This study examined research misconduct and related university policies including prevalence of misconduct, institutional procedures and responsibility for dealing with misconduct, relationships between misconduct and federal funding, actions taken to educate faculty administrators and students, and whether review of misconduct policies should be part of accreditation. A random sample of North Central Association accredited institutions of higher education were surveyed. Institutions selected offered a full continuum of academic degrees with full-time enrollments of at least 5,000 students. Of these 36 were randomly selected, assured of anonymity and confidentiality and then 31 were interviewed by telephone. Most often the interview was with the graduate dean of the institution. Results of the survey indicated that 62 percent encountered no cases of misconduct though 38 percent were dealing with a wide range of allegations of misconduct. The actual incidence and prevalence of misconduct was unclear. Officials did not appear to have a standard internal reporting system to assess the extent of misconduct. A variety of structures existed on campus to deal with misconduct allegations, and the amount of an institution's external support appeared to be related to the degree of sophistication of its policy and procedures for dealing with misconduct. (Contains 14 references.) (JB)
EVALUATING UNIVERSITY POLICIES ON PLAGIARISM AND OTHER FORMS OF RESEARCH MISCONDUCT

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Teaching, scholarship and service represent the triadic mission of an institution of higher education. Linking this academic trinity is the pursuit, dissemination, and application of truth and knowledge. Critical to each of these undertakings is the need for absolute honesty and integrity in both the processes utilized and the individuals involved in the pursuit. A single incident of misconduct in a scholarly undertaking not only diminishes proportionally the integrity of the institution, but also taints the entire enterprise of scholarship. Insuring the integrity of the academy is therefore a paramount obligation of all its members.

Recent allegations, investigations and charges of scientific misconduct have captured the public's attention and dramatically increased the concern over academic honesty within the academy. An investigation by scholars at Boston University last year found that Martin Luther King had plagiarized "significant portions of his doctoral dissertation" (Coughlin, 1991). Revelations that the Dean of the College of Communication at Boston University used "unattributed... material in his commencement speech" led to his removal (Flint, 1991). A junior faculty member at California State University at Long Beach published an article in a sports journal and was found by various investigatory groups to have plagiarized from an article published five years earlier (Mooney, 1992a, 1992b). In a two year period from 1989 to 1991 the National Science Foundation noted that more than 200 allegations of misconduct in science had occurred (Wheeler, 1991).

The authors gratefully acknowledge the assistance of Mary Beth Karr and Lilian Obi, doctoral students, in the data collection process.
Paralleling these allegations has been the increased involvement of federal agencies. Both the National Science Foundation (NSF) and the Public Health Services (PHS) published regulations for managing scientific misconduct at institutions receiving support by each agency (see the Federal Register, May 14 and June 13, 1991). While these regulations focus on the integrity of federally funded research and their purview of authority, their attention to the issue served to generate increased national scrutiny of academe in general, and its research mission specifically.

As the academy has responded with greater scrutiny regarding scholarly integrity, it has come to realize the full complexity and multifaceted nature of the issues involved. There are concerns in the processes employed in adjudication: roles and jurisdictions of various agencies, definitions of misconduct, prevalence of misconduct, protection of confidentiality, and obligations of the individual scholar, to name a few.

It was in light of these concerns that the following study was undertaken. Seven primary questions were posed for investigation:

1. How prevalent is research misconduct?
2. Is research misconduct increasing, decreasing, or about the same as it has been in the past?
3. Who has the institutional responsibility to deal with cases of alleged misconduct? By what authority has this responsibility been designated?
4. Is there a relationship between institutional research misconduct (and policies to address it) and the extent of federal funding that an institution receives annually?
5. To what extent are institutions reviewing or revising their specific policies regarding research misconduct as a result of recent revisions in rules promulgated by NSF and PHS?
6. What actions are institutions taking to educate faculty, administrators, and students regarding research misconduct? Are these actions sufficient to prevent or curb misconduct?
7. Should the North Central Association in its accrediting process review each institution's guidelines and procedures for adjudicating cases of research misconduct? Why?

**Methodology**

**Sample**

A random sample of North Central Association accredited institutions of higher education were surveyed. Institutions selected for the study offered a full continuum of academic degrees from the bachelors to the doctorate with full-time enrollments of at least 5,000 students.

Of the 940 accredited institutions of higher education in the NCA region (NCA, 1991), 78 met the selection criteria for the study. Half (n=36) were then randomly selected. Representatives of these institutions were notified in late February, 1992 that their institution had been selected for the study. Anonymity and confidentiality of respondents was assured. During the month of March, 1992, university representatives from 31 institutions were interviewed by telephone (Response rate = 86%); most often, these representatives were the graduate deans of the institution. The number of institutional participants in the sample is listed by state in Table 1.

**Results**

**Question One: How prevalent is research misconduct?**

Sixty-two percent of the institutions reported no incidents of research misconduct from faculty or students during the preceding year. Of the dozen institutions reporting incidence of research misconduct in the past year, one to eight faculty-initiated incidents were reported with an average of two per institution during the year and six student-initiated incidents, for an average of .5 per institution. The faculty allegations of misconduct included the mishandling of finances, falsification of data, plagiarism, and at least one charge of professional misconduct regarding work with clients. Each of the allegations against students involved plagiarism.
### TABLE 1

STATE AND INSTITUTIONAL RESPONSE TO NCA SURVEY REGARDING RESEARCH MISCONDUCT

<table>
<thead>
<tr>
<th>State</th>
<th>Survey Population</th>
<th>Number Responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Arkansas</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Colorado</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Illinois</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Indiana</td>
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<td>2</td>
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<tr>
<td>Kansas</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Michigan</td>
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</tr>
<tr>
<td>South Dakota</td>
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<td>1</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>36</strong></td>
<td><strong>31</strong></td>
</tr>
</tbody>
</table>

Note: Two states within the NCA region, West Virginia and Wyoming, had no institutions selected in the random sample.
Question Two: Is research misconduct increasing, decreasing, or about the same as it has been in the past?

When asked whether the incidence of research misconduct was more, less, or the same as in the past, 62% of the respondents said misconduct was about the same as it had been in the past. Our data are in the same direction, but somewhat higher than results reported by the American Association for the Advancement of Science (1992). The AASA reported that 44% of AASA members polled "believed the incidence of fraud had stayed the same over the past decade. Thirty-seven per cent believed it had increased." Asked whether misconduct is indicative of greater immorality today among scientists, Streharsky (1988, p. 35) says: "Those who cry that the reason for recent cases of scientific misconduct and fraud is the decay of present society's moral fiber should look more deeply into history. Similar problems have been encountered in other eras."

Question Three: Who has the institutional responsibility to deal with cases of alleged misconduct? By what authority has this responsibility been designated?

The institutional officer designated to deal with cases of alleged misconduct is likely to be the dean for research. Forty-eight percent of the institutions (15/31) reported that the president or provost designated the dean of research to deal with misconduct cases. Other institutions indicated that no individual was specifically designated to deal with such cases. When they occurred, incidents were usually handled either by the academic departments or some other office, council or unit on campus.

Question Four: Is there a relationship between institutional research misconduct (and policies to address it) and the extent of federal funding that an institution receives annually?

The more external funding that universities receive, the more likely there are allegations of research misconduct, as well as more formal processes and policies regarding ethical practices in research. The dozen institutions which reported research misconduct received about $119
million on average from external sources annually. Those institutions that reported no incidents of research misconduct received an average of about $26 million annually. The more research an institution conducts using external monies, the more likely it will have research misconduct and more formal policies in place to respond to it.

Question Five: To what extent are institutions reviewing or revising their specific policies regarding research misconduct as a result of recent revisions in rules promulgated by the NSF and PHS?

Federal regulations have a direct influence on university policy dealing with research misconduct. When asked about the latest regulations from the federal government, 55% of the respondents (17/31) said they had either reviewed or revised their policies and/or procedures dealing with misconduct in response to the federal rules. Nearly a fourth (23%) of the respondents (primarily from smaller institutions receiving little or no external funding) indicated that they had no reason to review or revise their institutional policies at this time. Others involved in revising their guidelines indicated they were doing it for other reasons, such as changes in reporting structures or personnel, or articulating the concern about protecting the accused. One institution described adding sanctions against accusers who make unsubstantiated and malicious charges. A few respondents seemed confused about the specifics of the federal policy in this area. In any case, institutions are paying more systematic attention to their policies dealing with research misconduct.

Question Six: What actions are institutions taking to educate faculty, administrators, and students regarding research misconduct? Are these actions sufficient to prevent or curb misconduct?

Universities use a variety of informal and formal ways to educate faculty, administrators, and students about research misconduct. Nearly all institutions do something annually to remind the university community about ethical expectations. Many reported the practice of distributing
a university policy on research misconduct. Others employed the use of periodic newsletters, memoranda, guides, or brochures regarding proper research conduct which also included information on the ethical treatment of humans and animals. Two respondents said that they depended upon professional associations and the *Chronicle of Higher Education* to keep their faculty and staff well informed.

There appeared to be a parallel of procedures for informing students. Some institutions covered the ethical aspects of research through the use of student handbooks, others through an ethics component of a general education requirement, or seminars on "plagiarism, data ownership, and credit," as well as on ethics courses in general. One respondent said that students supported by NIH research training grants were required to attend formal training sessions. The federal regulations appear to have influenced some efforts to educate faculty and students. Given the relative informality and lack of clear institutional oversight of these practices, however, they seem unlikely to prevent or curb research misconduct.

**Question Seven:** Should the North Central Association in its accrediting process review each institution's guidelines and procedures for adjudicating cases of research misconduct? Why?

Institutions are divided about the role that regional accrediting associations should play in addressing research misconduct. When asked whether accrediting associations such as the North Central Association should review an institution's guidelines and procedures for adjudicating cases of misconduct, 33% reported yes. One of these respondents urged that a university's misconduct policy should be examined in relation to other university policies.

Twenty-nine percent answered this question with an emphatic no. They provided the following reasons: "It is unnecessary intrusion; there is already enough oversight; it is best left to the institution to deal with; the system must be flexible to deal with individual cases." Officials in other institutions said they either had no opinion or it was best left to the institution.
Discussion

The results of the survey indicated that much still needs to be done to address the concerns related to scientific misconduct. Although 62% of the sample indicated there were no cases of misconduct, there were still 38% of the respondents who were dealing with a wide range of allegations of misconduct.

What is the actual incidence and prevalence of research misconduct? Despite our data, our own experience, and supporting data from the survey of the American Association for the Advancement of Science (1992), the answer is still unclear. There remains the lingering perception that the prevalence of research misconduct both for faculty and students is much greater than the reported cases. This perception is fueled by the number of informal cases that do not reach the formal allegation stage and/or are handled away from the formal structure. Perhaps they are not related to the use of federal funds, we don't know. But, the perception remains that misconduct exists even if not proven. Further, the perception is supported by the knowledge that institutions can't empirically refute the perception.

Officials do not appear to have a standard internal reporting system by which they can assess the extent of research misconduct nor the belief at this time that such might be of value. Some allegations never go beyond whispers. Some allegations are handled strictly at the classroom level, between professor and student, also at the department level between the chair and faculty member, or at the college level. Lastly, some allegations appear to be addressed in a collegial manner rather than the quasi-legal manner dictated by the NSF or PHS regulations. The AASA poll (1992) concluded that "institutions are not conscientious enough about looking into fraud and misconduct cases."

There were a variety of administrative structures on the campuses to deal with misconduct allegations. Although our study was not designed to examine the efficacy of different administrative arrangements, it is recommended that institutions consider naming one specific person to monitor scholastic integrity in its many facets. This individual should have the following attributes: highly cognizant of the federal rules and institutional policies governing
such procedures; have oversight capacity across the university; and committed to fairness and objectivity, especially in the area of the restoration of academic reputations.

The amount of the institution's external support appeared to be related to the degree of sophistication of its policy and procedures in dealing with scientific misconduct. However, scientific misconduct is possible regardless of size, history or reputation of an institution. The pace and scope of the federal response to these concerns (e.g. the NSF and PHS regulations) is a clear indication that the prevention of research misconduct (or stated more positively, the protection of scholarly integrity) should be high on the agenda of the entire academy. It is essential that all institutions review, revise and refine their policies and procedures for adjudicating allegations of misconduct.

Universities need to increase their education efforts to systematically inform their constituents about research misconduct. Programs similar to those dealing with gender or cultural bias should be developed to examine issues of scholarly integrity.

For a more detailed explication of the issue of research misconduct, readers are directed to two recent publications which provide very thorough analyses and discussions of scientific misconduct. The first is a booklet by Teich and Mark (1992) entitled: *Good Science and Responsible Scientists: Meeting the Challenge of Fraud and Misconduct in Science*. The second is a monograph of the Committee on Science, Engineering and Public Policy and published by the National Academy of Sciences entitled: *Responsible Science: Ensuring the Integrity of the Research Process* (1992). In the prologue, Dr. Frank Press aptly summarizes the complexity and critical nature of the problem of scientific misconduct:

"Issues of misconduct and integrity in science present complex questions. These issues require the sustained attention of all members of the research community as well as of leaders in the public and private sector who are concerned with safeguarding the health of science. In this regard, ensuring the integrity of the research process is similar to ensuring safety in the workplace: it is a process that requires continued participation from all levels of the entire research enterprise--the practitioners, the host institutions, the sponsors in government, and the legislators who provide the funds...Ensuring the integrity of the research process is one of the fundamental obligations that accompanies the "right to search for truth."
There is not yet a clear consensus from institutional representatives regarding the appropriateness of a role for accrediting agencies in ensuring scholastic integrity. When or if accrediting agencies choose to extend their sphere of influence to the area of research misconduct, it is critical that higher education institutions remain the primary agent responsible for assuring the academic integrity of work produced within its campus. How the institution manages this important obligation will be reflected in its own internal policies.
REFERENCES


