whether he had "talked to Miller?" he responded with, "Who's Miller?" Then it was explained to him that George Miller (D-Calif.) is chairman of the House Science and Astronautics Committee, of which Roudebush is a minority member; and that is was extremely unlikely that Roudebush could investigate anything without the approval of his chairman. To which the science statesman replied, "I'd better get going on this." Whatever the reason, no investigation took place.

Nevertheless, with Roudebush assailing the Foundation and demanding that something be done about Smale, NSF decided that it had a problem on its hands, and then, in the best of faith, sought to chart an honorable course. In doing so, it was not responding to political pressure, for, despite Roudebush's triumphant misreading of NSF's present stand in the case, Smale has not been turned down; he merely has been told to revise his application. But, if NSF was not responding to political pressure, it was responding to its foggy perceptions of the political atmosphere, and the product of this response was the curiously tortured formula that it came up with for dealing with the provocative and embarrassing young professor from California. With the National Science Board, NSF's highest advisory body, looking on each step of the way, NSF cooked up its decision and dispatched it to the University of California over the signature of William E. Wright, the NSF division director of mathematical and physical sciences.

"We have come to the conclusion," the letter stated, "that, in light of Professor Smale's performance in the administration of the present grant, we cannot tender a new grant to the University based on the proposal in its present form.

"This does not reflect any adverse decision on the part of the Foundation concerning the intrinsic merit of the research proposed. Rather, it reflects a decision by the Foundation that the proposed administrative arrangements are unacceptable."

Then the letter went on to state NSF's formula for navigating between its felt obligation to support someone of Smale's professional ability and its desire to demonstrate that it wasn't letting Smale get away with anything. The present application, it said, should be broken down into two or more proposals. "One of the new proposals should confine itself strictly to the needs of Professor Smale in the pursuit of his own research interests without involving NSF support of other faculty members." (It is interesting to note that 10 days after NSF proposed that Smale be at least financially parted from his research group, Donald F. Hornig, the presidential science advisor—without reference to the Smale case—reiterated his long-standing plea for greater reliance on institutional and block funds in federal support of research. Speaking 9 September at the dedication of the Stanford Linear Accelerator Center, Hornig said that direct dealing with individual investigators "becomes a monstrosity when it involves 30,000 strings to Washington.")

Smale's response remains that he will not cooperate with NSF's scheme, and, while ire and puzzlement spread through the academic community, that is where the matter remains.

Smale, of course, will come out all right, no matter what happens, but the issues involved go far beyond him or his particular situation. For, if the formula that NSF has worked out for Smale is permitted to stand, a potentially troublesome, very troublesome, precedent will have been established, and it is this: a federal agency, without offering any specific information beyond a declaration of dissatisfaction with past administrative performance, has taken it upon itself to dictate who shall not head a research group.

Smale still demands to know specifically what acts or omissions on his part support the charge of maladministration. NSF still won't say anything on this point, beyond a statement by Philip Handler, chairman of the National Science Board, (*Science*, 22 September) that "the Board . . . concurs with the director that management of this grant has been relatively loose and has not conformed to appropriate standards."

Privately, NSF explains that Smale is a fine topologist but a bad housekeeper—which is probably a fairly accurate assessment of the realities of the situation. But NSF, which is one of the best and scientifically most sensitive friends that academic research has ever had, is treading into wicked territory when it tries to dictate who's the boss on a research project, but won't tell why. The letter-writers and statement-signers who are alleging political influence may be off the track; nevertheless, they have ample grounds for concern.—D. S. GREENBERG

Privacy: How Much Need You Tell a Visiting Federal Investigator?

"People today are being forced to surrender what privacy they have left in a technological age, in order to obtain and hold jobs."—Senator Sam J. Ervin, Jr. (D–N.C.)

Individual privacy is a growing public concern. On 13 September, the Senate overwhelmingly passed Senator Ervin's bill "to prevent unwarranted governmental invasions of the privacy of civilian employees of the executive branch." Since the bill sailed through the upper chamber by a 79–4 tally, its supporters think that the chances are good for House passage of a similar bill in the 1968 session.

Among other provisions, the Ervin bill (S. 1035) protects the individual in most cases from having to take polygraph and personality tests asking intimate questions, from having to divulge race, national origin, or assets (except for possible conflict-of-interest situations), and from being forced to divulge outside activities; it also provides the opportunity for legal counsel in an interrogation which may lead to disciplinary action. Although the bill provides added safeguards for the government employee or job applicant who is being interrogated, it does not deal with another common situation—an investigator's interview of a third party about a government employee or applicant. Defining the proper limits of this interview situation has caused concern in the past and, at present, is a subject of a study by Ervin's subcommit-

tee on Constitutional Rights of the Senate Judiciary Committee. This study may result in legislation to protect privacy in this interview process, subcommittee staff members indicated last week.

The number of interrogations being conducted by government investigators is rising rapidly as the size of the federal government and the Vietnam involvement continue to grow. Last year, the Civil Service Commission (CSC), which does most of the employment investigations for the government, processed more than 500,000 applicants and employees, 300,000 more than in an ordinary year. This increase in civilian employment by the government is largely due to Vietnam. But, even apart from the needs imposed by Vietnam, the number of government investigations is mounting. Federal agencies are increasingly using CSC investigations as a means of prior evaluation of candidates for top jobs, as well as for their more traditional uses.

Many Scientists Questioned

Many scientists, whether they work in universities, industry, or government, are called upon to comment to government investigators about former students, co-workers or friends, Information given in these interviews often becomes part of permanent government records—records which seem to be freely transferred from one agency to another. The unverified or no longer valid statement about an acquaintance may live on in his government personnel file for many years. Furthermore, government investigators seem to operate on the principle that they are freer to ask personal questions of third parties than to ask them of the applicant himself.

In most cases, the investigator gives the person interviewed little time to formulate answers about his acquaintance. The investigator often seems reluctant to give prior notice concerning the person about whom he wants information and about the nature of the investigation. The person interviewed answers with little, if any, reflection on what information is relevant to the inquiry at hand. Government investigators usually interview in person, because, as an FBI spokesman pointed out, "People won't talk over the telephone; they are reluctant to give derogatory information over the telephone."

The increasing number of visits by government investigators to university campuses, as well as requests from the House Un-American Activities Committee and other sources, have compelled some educators to define a more formal position concerning their responsibilities to students in such situations. In June, a special committee which included representatives of the American Association of University Professors and the Association of American Colleges prepared a draft of a statement on the rights and freedoms of students. This document contains provisions asserting that information about student views, beliefs, and political associations should be considered confidential, that administrative staff and faculty members should respect confidential information acquired about students, and that student records should generally not be made available to a person off campus without the express consent of the student. In July, the directors of the American Council on Education also issued a statement stressing the need for the confidentiality of student records and stated, "Except in the most extreme instances, a student's college or university should never be a source of information about his beliefs or his associations unless he has given clear consent. . . ."

ACLU Position

A more sweeping statement on the subject was made a few years ago by the Academic Freedom Committee of the American Civil Liberties Union (ACLU). The ACLU argued that the teacher-student relationship is a privileged one and that it presupposes "at least within certain limits, the privacy of the communication involved." The ACLU further stated that "When interrogated by a student's prospective employers of any kind, public or private, a teacher can safely answer only those questions clearly concerned with the student's competence . . . questions relating to the student's loyalty and patriotism, his political, religious, or moral outlook, or his private life, may well jeopardize the teacher-student relationship."

One reason why various private organizations may feel it necessary to formulate ways of responding to investigators is that the investigators themselves seem to operate on ill-defined guidelines. If guidelines exist (and they do not seem to exist in some government agencies), it is difficult to determine what they are, since they are not often made public. In testimony before Senator Ervin's subcommittee last year, Lawrence Speiser, the Washington ACLU director, said that, in all the time he had filed complaints against agencies, "I have never been informed of any disciplinary action taken against any investigator for asking improper questions" or "for engaging in improper investigative techniques."

The Skallerup Memorandum

The most comprehensive general guidelines for government investigators which have been made public were issued in a 1962 memorandum by Walter T. Skallerup, Jr., the Deputy Assistant Secretary of Defense Security Policy. Skallerup said that it was necessary for investigators to "have a keen and well-developed awareness of and respect for the rights of the subjects of inquiries and of other persons from whom information is sought." Skallerup emphasized that it was important not to inject improper matters into inquiries. Such "improper matters" included questions about opinions on racial subjects, religion, "political beliefs and associations of a nonsubversive nature," and affiliation with labor unions. Skallerup said that inquiries which were irrelevant to a security determination should not be made. "Questions regarding personal and domestic affairs, financial matters, and the status of physical health, fall in this category unless evidence clearly indicates a reasonable basis for believing there may be illegal or subversive activity, personal or moral irresponsibility, or mental or emotional instability involved," he stated. Skallerup insisted that Defense Department representatives should always be prepared to explain the relevance of their inquiries when requested to do so and said that adverse inferences should not be drawn from the refusal of people to answer questions which are not established as relevant. Skallerup's memorandum listed 26 "types of questions" which were improper for investigators to address to the subject or to a third party. These questions included: "Do you believe in God? Are you a member of the NAACP or CORE? Do you entertain members of other races in your home? What is your net worth? Do you have any serious marital or domestic problems? Is there anything in your past life that you would not want your wife to know?" In an interview last week, Skallerup, who is now practicing law in Washington, D.C., explained that this "parade of horribles" came from ques-

tions which had actually been asked by military investigators. He said that all the military services had agreed with him that they could comply with his memorandum and still conduct good security programs.

In an interview, Joseph J. Liebling, Skallerup's successor at the Defense Department, said that he had reiterated the Skallerup memorandum on 23 June and that it had been reemphasized by the service agencies on 20 July. The letter issued on that date by the Air Force Office of Special Investigations warned that "the critical interest focused upon these interviews dictates that our agents scrupulously adhere to the highest ethical standards during their questioning."

Other investigative agencies do not seem to have as detailed guidelines for investigators as the Defense Department does, but do agree that questions about a man's religious beliefs or his political associations (except those judged of a subversive character) have no place in an interview. The FBI, a spokesman indicated, relies on "the integrity of the agent" and does not provide written guidelines for him. The investigative agencies say that their investigators rely on open-ended questions (such as "Is he a person of good moral character?") rather than on inquiries about specific personal deviations. "We're not going to pry further if they say the applicant has fine moral behavior," commented Walter I. Waldrop who is now acting as the director of the CSC's Bureau of Personnel Investigations. Waldrop said that CSC investigators try "to avoid accusatory questions, although we don't manage it 100 percent." An FBI spokesman said that FBI agents are trained to avoid leaving "a trail of innuendo."

When a person is interviewed concerning an applicant about whom he has unfavorable information, he is often confronted with an agonizing personal choice. His situation can be especially difficult if the information was received in privileged circumstances, if it has not been completely verified, or if it does not seem relevant to the investigation being conducted. Several people interviewed by *Science* indicated that they met this kind of situation by "shaping" the truth so as not to conflict with what they perceive to be the values of the investigator. "I think that most people will lie to an investigator rather than refuse to cooperate," one lawyer commented.

Those who dislike lying can always refuse to answer either part or all of an investigator's questions. All the investigative agencies acknowledge that the outside source or reference has a right not to answer questions. "We have no power of subpoena," Waldrop noted. All the federal investigative agencies contacted by *Science* said that an individual's refusal to answer questions about an applicant would in no way hurt the applicant's chances for a job or a security clearance, unless the phrasing of the refusal cast doubt on pertinent personal qualities.

There is no penalty for providing false or incomplete information to a visiting federal investigator or for refusing to answer his questions. Officials of investigating divisions of the Defense Department and the Civil Service Commission said that employees of their agencies would suffer no penalty if they refused to answer the questions of an investigator from their own agency. An FBI spokesman enunciated a similar policy for his agency but added "I'm sure that any FBI employee who had derogatory information about a person would furnish it." He explained that such behavior would be expected as part of the FBI's conception of "good citizenship."

All the investigative agencies contacted said that they did not keep separate files on individuals who refused to cooperate with investigators. In many cases, officials indicate, no record is kept on those who refuse to talk to an investigator. The failure to answer specific questions may be included in the file on the applicant who is being investigated.

The agencies are not worried about those who refuse to answer their investigators, since the number of noncooperators is quite small. If the investigator finds one person who does not wish to answer questions, he usually has no trouble in finding full information elsewhere. "People will volunteer an amazing amount, including all the details," one investigative official exclaimed. "They will cooperate much more than you would ever imagine."

Since so many people seem to "tell all" to the government investigator, the noncooperator need have no fear that his reticence about an individual will endanger the government security program or imperil the selection of qualified government employees. The person who receives irrelevant or impertinent questions from a government investigator should remember that the investigator comes not as an inquisitor but rather as a supplicant and should be treated accordingly.—BRYCE NELSON

The "Columbia" Filter: University Takes a Second Look

Slightly more than a month after Columbia University announced that it had acquired the rights to a new cigarette filter (*Science*, 4 August), president Grayson Kirk went before a Senate subcommittee to say that the university is having second thoughts.

Kirk said that negotiations between Columbia and the tobacco industry have been suspended and that an "extensive testing program" would be undertaken before any licensing agreement would be signed.

Kirk left the matter hanging for a very good reason: Columbia has not decided what to do with the filter, invented by Robert C. Strickman. Almost everyone connected with the project likes to assume that licensing talks will be resumed sometime in the future. But when? Who will decide? On what criteria? Firm answers are hard to find.

The catalyst in this confusion was the Consumer Subcommittee of the Senate Commerce Committee. University officials, including Kirk, met with the subcommittee's staff the day before Columbia was scheduled to testify. The staff members demanded, in essence, to know what made the Strickman filter different from other filters that are in use or under study. Most such products, they said, were able to reduce tar and nicotine (which the Strickman filter does), but they also have practical disadvantages. The chief problem is one of "draw"—the ease with which the smoker inhales.

During negotiations, representatives