Ratings of the ten best materials science schools in the nation, as found in two private surveys (left and center columns) and by an academy committee (right column).

Kuhlmann-Wilsdorf	Stein	COSMAT
1. Harvard	M.I.T.	M.I.T.
2. Univ. of Maryland	Univ. of Calif., Berkeley	Pennsylvania State
3. Stanford	Rensselaer	Case Western Reserve
4. Univ. of So. Calif.	Lehigh	Univ. of Illinois
5. M.I.T.	Stanford	Rensselaer
6. Univ. of Virginia	Northwestern	Northwestern
7. Northwestern	Pennsylvania State	Ohio State
8. Univ. of Calif., Berkeley	Ohio State	Univ. of Calif., Berkeley
9. Univ. of Kentucky	Carnegie-Mellon	Lehigh
10. Univ. of Calif., Los Angeles	Univ. of Illinois	Stanford

(ranked 29th but received $690,100); and the University of Connecticut (ranked 37th but received $317,200).

As for Kuhlmann-Wilsdorf, her department of materials at the University of Virginia, although ranked 6th in her study, has received an estimated $40,000 from the DMR since 1971. An application to NSF to establish a block-funded Materials Research Laboratory there is still pending at NSF in Washington. She says that at first the scientific community may have misunderstood her study and what she was trying to say, but that, of late, her contacts with colleagues have been friendly.

But personalities aside, the Kuhlmann-Wilsdorf study has raised the more substantive question of how to determine whether the NSF's materials division—or, indeed, any government research agency—is awarding its grants fairly. Some NSF staffers and a committee made up of the chairmen of materials science departments—known as the DEPTH committee—have been reviewing Kuhlmann-Wilsdorf's study and her finding that top-ranked departments are slighted.

Her study used the citation index—a list showing how many times a scientist's work is cited in the technical literature—as an indicator of scientific merit. In her ranking system, she divided the number of citations of a given department by the number of faculty in the department, thus obtaining an average citation rate for each department. Some 60 materials departments around the country were so ranked.

Both NSF officials and materials scientists who have commented on the study have countered that this is not an appropriate method. Among other things, they say, first-author citations ignore the custom in the field of putting graduate students' names first on papers. First-author citations also list the scientists by last name and first initials only—allowing errors in the case of homographs, because one scientist can appear to be frequently cited when in fact the citations belong to several people with similar names. First-author citations also give preference to old-timers who have authored many papers but who may no longer be productive researchers.

These problems were deemed sufficiently serious for the DEPTH committee, at a November meeting, to pass formal resolutions supporting NSF but urging DMR not to use the citation index "as an indication of the research quality of metallurgy and materials individuals and/or departments." In addition, the NSF has asked a former materials grant administrator, Charles Wert, to make his own study of the citation index problem.

Among the most controversial of Kuhlmann-Wilsdorf's conclusions is her listing of the top ten materials science departments in the country. Many who wrote to *Science* ventured their own, off-hand guesses of which departments were best (and where the University of Virginia should be placed). But Dale Stein, Chairman of the Department of Metallurgical Engineering at Michigan Technological University, drew up his own formal ranking, based on the methods employed in a previous ranking of physics departments (*Science*, 5 November 1971). In addition, a report just released by the National Academy of Sciences' Committee on the Survey of Materials Science and Engineering (COSMAT) contains another ranking of the ten departments judged the most attractive for graduate-level study. (COSMAT tactfully listed them in alphabetical order, but their actual, approximate order has been obtained by *Science*).

Hence, there has been all kinds of activity in the materials community as a result of the issues raised last summer, but it's unclear whether all the sound and fury will lead to anything constructive. Wert, who is now at the University of Illinois carrying out his study for NSF, says his findings will be ready in the next few months. NSF itself has been compiling data on the success of various schools—including those which Kuhlmann-Wilsdorf says are being slighted—in applying for NSF materials research funds. A more general review of NSF's peer review system is also under way—but there are few signs that it will lead to major reforms. The DEPTH committee, meanwhile, has appointed a subcommittee to keep track of these developments and review the Kuhlmann-Wilsdorf study.

In her criticism of NSF's grant awards Kuhlmann-Wilsdorf had raised, by implication, the question of what NSF was getting for its investment in materials research. So far, one answer seems to be that it has at least gotten a great many friends.—DEBORAH SHAPLEY

"Nessie": What's in an Anagram?

The existence of the Loch Ness monster remains conjectural, but speculation about Nessie, as it is familiarly called, has been enlivened lately by the publication of some underwater photographs and sonar traces which are said to have caught the creature's likeness or at least part of it. The evidence was published in the 11 December *Nature* in an article by British naturalist Sir Peter Scott and Robert Rines, a Boston patent lawyer who has been the main organizer of a technologically sophisticated, intermittent effort over the past 6 years to acquire proof of Nessie's existence. In the *Nature* article, which the editors printed without declaring themselves on the pros or cons of the controversy, Scott and Rines proposed a scientific name for the animal on the grounds that if it exists it should be given the protection afforded endangered species under a new British law.

The name put forward is *Nessiteras rhombopteryx*. The rough translation from the Greek would be Ness monster with the diamond-shaped flipper (the most clearly suggested anatomical feature in the photos).

Experts disagree vigorously about the validity of the evidence and, as usual when Nessie surfaces as an issue, the skeptics have been busy. A retired Scottish librarian, himself a loch watcher, suggested that the photographs might show a model monster made for a movie in the late 1960's and which foundered and sank in the loch. And British newspapers and television have noted that an anagram of *Nessiteras rhombopteryx* is "monster hoax by Sir Peter S."—J.W.