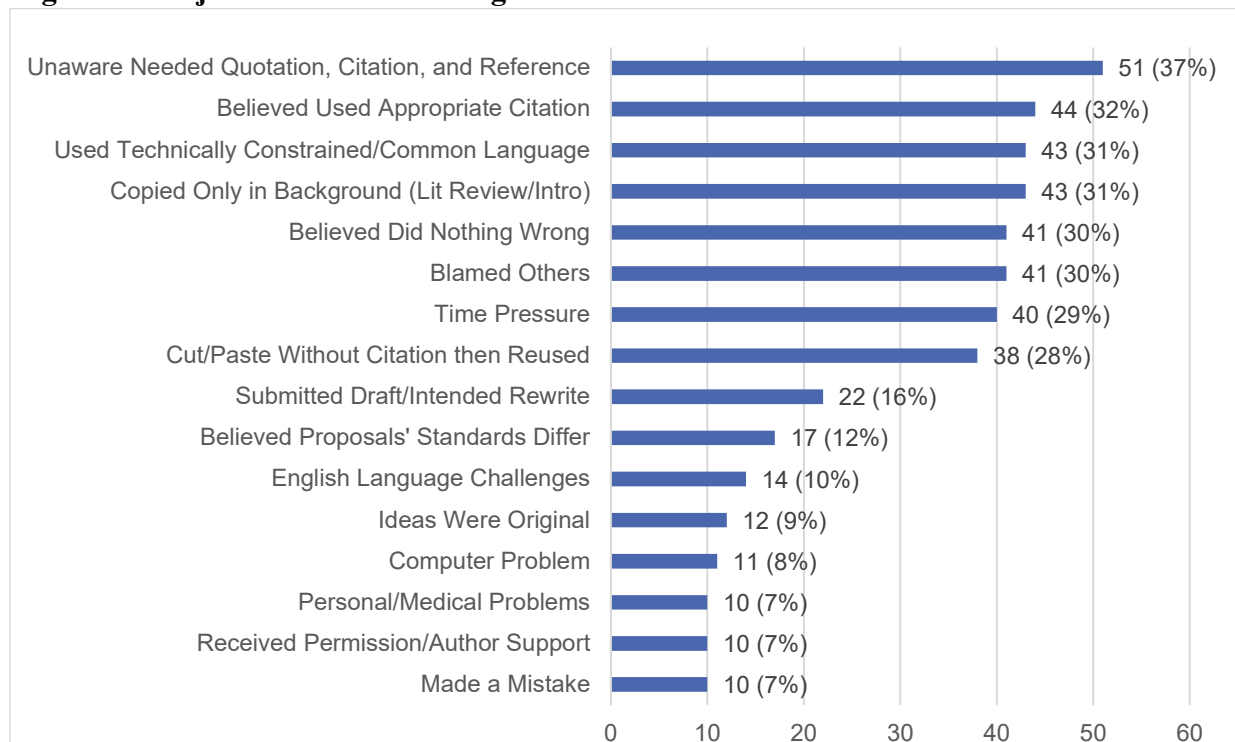
- 50 subjects (37%) committed other acts of misconduct in addition to plagiarism, including data falsification, merit review violations, inappropriate use of NSF funds, and evidence fabrication.

When awarded proposals contain plagiarism, we generally ask cognizant NSF program officers if the specific plagiarized material was so important to the proposals' overall evaluations that they would not have recommended funding had they known about the plagiarism. For 9 of the 57 awarded proposals in our review, the program officers said the specific plagiarized material was a critical component in their evaluations and funding recommendations. NSF recovered funds in six of the cases involving these nine proposals. In the remaining cases, we did not recover funds because the grants were either terminated by the institution, transferred to another PI, or had already closed.

Reasons for Plagiarism

Subjects have multiple opportunities during both NSF and institutional research misconduct processes to explain why they committed plagiarism. See Figure 4 for subjects' most often reported reasons for plagiarism.

Figure 4. Subjects' Reasons for Plagiarism[*]

Reason	Value
Unaware Needed Quotation, Citation, and Reference	51 (37%)
Believed Used Appropriate Citation	44 (32%)
Used Technically Constrained/Common Language	43 (31%)
Copied Only in Background (Lit Review/Intro)	43 (31%)
Believed Did Nothing Wrong	41 (30%)
Blamed Others	41 (30%)
Time Pressure	40 (29%)
Cut/Paste Without Citation then Reused	38 (28%)
Submitted Draft/Intended Rewrite	22 (16%)
Believed Proposals' Standards Differ	17 (12%)
English Language Challenges	14 (10%)
Ideas Were Original	12 (9%)
Computer Problem	11 (8%)
Personal/Medical Problems	10 (7%)
Received Permission/Author Support	10 (7%)
Made a Mistake	10 (7%)

Source: NSF OIG-generated.
[*]Percentages indicate the percentage of the 137 subjects who gave that reason. Because subjects often gave multiple reasons, the sum of the percentages does not equal 100.

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[13] Subjects' degree of intent reported in this observation was determined during OIG's investigation. See Assessing Intent in Research Misconduct Investigations.

The most common reasons subjects provided for their plagiarism suggested that subjects:

- did not know what constitutes appropriate citation;
- thought they used appropriate citation when they did not;
- did not understand what kinds of text require citation;
- considered appropriate citation less important in certain document sections;
- recklessly incorporated sources into drafts; and/or
- rushed through document preparation.

Other subjects believed they did nothing wrong or blamed others.

Outcomes of Research Misconduct Investigations

To protect the government, NSF takes actions against subjects who commit research misconduct. Likewise, institutions take actions against subjects to protect the institution. Institutions may also make institution-wide changes based on our referrals or their own research misconduct findings.

NSF Actions

NSF took action against all of the subjects in our review. All subjects received a letter of reprimand and almost all were required to take RCR training. Additionally, as illustrated in Figure 5, NSF generally required 2 or 3 years of certifications and assurances and prohibited the subjects from serving as reviewers.

Figure 5. Number and Time Period of NSF Actions
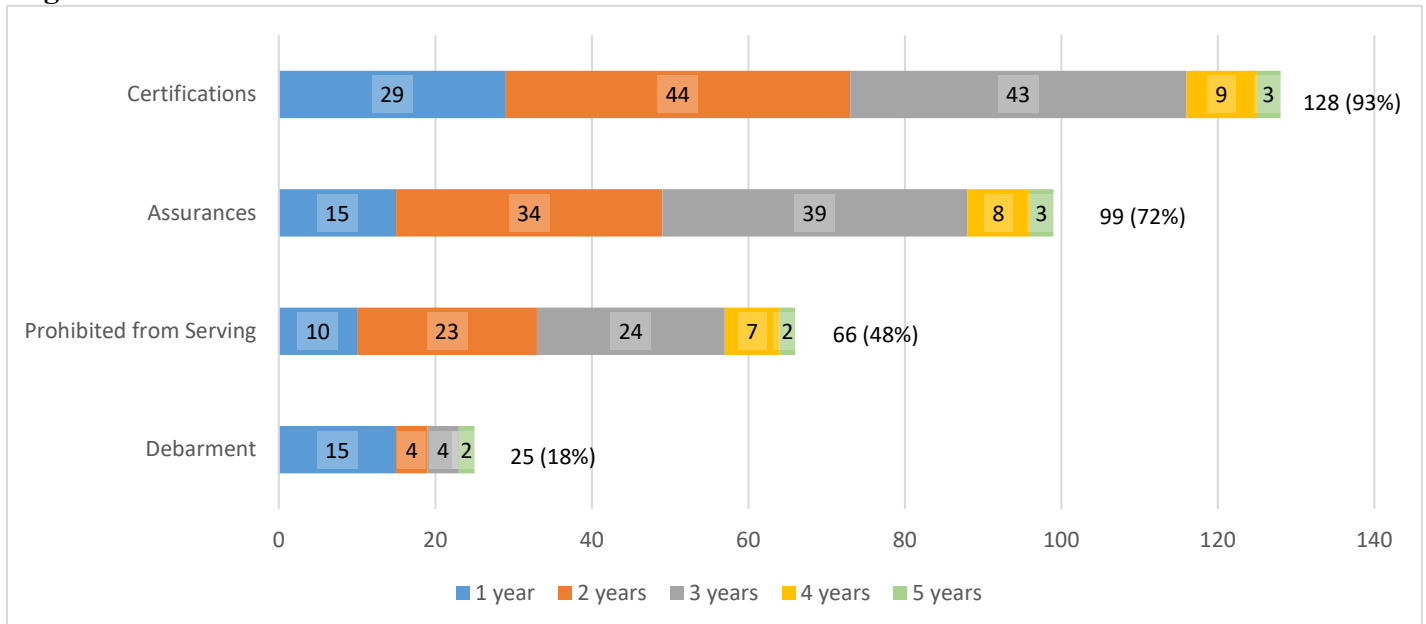
Source: NSF OIG-generated.

Additionally, NSF sometimes suspended awards, terminated awards, or recovered funds due to plagiarism-related research misconduct findings. For the cases discussed in this report, NSF recovered $989,270 from 10 institutions.

Institutional Actions

Institutions accepted referral of research misconduct allegations involving 114 of the 137 subjects in our review.[14] These institutions conducted their investigations according to their institutional policies and made research misconduct findings and took actions against 95 of the 114 subjects. They also took actions against an additional 13 subjects against whom they did not make research misconduct findings.

- Most institutions required subjects to take RCR training due to research misconduct. Of the 114 subjects investigated, 60 were required to take RCR training; 14 were required to teach RCR courses; and 7 were required to conduct RCR training with their students. One subject was required to do all three.
- Other actions taken included requiring certifications; requiring assurances; prohibiting proposal submissions; reducing salary or stipends; termination; removal from or denial of promotions or positions; and requiring mentorship of subjects. Additionally, in 19 cases (14%), subjects left their institutions due to research misconduct investigations or findings.
- Twenty-one institutions made institution-wide changes based on research misconduct allegations or findings related to 22 subjects (16%). Most institution-wide actions were related to creating, reviewing and/or modifying RCR policies or training, or purchasing, reviewing, or requiring use of plagiarism detection software by students and/or faculty. Other actions included developing document review procedures and reviewing RCR training records.

Strategies to Help Prevent Plagiarism

Based on our analysis and investigative experience, we suggest institutions consider implementing the following strategies in their institutional culture, training, support, and document submission.

Institutional Culture

1. Foster a culture of research integrity.

Institutions should strive to create a culture of research integrity, where those who violate its principles, whether students or faculty, are held accountable. Research shows that institutional plagiarism prevention hinges on establishing an ethical institutional culture that is intolerant of plagiarists and holds plagiarists accountable.[15] We suggest institutions:

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[14] The remaining 23 referrals were situations in which we elected to do the investigation ourselves, which can occur, for example, when institutions lack a research misconduct policy.

[15] See Heckler, N. C., & Forde, D. R. (2014). The Role of Cultural Values in Plagiarism in Higher Education. *Journal of Academic Ethics*, *13*(1), 61–75. https://doi.org/10.1007/s10805-014-9221-3; Mccabe, D. L., Butterfield, K. D., & Linda Klebe Treviño. (2017). *Cheating in college: why students do it and what educators can do about it*. The Johns Hopkins University Press.; and Elliott, T. L., Marquis, L. M., & Neal, C. S. (2012). Business Ethics Perspectives: Faculty Plagiarism and Fraud. *Journal of Business Ethics*, *112*(1), 91–99. https://doi.org/10.1007/s10551-012-1234-5.

- Continually educate all faculty and students about RCR and incorporate statements regarding academic integrity into every academic course;
- Hold faculty to the same standards as students;
- Stress to faculty their role in modeling RCR to students, and stress to students the importance of professional integrity;
- Treat plagiarism as seriously as other research misconduct; and
- Ensure faculty and students know where to report research misconduct, can report these allegations safely and confidentially, and are aware of whistleblower protection rights.

2. Publicize an institutional research misconduct policy.

Although most of the institutions in our review (114) had research misconduct or related policies prior to their inquiries or investigations,[16] we do not know how well these institutions disseminated their policies to faculty and students. Research indicates students do not always read their institution's plagiarism policy[17] and, based on the reasons for plagiarism our subjects described, it appears many were unfamiliar with or did not understand their institution's research misconduct polices. To help ensure that these policies are understood, we suggest institutions:

- Require faculty and students to certify they received and read the institution's research misconduct policy;
- Include a point of contact on the certification form to address faculty or student questions;
- Emphasize the consequences of research misconduct findings within the policy; and
- Incorporate their policy into their RCR training and reference it at the beginning of every course.

Training

1. Establish Targeted RCR Training

Subjects within our data set were primarily faculty,[18] often in junior academic positions, recent degree recipients, and/or educated outside of the U.S. Additionally, subjects often said they did not understand the nuances of how and when to appropriately cite materials to avoid plagiarizing.[19] Therefore, we suggest institutions:

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[16] ROIs for 118 of the 137 subjects contained data regarding research misconduct policies. The other four subjects for whom we had data were associated with universities that did not have policies when informed about the plagiarism allegation.

[17] See Gullifer, J. M., & Tyson, G. A. (2013). Who has read the policy on plagiarism? Unpacking students' understanding of plagiarism. *Studies in Higher Education*, *39*(7), 1202–1218. https://doi.org/10.1080/03075079.2013.777412

[18] As noted, only 7 subjects (5%) were students or postdocs. Although RCR training for students and postdocs is essential and, in some cases, required by NSF, faculty training should be equally important. NSF's RCR mandate, however, does not require training for faculty. *OIG Review of Institutions' Implementation of NSF's Responsible Conduct of Research Requirements* found only 15% of university RCR plans reviewed by OIG required faculty to take RCR training despite their critical role in the research enterprise and significant percentage of research misconduct subjects.

[19] Our examination regarding whether subjects received RCR training before committing plagiarism was limited by having self-reported or institution-reported RCR training data for only 52 of the 137 subjects. Of these 52 subjects, only 9 received RCR training. However, as noted, NSF's RCR mandate does not require faculty training.

- Require RCR training as part of orientation for all new faculty and students;
- Identify existing faculty and students who have never taken RCR training and require them to enroll;
- Require refresher RCR training for all faculty and students every 3 years;
- Create ongoing RCR training that targets at-risk individuals identified in our review, e.g., inexperienced grant writers and those educated outside the U.S.; and
- Ensure initial, refresher, and ongoing RCR training:
  - is interactive,
  - is conducted at least partially in person,
  - details the intricacies of what constitutes plagiarism,
  - addresses institution- and U.S.- based norms of appropriate citation,
  - includes definitions, exercises, and case studies,
  - addresses common reasons for plagiarism and provides rebuttals for each, and
  - incorporates and acknowledges cultural differences related to research integrity.

2. Emphasize the Consequences of Plagiarism

Many subjects of this review had substantive, multi-year actions taken against them by both NSF and their institutions. To ensure both faculty and students are aware of the personal and professional harm that may result from plagiarism, we suggest institutions:

- Address the consequences of plagiarism in every RCR training;
- Acknowledge and discuss the risk of institutional and individual reputational harm, including, but not limited to, being named on websites that track research misconduct, having journals retract already published papers, and alienating collaborating researchers and institutions; and
- Use case studies to underscore plagiarism's effect on individuals' academic records and careers.

Support

1. Support Inexperienced and Unsuccessful Grant Writers

Subjects in our review submitted numerous proposals but were infrequent grant recipients, and more than a third never received an NSF award (see Appendix B). Additionally, research suggests that faculty who plagiarize often feel pressure to publish their research in prestigious journals.[20] Therefore, we suggest institutions:

- Design a proposal writing course for inexperienced grant writers that teaches both successful proposal writing skills and research integrity, and require that those new to proposal writing enroll;

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[20] See Elliott, T. L., Marquis, L. M., & Neal, C. S. (2012). Business Ethics Perspectives: Faculty Plagiarism and Fraud. *Journal of Business Ethics*, *112*(1), 91–99. https://doi.org/10.1007/s10551-012-1234-5.; and Honig, B., & Bedi, A. (2012). The Fox in the Hen House: A Critical Examination of Plagiarism Among Members of the Academy of Management. *Academy of Management Learning & Education*, *11*(1), 101–123. https://doi.org/10.5465/amle.2010.0084.

- Establish a mentorship program, in which successful grant recipients serve as mentors to those less experienced;
- Consider the weight placed on successful grant submissions for tenure or promotions; and
- Balance the need to win awards with other required teaching and research obligations.

2. Provide General Support

All faculty, even those with successful research programs and ample funding, could benefit from additional support to prevent plagiarism. Our prior report titled *OIG Review of Institutions' Implementation of NSF's Responsible Conduct of Research Requirements* listed some promising practices that some institutions were using within their RCR programs. For example, one institution added a stress management class to its RCR training, which became the most popular class in that institution's RCR program. We recommend institutions educate students and faculty in time management and stress management to help alleviate academic and professional pressures.

Document Submission

1. Make Plagiarism Detection Software Available

Research shows that although use of the software alone without other efforts is not a panacea,[21] it has been found to reduce plagiarism.[22] We recommend institutions:

- Make plagiarism detection software available and publicize its availability; and
- Require faculty and students use plagiarism detection software before submitting internal or external documents.

2. Consider a Pre-Submission Process:

Many subjects in our review attributed their plagiarism to time pressure, with some reporting they were still writing and editing their plagiarized documents right up to submission deadlines.[23] To prevent subjects from hastily preparing and submitting documents, institutions could:

- Consider a human- or a software-based quality assurance process for important external documents;
- Set a deadline in advance of real submission deadlines to allow time for review and revisions; and
- Ensure faculty and students build in extra time to review plagiarism detection software results before submission.

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[21] See Mccabe, D. L., Butterfield, K. D., & Linda Klebe Treviño. (2017). *Cheating in college: why students do it and what educators can do about it*. The Johns Hopkins University Press.

[22] See National Academies of Sciences, Engineering, and Medicine. (2017). *Fostering Integrity in Research*. National Academies Press. https://doi.org/10.17226/21896.

[23] We note that some of NSF's programs have eliminated submission deadlines to reduce PI and institutional burden. E.g., https://www.nsf.gov/pubs/2020/nsf20130/nsf20130.jsp

Appendix A: Scope and Methodology

We reviewed 134 plagiarism cases involving 137 researchers against whom NSF made findings of research misconduct and whose cases closed during FYs 2007–2017.[24] We obtained the data from 134 ROIs and supplemented the data, when necessary, with data found in NSF or OIG databases and open sources on the Internet. We recorded data related to subjects, the plagiarism, subjects' reasons for plagiarizing, institutions, institutional inquiries/investigations, OIG investigations, and actions NSF and institutions took against subjects. Data for one individual, who was the subject of two separate research misconduct findings involving two different institutions, was recorded separately for both cases to ensure an accurate account of that subject's case-specific characteristics. Similarly, though the data included only 106 unique institutions — 5 institutions were involved in 3 cases and 21 institutions were involved in 2 cases — every finding's data related to subjects' institutions was also recorded separately. At least two OIG staff members reviewed all data and analyses to ensure accuracy.

Limitations of this review are that reported observations relate only to plagiarism allegations resulting in research misconduct findings in FYs 2007–2017. As such, observations are limited by both the ROIs' content and by this specific data set, which itself is limited to only those plagiarism allegations of which OIG is made aware[25] and to only the set of basic science researchers who sought or received NSF funding. The observations are therefore descriptive and retrospective, rather than intended for inferential or predictive use or for extrapolation to other contexts.

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[24] Subjects include 136 plagiarism-only and 1 plagiarism and fabrication/falsification research misconduct outcomes.
[25] Neither NSF nor OIG proactively review for plagiarism all documents submitted to NSF.

# Appendix B: Expanded Results

Plagiarized Documents

Subjects' research misconduct findings were primarily based on plagiarism in NSF proposals (129, 94%).[26] Only eight subjects (6%) plagiarized in non-proposal documents, such as publications, dissertations, presentations, or NSF annual reports.

NSF Proposal History

The first attempt at NSF funding for 39 subjects (28%) involved presenting NSF with plagiarized material.[27] However, most subjects submitted at least one NSF proposal without plagiarized material before submitting a proposal containing plagiarism. In general, subjects were prolific submitters;[28] at the point of data collection, 56 (41%) had submitted 16 or more proposals. They did not, however, often receive grants; 53 subjects (39%) had no awards while 52 (38%) had only one to five awards. Instead, almost every subject had at least one NSF proposal declined, with only eight subjects (6%) having no proposals declined.[29]

Figure 6. Plagiarism in First Proposal
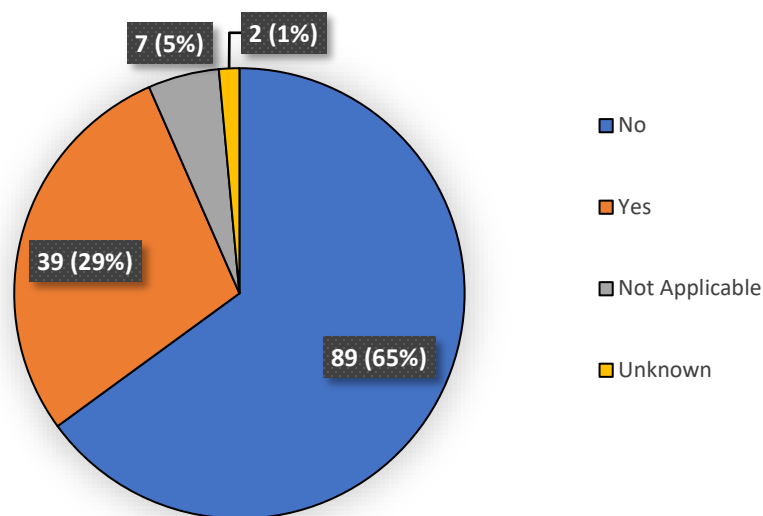
Source: NSF OIG-generated.

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[26] One subject plagiarized proposals and papers and is counted, in this category, as having only plagiarized proposals.

[27] Research misconduct findings for seven subjects, labeled 'Not Applicable,' were not based on plagiarism within NSF proposals, and two subjects, labeled 'Unknown,' had no NSF proposal histories.

[28] Number of proposals submitted was the total number of awarded, declined, and withdrawn proposals and obtained via NSF databases. Span of years for submissions was not considered. The six subjects with no proposal submissions included four students, one academic official, and a co-PI removed from a proposal for whom NSF does not have a proposal history.

[29] The eight subjects with no declined proposals include six subjects with no NSF proposal submissions.

Figure 7. Proposals Submitted Before Plagiarism[*]
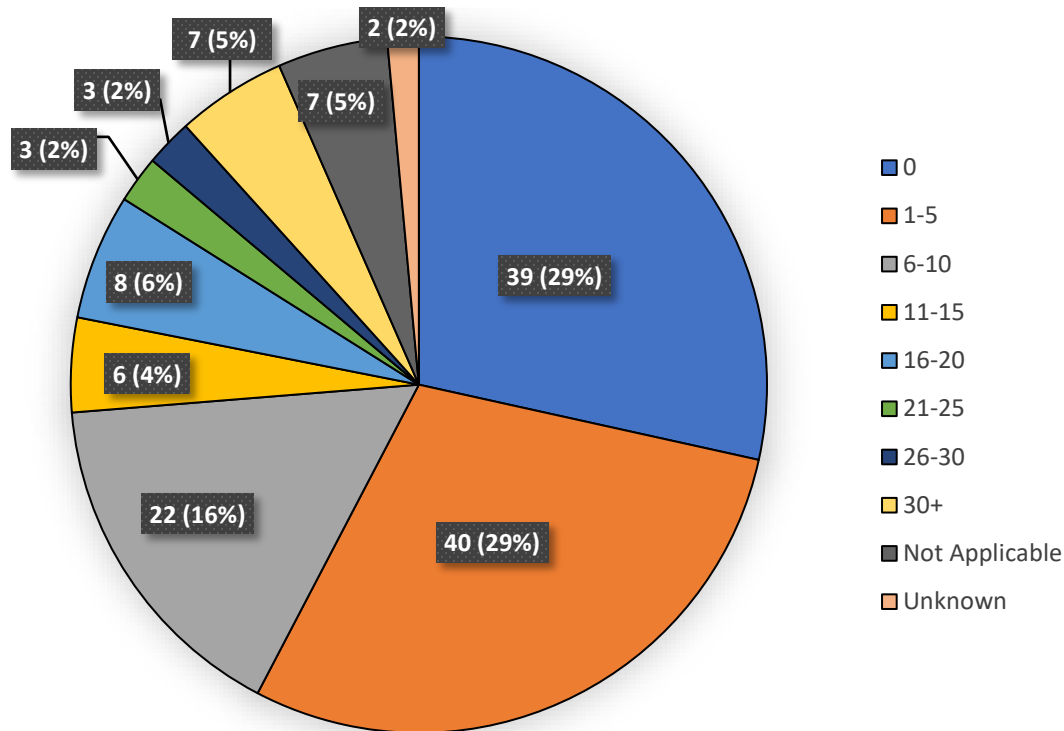
Source: NSF OIG-generated.
*Totals do not equal 100% due to rounding.

Plagiarism from Others' Proposals

Twenty-nine subjects (21%) copied material from others' NSF or non-NSF proposals into their own documents. Of these 29 subjects, 6 plagiarized from declined NSF proposals and 16 plagiarized from funded NSF proposals.[30] Although NSF proposals are not automatically made public, NSF will release awarded proposals when requested under the *Freedom of Information Act* (FOIA) but will not do so for declined proposals. Subjects obtained the NSF proposals from which they plagiarized either from the Internet, while serving as peer reviewers or program officers, directly from proposal authors or peer reviewers, or from NSF via FOIA.

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[30] One additional subject plagiarized text from an NSF proposal; the ROI, however, did not record the proposal number or funding status.