Academy Membership Fight Goes Public

A Yale mathematician, saying he wants to make an issue of alleged abuse of math in social science, is campaigning to keep a Harvard political scientist out of the Academy

In a rare public dispute over membership in the National Academy of Sciences, Serge Lang, a mathematician at Yale, is trying to block the election of Samuel Huntington, a Harvard political scientist.

Lang has been in the Academy just over a year. Huntington was nominated, but not elected, in April. He may be nominated again in the spring.

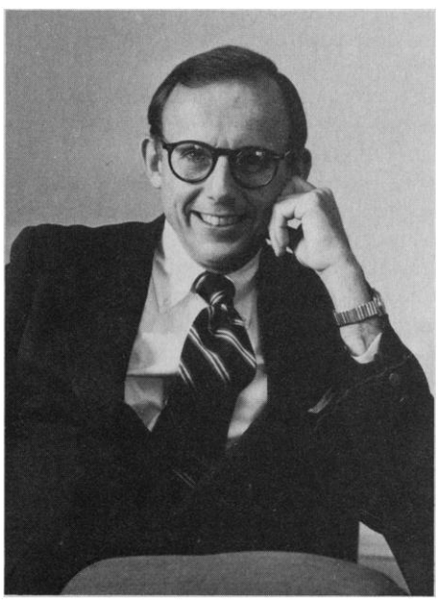
What began 8 months ago as a private challenge has blossomed into a public attack on Huntington as a scientist, based on his use of "pseudomathematics."

Some of Huntington's peers are baffled by the campaign, muttering that it looks like a "vendetta" inspired by a hidden political agenda. It is true that Lang disagrees with Huntington's politics, particularly with his early support for the Vietnam War. But, when questioned about this, Lang vehemently denied that politics motivates him. He regards any reference to motives as an attempt to obscure the main subject: the use of mathematics to create the illusion of objectivity in political writing. He wants a debate, with Huntington's work serving as an exemplary case.

Lang says he has stated his views in public. Now he wants a response. This is not the first time he has played the role of a sheriff of scholarship, leading a posse of academics on a hunt for error. As in earlier cases, Lang is collecting letters from all sides, xeroxing, and redistributing them in a process he calls "filemaking."

The present file began in March when Huntington was nominated to the Academy by leaders of the social science community. At that time, Lang privately told Academy officials that he might raise a challenge, as members are entitled to do. To win acceptance, a challenged candidate must be supported by a two-thirds vote at the annual meeting. Lang went public in April, he says, only after Huntington's chief backer, Princeton political scientist Julian Wolpert, spilled the news of the impending challenge to a nonmember. The nonmember happened to be a friend of Lang's.

After reading one of Huntington's most highly recommended books—*Political Order in Changing Societies* (1968)—Lang protested that it contained pseudoequations and "nonsense statements." He quoted its summary of the social order in several dozen countries, as follows: "The overall correlation between frustration and instability was .50." Lang claims that in other places Huntington draws his personal observations out to three full decimal places of significance. "I object to the Academy certifying as 'science' what are merely political opinions and their implementations," Lang wrote.



Samuel Huntington: *Harvard political scientist under attack for using "pseudomath."*

On the use of mathematic symbols, Huntington said in a telephone interview that Lang is "perfectly accurate" to point out that he did not write valid equations in *Political Order in Changing Societies*. "They were not designed to be. I don't think anybody except him has taken them to be mathematical equations. They were simply a shorthand way of summing up a complicated argument in the text."

Huntington, a major figure in U.S. political science, is the former chairman of Harvard's government department, present director of the Center for International Affairs at Harvard, and sometime adviser to the State Department and the White House. He helped found and edit the quarterly *Foreign Policy* and has published a dozen books and 70 scholarly articles. In August, he was elected president of the American Political Science Association, being one of its best known and most frequently cited authors.

Asked for his reaction to Lang's criticism, Huntington said: "I think it is quite clear that my colleagues in the profession have opinions which differ greatly from [Lang's]." He was "not terribly interested" in Lang's opinion. However, he strongly objected to Lang's circulating a letter that purports to describe Huntington's research in Vietnam, a letter which Huntington calls "simply untrue."

Interviewed in his office in the Yale mathematics building, Lang said he has gone public with this fight—as with many before—because the other side won't respond to quiet prodding. "Never mind the decibel count; just take the words," he said, his voice booming against the leaded panes of 12 Hillhouse Avenue, where he works 10 hours a day, 7 days a week. Passionate in his causes, Lang lives and breathes mathematics and "filemaking," with no family distractions.

Lang speaks with a crisp accent acquired in Paris, where he was born in 1927. He attended high school in California and graduated from the California Institute of Technology at the age of 18. He did not become a mathematician until later, after serving in the U.S. Army and studying philosophy for a year as a graduate student at Princeton. Lang quit philosophy and began taking undergraduate math courses. A few years later, in 1951, he got his Ph.D. in math from Princeton. Since then he has taught mainly at Columbia and Yale. He has received the American Mathematical Society's Cole Prize and the French Academy's Prix Carriere for his research.

Lang is regarded as a "very good mathematician," according to colleague Barry Mazur at Harvard. Lang has published about 60 research monographs and, most recently, two educational dramas—transcripts of unrehearsed math classes with an auditorium full of French high school students. "He has an amazing breadth and startling rapidity as a writer," said one nonacademic observer, adding that Lang is so able that some wish he had explored subjects less rapidly and more deeply.

Sitting in his office and waving at page proofs, reprints, exam papers, desk, tele-

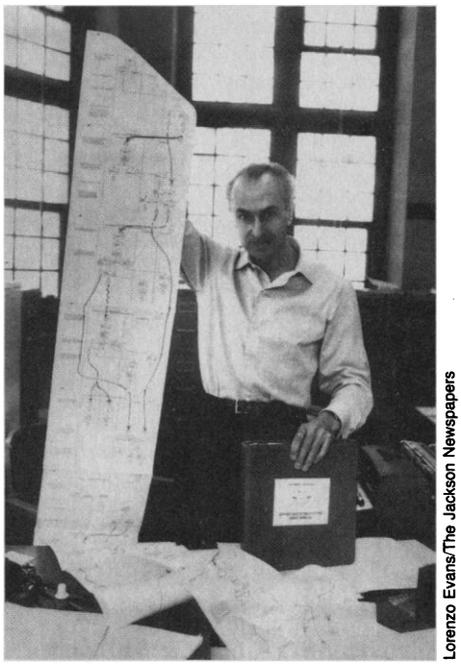
phone, typewriter, files, and math books (30 written by him), Lang said, "This is my life."

The files are important. In 1981 Lang published a book called *The File* (Springer-Verlag, New York), a mass of photocopied letters and newsclips generated by an earlier fight with a political scientist. In this case, Lang's quarry was Seymour Martin Lipset, coauthor of a questionnaire that came to Lang in the mail. It elicited views on grading, peer review, drugs, sex, military policy, and other controversies. Rather than answer the questionnaire, Lang savaged it in a series of letters to its sponsors, criticizing the alleged bias and ambiguity of its questions. It withered, and the contract for publishing survey results in the *Chronicle of Higher Education* was not renewed. Lipset saw this as a McCarthyesque crusade to silence him. The correspondence on it makes up the fattest of many files in Lang's cabinet. The Huntington file is one of the thinnest.

Controversy is not new to Huntington. In the 1960's, he attracted criticism as a supporter of U.S. policy in Vietnam. More recently, in February 1986, he was in the news for publishing an article with Brookings Institution scholar Richard Betts on Third World dictators. (Among other things, they predicted that Filipino President Ferdinand Marcos would die in office.) Their research was funded by the Central Intelligence Agency, which originally had asked that its role be kept secret. Harvard forbids its faculty to engage in classified government research on campus. For this reason, Huntington's disclosure that he had received CIA support became part of an ongoing controversy over secret research at Harvard. The university took no action against Huntington. When the CIA waived its secrecy requirement last spring, the flap ended.

Since March, Lang has been busy at the typewriter and xerox machine, getting out letters on Huntington and mailing them to the *Chronicle of Higher Education*, the *New York Review of Books*, the *New York Times*, the *Los Angeles Times*, the *Wall Street Journal*, and *Science*. They deal with the Academy's arcane election procedures and the charge that Huntington uses math to "intimidate" readers. Lang wants a full discussion of Huntington's work if he is to be renominated.

Lang got no rise from the Academy for months, despite his most provocative efforts. This summer he sent several anti-Huntington letters to the Academy's home secretary, Bryce Crawford, for circulation to the governing council and the full membership. When the council refused, Lang circulated them himself, at a cost of $700. According to Lang, the mailing was funded by himself, the Yale mathematics department, and various donors. "It is my duty as a teacher," Lang says, to correct bad scholarship, and this justifies the institutional support for his correspondence.



Lorenzo Evans/The Jackson Newspapers

Serge Lang: *Huntington's challenger, in a separate campaign, holds federal grant reporting system up to ridicule.*

Academy officials decline to talk about the Lang-Huntington case and say that members should do the same. Yet Lang will not be silent. Crawford wrote to Lang in September stating the council's position that last spring's election is closed and that the Academy will not circulate material about nominees except "during the formal nomination procedures." Crawford added a reprimand: "Since you accepted election to the Academy, it would seem appropriate that you conform to the bylaws of that body." The bylaws instruct members not to repeat to outsiders the "remarks and criticism" of nominees made during the election process, adding that no "instruments of election" may be released to a nonmember.

Several academicians told *Science* that they take the bylaw to mean that all discussion of nominees is privileged. Some would be glad to see Lang censured or dismissed for his breach of tradition. On the other hand, Lang has collected endorsements from some members who support him. Mathematician Hyman Bass of Columbia wrote that "a serious question has been raised about . . . Huntington's work," urging Academy officials to allow time for a "responsible inquiry." The Academy is taking no action and riding out the storm in silence.

In a phone conversation, Crawford said, "Most members of the Academy, including me, try to observe the spirit of the bylaw, and we don't discuss these questions with anybody who is not a member of the Academy." Furthermore, the council considers the election of 1986 closed, "and that's that."

Lang is not interested in the spirit of the bylaw. In any case, he says, the bylaw is widely ignored, naming three documented cases of extramural gossip. He points out that in the present case, confidentiality was breached in March by Julian Wolpert, who informed a nonmember (Princeton sociologist Marion Levy) that Lang would mount a challenge, calling Lang a "madman" for doing so. This triggered Lang's first public letter and a steady output ever since.

However, Lang appears to have suffered a setback. One of the letters he sent to all members of the Academy may be in error, for it has been challenged directly by Huntington. The letter, written to Lang by Marion Levy, describes Levy's shaky recollection of a 1966 survey of political opinion in Vietnam, proposed to the State Department, as Levy recalled, by Huntington. Levy cited many methodological weaknesses in the proposal.

Huntington was sent a copy of the letter on 30 July but ignored it for several months. After being called by a reporter, Huntington wrote to Lang on 31 October: "I have never been involved in the design, organization, direction, or conduct of any public opinion questionnaire or survey in Vietnam." Furthermore, he said, he has not run such surveys, "*anywhere*."

Betts, coauthor of the study on dictators, sees the Lang campaign as a "bizarre vendetta" and asks: "What does it say about Lang's scientific standards that he would base his case on 20-year-old gossip" before determining its accuracy? He also says that among political scientists, Huntington is not seen as a heavy user of numerical data.

Lang, in keeping with his own rules, has sent Huntington's letter to Academy members so that they may keep abreast of the debate by samizdat. Levy admits that he is confused by Huntington's denial, and has written to Huntington that, "in all the years I have lived, my memory has never played such tricks on me before." Levy has asked Huntington for more information and says he is prepared to apologize if he is wrong.

Lang, however, insists that "I did my homework," by writing to the State Department and Huntington to confirm Levy's letter. Lang wants to know why he heard nothing from Huntington until 31 October and still has received no substantive reply from the government. He claims that "the only way I can know if something is correct or not is by circulating it."

Lang claims that his broader purpose is to spark a debate on the conduct of political and social science. Many practitioners, he says, are in the habit of making broad and sloppy generalizations, encouraged in this kind of thinking by the schools and the news media. In addition, Lang says that writers who rely on the trappings of science (equations and statistics) may be seen as more "objective" than those who do not, and this troubles him.

The Lipset and Huntington files are case studies in Lang's ongoing campaign to "clean up the area where the academic world meets the political world and the world of journalism." The reason for the emphasis on personalities, according to Lang, is that his method requires him to build from a concrete case, meaning an individual.

For the record, Lang advertises that he has tackled scholars on the political left as well as the right, although there are fewer examples of this. For example, a recent file in Lang's cabinet deals with an article in the *Nation* by Jon Wiener. Wiener attacked a historian at Yale, Henry Turner, Jr., as being one of a group of anti-Marxists who were trying to ruin the career of another historian, David Abraham. Abraham, a Marxist, had published a book that claimed to give documentary evidence that German businessmen encouraged and backed Hitler. Since then, Abraham has confessed that the book contains serious errors, some of which were brought to the attention of the academic community by Turner. Lang came to Turner's defense and organized a letter of protest to the *Nation*. The magazine's handling of the letter generated yet more protests, and the file thickened. Lang then got into a debate with Yale officials over their decision to let Wiener speak while refusing Lang equal time.

In an earlier campaign, Lang sought to defeat the government's requirement that academic grant recipients fill out "effort reports," segregating time spent on research from time spent on teaching. The two are inseparable, Lang maintains. The 20-year battle over "A-21," so called after the federal regulation at issue, ended in a stalemate in the early 1980's. Lang is proudest of this struggle, in which he won the endorsement of 27 academic senates.

The Lipset and Huntington files are different, however, and not so warmly received. It is unlikely that the Academy will set up a platform, as Lang would like, for a sparring match between the disciplines under its roof. But the file on Huntington remains open, and Lang, being Lang, is not about to close it. ■ **ELIOT MARSHALL**

Chemical Weapons: A Plan for Europe

NATO painted itself into a corner on chemical weapons policy this year, according to a report released by the Aspen Study Group, a private think tank, on 21 November.

The Alliance made two mistakes, according to the arms controllers and strategic thinkers from the United States, Britain, and West Germany who wrote the report. NATO's first mistake was to agree to remove all chemical munitions from West Germany by 1992. This was done in order to win political approval for plans to "modernize" NATO's stockpile, as promoted for many years by the United States. Doing away with forward-based munitions in Europe worsens the dependence on the United States as a "distant arsenal," the report says. Because of the obvious transport problems that could arise in wartime, the deterrent value of having chemical weapons is reduced, but not eliminated.

Second, the allies may have erred in choosing the U.S. Bigeye binary bomb as one of the main elements of modernization, along with a new artillery shell. According to speakers at the news conference on 21 November, the Bigeye is known to have technical flaws (*Science*, 21 November, p. 930). It also seems inadequate for the role it must play in Europe. What is feared most is a limited use of chemicals to pave the way for a conventional assault by Soviet troops. The Aspen group claims that for NATO to nullify this threat, it must be able to raise the same threat itself, in a convincing fashion. But the new weapons appear to be neither reliable nor suitable for limited, surgical applications.

Joseph Nye of Harvard, cochairman of the Aspen study group, said that the report was conceived months ago as a means of pouring oil on troubled waters. But, as it turned out, there was no trouble, no "hysterical crisis," as one speaker said. The fact that NATO has promised to divest itself of chemical munitions while requiring no concession on the Soviet side has caused no furor. But Nye says that NATO is tiptoeing around a sleeping dog; it may awake later.

Against that possibility, the Aspen report lays out what its authors view as a calm and reasonable strategy for dealing with chemical weapons in Europe. In passing, they make a wistful comment: "If a reversal of the decision to withdraw existing stocks were possible, it would be desirable." But a reversal is unlikely, given the "new political reality" created by promises to get rid of such weapons.

The main point, according to Nye, is that NATO must not let disagreements over chemical weapons cause internal division. "Modernization has gotten more attention than it deserves," Nye said, and the furor over binary weapons has distracted people from bigger issues. The best deterrent NATO can adopt is to maintain a united military front.

NATO could respond to the Soviet threat of chemical warfare with a variety of projects. First, it could attempt to minimize the new transport problem it has created. No specific solutions were suggested. Second, NATO should emphasize defensive technologies. More research should be devoted to developing protective clothes and masks, monitoring devices, alarms, and special communications gear. Third, NATO should consider increasing its use of nonchemical defensive weapons, such as interceptor missiles, as a means of limiting the effectiveness of any Soviet assault.

In planning for the future, the Aspen report says, the importance of Soviet stockpiles should not be exaggerated. Even if the stocks are large (estimates range from 20,000 to 700,000 metric tons), only a limited fraction of the total has any strategic value, for a massive attack would move the conflict out of the chemical and into the nuclear realm. For this reason, NATO does not need to match Soviet chemical stocks ton-for-ton in order to deter their use. The Western allies need to maintain a stockpile just large enough to persuade the Soviets that they would gain no advantage by initiating the use of chemicals.

The best solution to all of these problems, the Aspen group said, would be to eliminate chemical weapons entirely. However, the outlook for a negotiated agreement is not good at present. For months, the main barrier has been the inability of the United States and the Soviet Union to agree on a system for verifying compliance with a ban. No fresh ideas have been placed on the table since Britain's proposal last July for a modified approach to America's insistence on short-notice "challenge inspections" (*Science*, 8 August, p. 617).

Despite the stalemate, the experts grasped at a straw of hope. Talks on chemical weapons are not likely to get entangled in the Strategic Defense Initiative, they said. As the winter of 1986 approaches, this small virtue has much to recommend it. ■

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