if attachment to the parent organization is tenuous in terms of mission or readily adaptable to serving multiple agency missions.

In the event such a department came to pass, committee changes likely would be in order.

References and Notes

1. Title 31, *U.S. Code*, sec. 11.
2. Bureau of the Budget press release, 6 Oct. 1967.
3. "Reclama" is a government term which refers to the budgetary appeal procedure.
4. *Congressional Rec.* (7 Dec. 1967), p. H16458.
5. "The Office of Science and Technology," *Science Policy Research Div., Legislative Ref. Serv., Library of Congress Rep.* (Mar. 1967).
6. House Rep. No. 338, 90th Congress, 1st session, 6 June 1967, p. 148.
7. House Rep. No. 535, 90th Congress, 1st session, 3 Aug. 1967, p. 9. Section 303 of the National Aeronautics and Space Act contains a proviso "that nothing in this Act shall authorize withholding of information by the Administrator from the duly authorized committees of the Congress."
8. Hearings before Independent Offices Subcommittee of the House Committee on Appropriations, 89th Congress, 2nd session, 1 Feb. 1966, pt. 2, p. 115; also hearings before Independent Offices Subcommittee of the Senate Committee on Appropriations, 89th Congress, 2nd session, 13 June 1966, p. 1726.
9. L. J. Carter, *Science* **158**, 233 (1967).
10. Jurisdictional changes were recommended by the Joint Committee on the Organization of the Congress, but no legislative action has been taken on these particular recommendations.
11. In this article the author is expressing his personal views and they are not necessarily those of any member of the Congress.

NEWS AND COMMENT

French Student Revolt: An Account of the Origins and Objectives

Paris. The most surprising thing about the massive and violent student demonstrations here is that they surprised everyone, including the students. There had been, indeed, sporadic demonstrations in French universities, but that these protests would explode into a national crisis seemed beyond the realm of possibility.

The UNEF (l'Union Nationale d'Etudiants de France), which has become the chief spokesman for the students, did not organize the early demonstrations. In the first days of street fighting, UNEF did not control the students. Even later, its authority, though strengthened by events, remained far from total.

The party politicians of the French left did not anticipate—and, for the most part, did not encourage—the demonstrations. Most conspicuously out of line were the Communists, who initially condemned everything the students did. This hostility was only natural. The most radical students (labeled *les enragés* by the newspapers) were to the left of the party and openly contemptuous of traditional French Communists. Moreover, the Communist party has formed a formidable electoral alliance with other, more moderate leftist parties and is playing the parliamentary game as seriously as ever. Is this perhaps because the *enragés* seemed too bold and risked upsetting the slow shift of the nation's voters to the left? Whatever the reasons, the party quickly reversed itself once the size of the demonstrations became apparent.

But the lack of foresight cost the Gaullist government more than it cost anyone else. Throughout the early days of the demonstrations, when a serious problem became a major crisis, the government down-played and apparently misinterpreted everything that was happening. In the evening of the day on which some of the most violent street fighting occurred (more than 800 were injured), the Minister of Education appeared on television and warned viewers not to exaggerate the seriousness of the situation. After all, he observed, the demonstrations in Paris were not nearly so grave as those in Berlin or even as those at Columbia in New York. Georges Pompidou, the prime minister, was away on a trip to Iran and Afghanistan. De Gaulle flew off on a ceremonial trip to Rumania. For whatever reason, the government seemed bewildered and acted on an impetuous day-to-day basis.

The first serious mistakes were made on Friday, 3 May. Though dull in comparison with the ensuing days, that day held the key to much that followed.

The crucial point in the chronology was the decision of the rector of the University of Paris, Jean Roche, to ask police to remove student demonstrators from the courtyard of the Sorbonne. This pivotal event occurred in circumstances that are still being disputed. The students, representing a small leftist group, were protesting the suspension of classes at the University's Nanterre campus, just beyond the city limits (*Science*, 17 May). Necessary or not, the call for force was clearly a bad move. The appearance of the police and the dispatch of the demonstrators antagonized other students who had gathered in crowds around the Sorbonne to see what was going on. They began to taunt and, later, to pelt the police with stones.

The reaction was spontaneous. What happened Friday and during the following week was, in one sense, very simple: students fought police. Had they not wanted to fight, rather than just resist or stage large protest marches, the level of violence, and of publicity, would surely have been much lower.

The police, for their part, seemed to operate on the theory that every insult and injury should be repaid three or four times over. It was, thus, a gruesome game that was played in the streets of Paris that Friday afternoon. Helmeted and armed with riot shields and night sticks, the police periodically rushed the students.

The cycle of combat recurred endlessly; the police, for all their ferocity, were too few. The students simply refused to go home and regrouped after every charge. While all this was going on, the rector, after consulting with the Minister of Education, made what many consider his second important mistake. He closed the Sorbonne, for the second time in its history. That decision probably exaggerated the importance of the afternoon's fighting and, coupled with the appeal for police assistance, made a real and symbolic break with large numbers of students.

The writer, a contributing correspondent for *Science*, now staying in Paris, was forced by the disruption of French services to travel to Belgium to send this story to the United States.—Ed.

NEWS IN BRIEF

• **NIH FOREIGN TRAVEL:** In an effort to allay fears that it has canceled all foreign travel as a result of Administration efforts to curb overseas expenditures, the National Institutes of Health (NIH) has issued a statement clarifying its travel support policy for the remainder of fiscal year 1968 and for fiscal year 1969. NIH and other agencies that make up the Department of Health, Education, and Welfare will reduce projected expenditures for foreign travel during these periods "somewhat in excess of 25 percent." The reduction applies both to NIH's own personnel and to outside scientists. On 11 March NIH rescinded all authorizations previously granted for use of grant or award funds for foreign travel, but grantees may request reconsideration by letter to the appropriate awarding institute or by a special attachment to any new, renewal, or supplemental grant application. NIH will give preference to travel requests "essential for the performance of research covered by the grant or award." Individual requests for travel funds to international meetings "will, in most instances, be approved only when such travel is incidental to foreign travel essential for the purposes of the grant or award." Grants will be renegotiated with responsible scientific societies to assure adequate U.S. representation at important international meetings.

• **LUNAR SCIENCE INSTITUTE:** In a departure from normal practice, the National Academy of Sciences has agreed to establish and initially operate a Lunar Science Institute in Houston to serve as a base for scientists interested in studying materials brought back from the moon by astronauts. The Academy has received a $580,000 grant from NASA, most of which is expected to be used to renovate a building on Rice University property adjacent to NASA's Manned Spacecraft Center. Rice will assist in the project as a subcontractor. The institute's facilities are intended for study and conference purposes and will require little or no scientific equipment. Scientists requiring experimental facilities will use NASA's Lunar Receiving Laboratory, now being completed at the Space Center. Frederick Seitz, Academy president, said the Academy will operate the institute on an "interim" basis until a consortium of universities can be organized to take over. Seitz has already approached Universities Research Associates Inc. (URA), a 49-member consortium formed to operate the new 200-Bev accelerator at Weston, Ill., but that group has not yet decided whether to take over the lunar institute as well. Although the Academy traditionally shuns an operational role in scientific projects lest such direct involvement impair its objectivity as a scientific adviser to the government, Seitz said the Academy decided to operate the lunar institute on an interim basis because "someone had to pick up the ball and URA was not ready at the critical time."

• **NSF REORGANIZATION:** The Senate on 24 May passed a bill amending the National Science Foundation Act so as to broaden the Foundation's mission; strengthen the policy-making role of the National Science Board; and increase the administrative authority of the NSF director. The bill would authorize NSF to support applied research, would direct it to support the social sciences, and would make the National Science Board responsible for rendering an annual report on science. The Senate bill differs in several respects from an NSF reorganization bill passed by the House last year, but the only substantial difference appears to be a requirement in the Senate bill that NSF receive annual authorization for its appropriations instead of its current permanent authorization. The differences are expected to be resolved without difficulty. The Senate bill was sponsored by Sen. Edward M. Kennedy (D–Mass.) and the House bill by Rep. Emilio Q. Daddario (D–Conn.).

• **OLIVER LEE DENIED TENURE:** After hundreds of University of Hawaii students demonstrated to force the Regents to grant tenure to the controversial political scientist Oliver M. Lee (*Science,* 1 Mar.), the Regents announced that Lee had been refused tenure, that his connection with the university would be ended by June, and that President Thomas H. Hamilton's resignation was effective immediately. Tenure cases like that of Oliver Lee have often resulted in an AAUP investigation to determine whether grounds exist for censure of the university.

The rector had violated the sanctity of the university by inviting the police inside, and had, in effect, admitted that his political problems with students could no longer be solved without outside help. That the police were despised and also regarded as the arm of authoritarian Gaullist government only widened the breach.

(In the wage of the continuing disturbances, the Minister of Education, Alain Peyrefitte, was forced to resign on 28 May. Premier Pompidou said he would add the position to his own duties.)

Closing the Sorbonne meant more than locking the doors. Having been caught short-handed Friday, the police resolved not to make the same mistake twice. By the busload, they arrived early Monday morning and cordoned off the university against a planned student demonstration. This show of force succeeded only temporarily, and by early afternoon the police were fighting students all over the Latin Quarter (the area surrounding the Sorbonne).

The presence of the police served as the main catalyst in enlarging the protest. The issue now became a question of "student repression"; thousands of students and hundreds of professors (including five Nobel prize winners) became involved, and competing student political groups were united. The police were their own worst enemies; countless incidents of indiscriminate violence (such as the shooting of tear gas bombs into crowds of passive spectators) put Parisian public opinion on the side of the students.

After Monday's combats, the police got hold of themselves and UNEF got hold of the students. A student strike, called by UNEF, began to paralyze universities all over France. Violence was sporadic; mass marches of 10,000 to 30,000 crisscrossed Paris. By this time the movement had sensed its own strength and wanted concrete concessions from the government: the reopening of the Sorbonne, the removal of police from the Latin Quarter, and amnesty for all people arrested and held during the street fighting.

The government was willing to budge on only the first two demands. The students remained adamant and on Friday paraded again, 10,000 strong. The police, in solid lines, prevented the march from leaving the Latin Quarter and, in effect, attempted to turn the demonstration back to its starting point. The students refused to turn back, decided to encamp on the streets sur-

rounding the Sorbonne, and began building 50 sturdy barricades.

Last-minute negotiations failed, and at 2:15 a.m. on Saturday morning, the police were ordered to clear the streets. It took them more than 4 hours. In the short space of a week, France had watched isolated incidents of student protest grow to *la nuit des barricades,* the most vicious street fighting in Paris since the days of the liberation. Why? The place people looked first for an answer was at the universities.

In the past 10 years, higher education in France has undergone a massive expansion. Responding to the postwar "baby boom" and the social and economic demands of a growing economy, the government has increased the number of students from 170,000 in 1958 to more than 600,000 this year. New campuses have been constructed all over the country, but hurriedly, and many of the new universities have prominent inadequacies.

At the University of Paris, overcrowding had reached disastrous proportions. At the Faculty of Sciences, the dean estimated, 31,000 students were using facilities meant for, at most, 24,000. Not only has the flood of students strained the existing laboratory and classroom space, it has challenged the usefulness of the very center of the French educational system, the baccalaureate examination.

At the end of secondary school, all students take the baccalaureate, and anyone who passes is entitled to entrance into a university. Not only were the universities being overcrowded but many students were apparently being pushed into work they could not handle. As a result, many students flunked the difficult university examinations at the end of the first and second years. They could stay on and repeat (and the repeaters are responsible for a large part of the strain), but, under new rules, if they failed a second time they were finished.

Many faculties were taking in more students at the beginning than they had done in the past but not producing many more degree candidates at the end. For the students, this is depressing. Almost everything depends on the year-end exams; their finality breeds fright and makes the university seem a hostile and uncompromising place.

The pressures of increasing numbers have also posed serious psychological problems. The universities are in the process of changing from schools for the social and intellectual elite to places of mass education. In times past, graduation from a university gave assurance of social and economic success; today, the graduate's future is neither so safe nor so simple. There is, in fact, considerable unemployment (and *under*employment) among graduates. In part, this difficulty reflects the students' own preferences regarding studies (the National Plan had anticipated an influx into the sciences, but instead the liberal arts have grown most quickly); mainly, it results from general unemployment among the young. These facts help explain the current troubles but do not diminish the students' disillusionment.

Robert J. Samuelson

These problems are all the consequences of rapid change and defy simple solution. But a large part of the French educational establishment has long claimed that even efforts to mitigate their impact have been frustrated by the rigid structure of the nation's university system. The universities are state-controlled and state-financed; all important decisions are made by the Ministry of Education in Paris.

One of the certain consequences of the students' demonstrations is that there will be some sort of fundamental reform of France's universities. When Prime Minister Pompidou returned from the Middle East, he not only made concessions to the students (including general amnesty) but also pledged the government to overhauling the system of higher education. The core of the reform movement is the belief that, if universities are given more power, they can be more responsive to the views of both students and scholarship.

Unfortunately for Pompidou, when the government says "reform" and the radical students say "reform," they are not speaking entirely the same language. Gauging student opinion is as difficult in France as anywhere else, and today's speeches may not represent the views of the mass of students. Whatever the opinions of France's silent youth, the talkers who have occupied the Sorbonne and other universities are demanding far more than decentralization. Out of the chaotic and endless debates, a few common themes have emerged.

► Many students think the government has perverted higher education by turning the universities into factories which produce parts for the nation's economy; the students resent being regarded as so many cogs in a machine.

► Many students detest not only the apparent arbitrariness of the present exams but also the very idea behind them—that some students should be selected to continue their studies and others should be dropped by the wayside.

► Students have no influence at all in the running of the university; there should be joint student-faculty committees, with students comprising half the membership, to run everything in the university.

Student participation has been advocated so many times, and its value recognized by so many professors, that it will almost certainly be included in any reform. But it is doubtful that the government will implement the most radical of the student ideas (such as doing away with examinations or giving students a veto power over all decisions in

the university), or that most members of the teaching profession would favor its doing so. As for the students, there are many who will not be satisfied by even very drastic changes in the university. The occupation of the Sorbonne made it clear that the major complaints lay elsewhere: with the Gaullist government, with the "bourgeois," and with capitalism.

One major difference between American and French student radicalism is that the French inherit a legacy that is both more Marxist and more romantic. Since 1789, revolution has been a part of French politics, and many students see themselves as descendants of a movement that includes the revolution of 1848, the Commune of 1871, and the Popular Front government of 1936. The barricades symbolized the link.

From Marxism, the student received an acute class consciousness and a reverence for the modern-day representatives of the urban proletariat. In the occupied universities, everyone addresses everyone else as "comrade." As the general protests gathered momentum, the obsession to spread discontent to the working class also grew.

The government's decision to attack the barricades early on 11 May helped the students widen their appeal by convincing the Communist party, and the Communist-dominated unions, that it was time to call a general strike and a mass march through Paris. Two days later, Parisians watched the largest political parades that have been held since the end of the war. The general strike and march, instead of being a grand climax for the student movement, simply gave it a second breath.

Probably only in a country like France, where one city so dominates the political, economic, and cultural life of a nation, could student demonstrations have such a startling effect. Yet, this crisis and its evolution, show how potent "student power" can be.

France has now slid into a major social and political crisis. No one expected it, no one masterminded it. Though its deeper repercussions will not be clear for months—or perhaps years—one of the immediate lessons is simple. Mass, spontaneous uprisings, unlikely as they are to start, are not easily stopped.—ROBERT J. SAMUELSON

Financial Plight at McGill: Quebec Favors Its French Universities

Montreal, Quebec. McGill University, once preeminent among Canadian institutions, is now finding its peculiar situation as an English-speaking institution in a predominantly French province an uneasy one. The uneasiness arises primarily from the circumstance that, while McGill grows increasingly dependent on the Province of Quebec for financial support, the province is caught up in nationalist ferment and is pressing the development of its French-language institutions.

Following its emergence as a major university at the turn of the century, McGill acquired two identities. One was its international identity as an institution emphasizing scientific studies and research, where such luminaries as Ernest Rutherford, in physics, and Sir William Osler, in medicine, did their early work. The other was its local identity as the cultural symbol and financial beneficiary of Montreal's economically dominant English-Canadian community. This dual identity has persisted. Moreover, McGill still enjoys a good reputation, even though its relative importance in Canada has declined as the University of Toronto, the University of British Columbia, and other Canadian universities have come into their own.

Now, however, McGill suffers because many French Canadians seem not to regard it as a *Quebec* institution. Indeed, McGill's most urgent task is somehow to convince French Quebecers that the province should, in its own interests, generously support and maintain a strong, internationally respected English-language university.

When the provincial government recently further increased the French universities' share of operating grants at McGill's expense, Quebec's Premier Daniel Johnson and his minister of education quite possibly believed they were doing the right thing. Certainly they knew they were doing the politically popular thing. Four-fifths of Quebec's 5.2 million inhabitants are French-speaking. Moreover, a major objective of French Quebec's "Quiet Revolution," under way since the late 1950's, has been to strengthen the system of French-language higher education.

The University of Montreal and Laval University in Quebec City are the province's principal French-language universities. Neither has had facilities and intellectual resources equal to McGill's. The Quebec government therefore has been following a policy of *rattrapage* (catching up) for the benefit of these universities and of the province's smaller French-language institutions.

Officials of McGill and two smaller English-speaking universities in Quebec now insist that the *rattrapage* policy is being abused, and that, so far as per student expenditures are concerned, it is their own institutions which need to catch up. The provincial government has given the French institutions nearly $55 million more in operating grants over the past 5 years than these institutions would have received had their grants amounted to no more per student than those received by the English-speaking institutions. While the officials of the latter institutions agree that the French universities have needed special development grants, they protest the way in which operating funds are being allocated.

For the academic year 1968-69 alone, they say, the French institutions will get another $18 million in *rattrapage* funds. The government even reduced the grants to the English universities from the amounts proposed by a government-university committee: McGill's was cut by $2.1 million from the $21.1 recommended. While two of the eight French institutions also got less money, the others got more. These adjustments reflected enrollment projections, but special research funds also were given to the French institutions.

In the still recent past, the support given Quebec's French-language universities was a measure of French Canada's backwardness. Until its Quiet Revolution, Quebec was dominated by an ultraconservative political regime which did little to support university