nese Science News, a triweekly publication of CAS. Their investigation revealed that two of the 25 papers Li claimed he had published in foreign academic journals when applying for promotion and funding were identical to previously published papers, and the rest were fictitious. Li later confessed to his misconduct and issued a personal apology in the newspaper. The repercussions were severe: The National Natural Science Foundation (NNSF) declared that he was permanently ineligible for funding, and the university stripped him of his title and put him on probation for a year. Li then quit and left academic research.

The second case of alleged plagiarism, also exposed by *Chinese Science News* earlier this year, involved Wang Ruidan, an associate professor of physics in Hunan Normal University, Changsha. According to the investigation by university authorities and *Chinese Science News*, Wang copied six papers already published by Ma Dongping of the physics department of Sichuan Union University and submitted them last fall to the *Journal of Chemistry and Physics*, where Ma saw them while reviewing manuscripts at the request of the Chinese journal's editor.

Ma wrote to both the newspaper and the university. As a result of their investigation, Wang was demoted to lecturer and his false "achievements" were erased from his files. Explaining the punishment, Jiang Fasheng, vice chair of the physics department of Hunan Normal University, says "we all agree that plagiarism is a shameless act. But Wang used to be a hard-working teacher, and demotion is quite a severe punishment for him."

What to do. Although Chinese officials took swift action in these cases, there is no consensus on the best way to reduce or eliminate such unethical behavior. Part of the reason, as is true around the world, is the difficulty of knowing the extent of the problem.

Chen-Lu Tsou, a member of CAS and honorary director of the National Laboratory of Biomacromolecules in Beijing, believes that those involved in plagiarism and other acts of misconduct "are very few in number." But Fan Hongye, a research fellow with the CAS Institute of Science Policy and Managerial Science who has been studying the issue, says that the incidence of misconduct is not clear because "nobody has conducted a survey." As for the likely reasons behind such conduct, a 1992 poll by Fan of 530 scientists, science journal editors, and research program officers offered these familiar explanations: "to seek instant fame, or to maintain or be promoted from their positions in the face of fierce competition."

The government has warned institutions to watch out for plagiarism, fabrication, or falsification of data. In 1991, Song Jian, Minister of the State Science and Technology Commission, told NNSF officials that "whenever such a phenomenon occurs, investigations must be conducted and due punishments imposed." CAS President Zhou Guangzhao earlier this year wrote a number of articles on the topic, encouraging scientists and journalists to expose misconduct through the media. But officials have not drawn up any blueprint for action.

Indeed, conducting those investigations isn't easy, says He, one of the 37 scientists who signed a letter on the topic that appeared earlier this year in the Beijing-based *Guangming Daily*, a national newspaper circulated among intellectuals. Plagiarists often send their copied papers to second-rate journals, he says, making their misdeeds harder to detect. Investigators must be trained in the relevant field, he adds, and they must be willing to spend the time to conduct a thorough inquiry. "Most scientists are reluctant to delve into such time- and energy-consuming investigations," says He, "because they are occupied with their own research."

Although Fan's survey indicates that plagiarism and other misconduct in scientific research arouse general indignation among scientists, most think that the present structure is capable of dealing with the problem. Only 16% of the respondents to Fan's survey felt that "an official monitoring body should be set up," with 61% preferring that "existing organs be enhanced." At the same time, most scientists call for increased training of young researchers. Toward that end, earlier this year CAS received permission to publish a Chinese version of the pamphlet, "On Being a Scientist: Responsible Conduct in Research," first issued in 1989 by the U.S. National Academy of Sciences, National Academy of Engineering, and Institute of Medicine.

In a Chinese newspaper review of the pamphlet, He calls it "a significant inspiration in our effort to discipline scientists at a time when various material temptations tend to lure some of them into irresponsible conduct." And CAS has made sure that material considerations don't interfere with its message: The book sells for about 80 cents.

–Li Xiguang and Xiong Lei

Li Xiguang and Xiong Lei are reporters with China Features.

SCIENTIFIC MISCONDUCT

Swift Justice Salvages Reputations

In a perfect world, scientists who had faced and were cleared of misconduct charges would emerge with their reputations unscathed. But a new survey commissioned by the Department of Health and Human Service's Office of Research Integrity (ORI) suggests that this is not always the case. While 57% of researchers exonerated of misconduct charges said they had not suffered lasting professional damage, 39% said they were still dealing with the consequences.

The survey, based on questionnaires completed by 54 of 108 people with closed cases at ORI, was conducted by the Research Triangle Institute in North Carolina. It found that 60% of those surveyed had experienced at least one negative professional consequence stemming from the fraud charges. Seventeen percent reported a severe impact, such as losing a job, or being passed over for a raise or promotion, while 43% suffered less serious consequences, such as receiving fewer invitations to chair meeting sessions and ostracism by colleagues. Negative personal consequences were even more common: Fully 78% of the respondents said the accusations had taken a toll on their mental well-being.

How institutions handle misconduct cases seems to have direct bearing on the extent of the professional stigma. Cases that attracted publicity and involved many parties, including attorneys, were more likely to do lasting damage. That suggests institutions should conduct speedy investigations and work harder to keep information about charges from leaking out, the report says.

Institutions also could do a better job of restoring exonerated researchers' reputations, the report concludes. Lawrence Rhoades, director of ORI's Division of Policy and Education, says that is usually done by cleaning up the individual's personnel file and notifying those involved of the case's outcome. Still, he says, "there is a real question as to how to restore a reputation."

–Jocelyn Kaiser

EFFECTS ON PROFESSIONAL LIFE	Negative	No Effect/ Uncertain	Positive
Professional Reputation:	46%	52%	2%
Job Mobility:	30	68	2
Presenting Papers:	39	57	4
Publishing Papers:	9	85	6
Income:	18	80	2
Promotions:	15	83	2
EFFECTS ON PERSONAL LIFE			
Physical Health:	48%	50%	2%
Mental Health:	78	18	4
Marriage:	22	69	9

From the Research Triangle Institute's "Survey of Accused but Exonerated Individuals in Research Misconduct Cases," available by calling 301-443-3400.