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23 July 1975; revised 20 October 1975

NEWS AND COMMENT

The Haemmerli Affair: Is Passive Euthanasia Murder?

A lot has happened in medicine during the past 25 years to change the very nature of what is so romantically called the "healing art." There are respirators for persons who cannot breathe and pacemakers for those whose hearts do not work. For persons laid low by serious infection, there are antibiotics. For those who cannot eat, there is artificial feeding.

Because of these and other advances in medical technology, some individuals, who in an earlier era would have died, today are alive and well. Others who would have died are now condemned to exist as living corpses. Most of us can agree that medical technology has created as many problems as it has solved. What we cannot agree on is what to do about it. The issues often are posed as ones requiring new definitions of life and death, and we are caught in a semantic web from which we cannot get free. Technology seems to have the upper hand because people have not learned how to cope with it. For very practical reasons it must be brought under control.

In the United States, the dilemma technology presents has been forced on the public consciousness by the case of Karen Ann Quinlan, whose life is being relentlessly maintained by a respirator. Some persons, including her parents and her priest, believe that she has a "right to die" and that her respirator should be turned off. A court has ruled that to do so could be considered murder. The machine breathes on.

On the other side of the Atlantic, the right to die is being debated in the press, in national governments, and in the Council of Europe in the context of an unprecedented legal case that is forcing people to think about the difference between passive euthanasia and murder. One of Switzerland's most prominent physicians has been accused of murder in the deaths of elderly, hospitalized patients. His crime, if it is one, lies in not maintaining heroic measures to prolong the lives of patients in irreversible coma. The case raises in concrete terms a question that is new to medicine: Are there times when a physician has a duty to do nothing?

The accused is Urs Peter Haemmerli, 49 years old. During a recent visit to New York, he told his side of the story during a lengthy interview with Science. *His accuser is Regula Pestalozzi, a Swiss politician who, according to accounts in the European press, will not comment on the case.*

This is a story about a murder case in which there is no victim, or at least no corpse. And it is a story about politics and medicine and the law. It is happening in Switzerland; it could happen elsewhere.

Early on the morning of 15 January, Urs Peter Haemmerli was arrested at his home in Zurich, having been accused of murder. Two policemen came knocking at seven o'clock. Haemmerli recalls that they politely waited for him to dress before taking him off to jail. At first he thought it was a bad joke. "After all," he reasons, "if I had murdered someone, I would be the first to know it."

As it turned out, Haemmerli was not accused of murdering "someone." He was accused of murdering by starvation an unspecified number of unnamed elderly patients at Triemli City Hospital, where he is chief of medicine. The alleged murders are said to have taken place during a period of four years. For months, lawyers have been combing the hospital's records in search of a victim. No formal charges can be pressed and the case cannot proceed unless he can be accused of murdering someone in particular. Haemmerli optimistically bets that no murder victim will ever be found and that his case will never come to trial. But the fact that it has come up at all sets a precedent for cases involving passive euthanasia.

As the accused recounts it, this is how the "Haemmerli affair" came about.

In the spring of 1974, a woman named Regula Pestalozzi was elected to the Zurich city council and named as the city's chief health officer, a position that put her in charge of the municipal hospital system. Haemmerli was pleased. During her campaign, Pestalozzi, a layperson, had called for improved care for the elderly and the chronically ill. At Triemli, described as Zurich's newest and most modern municipal hospital, there were many such patients. Haemmerli thought that he would have a friend in court in the new health officer. He invited her to visit Triemli. Months passed but she never came. Then, in December, she asked him to visit her, and one day the doctor and the politician had a long conversation in her office. Haemmerli remembers it as a very pleasant occasion.

Among other topics, Haemmerli and Pestalozzi talked about the care of the ter-

minally ill. Haemmerli does not believe in giving extensive treatment to a patient who is hopelessly ill; sometimes, he believes, it is better to allow a person to die in peace. Take, for example, the case of a person who has a stroke, lapses into a coma, and, after months, has not regained consciousness—who, in the opinion of the medical staff (both doctors and nurses), is never going to be conscious again. That is the example Haemmerli took with health officer Pestalozzi. The patient is unconscious but still breathing. "In the case of such patients, the cerebrum has failed irreversibly, so that they have permanently lost consciousness. However, their deeper brain structures are only partially affected, so spontaneous respiration goes on." These patients are kept alive by artificial feeding, usually through tubes that pour solutions of nutrients directly into their stomachs. Eventually, the question is asked, Should this continue? As far as Haemmerli and his staff are concerned, the answer is no, and feeding is discontinued. In its place, the patient is given only a solution of salt and water that prevents dehydration and maintains the normal balance of chemicals in the blood. Usually the patient dies within a couple of weeks. In fact, it is death by starvation. As far as anyone knows, for a comatose patient it is painless. Haemmerli calls it "sound and humane" medical practice and adds, "I have never done anything to my patients that I would not do for my own mother and father, who are still living, if they were in such a position."

Recent advances in biomedical science are raising important problems of ethics and public policy. This is one of a series of occasional articles planned for News and Comment on the conflicts involved.

Pestalozzi, Haemmerli recalls, seemed interested in what he had to say but asked no questions about it. He left her office. As far as he knew, "That was that." A month later, the police came. Following the accusation of murder, Haemmerli was suspended from the hospital by the city council and barred from seeing his patients. He spent subsequent weeks secluded at home, reading about euthanasia and law. On 1 April, he was reinstated as chief of medicine and has been at work ever since.

Haemmerli feels he was made the scapegoat for the sake of Pestalozzi's political ambition. "She wanted to run for the national government," he claims. "She saw herself as the first woman in the Swiss cabinet. But she was an unknown. She needed some way to get national attention and I was the way. The whole thing was political, even the police knew that. Under our law, they could have held me in jail. We have no bond as you do. But after 15 hours, I was out. I had an engagement to go boar hunting in France and I asked them if I could go. They said 'Fine.' So I went and took my rifle (Haemmerli comes from an old Swiss family of precision rifle makers) and I thought 'Here I am accused of murder and the police say I can go around with a gun. This is not a case of murder. It is a case of politics.' "

Whatever Pestalozzi's motives were for bringing the case, her action brought her at least fleeting fame in Switzerland and all of Europe as the news of the case hit the papers and news magazines, where it was frequently played as a cover story. She became a contender for national office, and she lost.

Haemmerli, too, was thrust into the spotlight, cast in a role he says he would never have chosen for himself but which he has decided to accept for the "good of the profession."

Haemmerli, who stands about 6′4″, is the personification of the learned physician and professor. Conservative in dress, precise in speech, sincere in manner, he seems well cast in his role as chief of medicine at one of Zurich's leading hospitals and as professor at the University of Zurich from which he received his medical degree. A specialist in gastroenterology with a particular interest in liver disorders, Haemmerli spent several years in training in the United States at institutions including Mount Sinai Hospital in New York and the medical schools of Georgetown and George Washington universities in Washington, D.C. In 1956, George Washington named him "outstanding resident of the year." "Dr. Haemmerli's devotion to his patients and his ability in instructing interns and students has been an example for the entire George Washington medical service," the citation said. His reputation as a physician continued to climb.

Now, in a more public arena than the medical circles in which he has lived, his

States Debate Death with Dignity Bills

The "right to die" and to do so with "dignity" is a powerful concept but it is not a right that has any basis in law at present. However, at least 15 states* now have before them draft legislation that would entitle their citizens to death with dignity. The bills before the legislatures of most of those 11 states would sanction passive euthanasia. Three states—Idaho, Montana, and Oregon—are debating legislation that would make active euthanasia (taking life by injecting a lethal drug, for example) legal. So far, none of the death with dignity legislation has passed.

The proposed legislation goes under different names; some states call it "death with dignity," some refer to "acts relating to medical treatment," some refer openly to "euthanasia." And the various bills are different in their specifics but underlying each is the same idea. These bills would provide a legally binding way for individuals to declare their desire not to be kept alive if there is no chance they will recover from an illness or injury that has destroyed brain function.

At present, the only thing an individual can do to preclude the possibility of becoming kept alive when there is no hope of recovery is to execute what is called a "living will." Various groups, including the Euthanasia Education Council† and a group of the Roman Catholic Church, have prepared such wills but they have only moral, not legal, force. Several draft statutes, including those before the legislatures of Maryland, Massachusetts, Washington, and Wisconsin, would make the living will legally effective.

The will prepared by the euthanasia council is typical of these documents. It begins, "Death is as much a reality as birth, growth, maturity and old age. . . . If the time comes when I, _____, can no longer take part in decisions for my own future, let this statement stand as an expression of my wishes, while I am still of sound mind." It then goes on to the effect that the person wishes to be allowed to die and says, "I hope you who care for me will feel morally bound to follow its mandate."—B.J.C.

*States considering this legislation include Delaware, Florida, Hawaii, Idaho, Illinois, Iowa, Maryland, Massachusetts, Montana, Oregon, Rhode Island, Virginia, Washington, West Virginia, and Wisconsin. †Located at 250 West 57 Street, New York 10019.

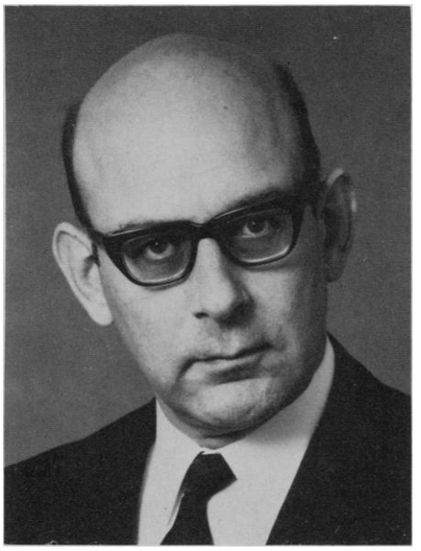
reputation is set as an expert on euthanasia, which he finds disturbing and inappropriate. "I never really thought much about euthanasia before this," he notes, "and I am not an expert on the subject. But I know that whenever anyone has a panel on euthanasia, they will invite me to speak and I sometimes will. If my case can help other physicians who find themselves in my position, I will have done some good. I cannot avoid the role."

Indeed, that is the case. When I met him, he was in New York as a guest of the Euthanasia Education Council, at whose meeting he was to be a star attraction. His speech to that group marked his second public appearance since his arrest. The first took place last April when he addressed the Council of Europe,* which is in the process of drafting a resolution on patients' rights, the right to die being prominent among them. The Council has yet to complete its work but has already accepted certain propositions as important. One is that physicians should respect the will of the sick. Another holds that the prolongation of life should not constitute the overriding purpose of medical practice.

As Haemmerli suggests, the time may have come to redefine the professional duty of the physician, which has always been defined primarily in terms of action. "In medical school and postgraduate training, the doctor is taught to act, to use the scalpel or drugs or machines to save the patient and restore health. He is not trained in omitting to act," he observes. Perhaps now he should be. "The development of modern medicine confronts the doctor with a new problem of principle: 'To do or not to do, that is the question.' "

The Quinlan case and the Haemmerli affair point up a feature of public debate on passive euthanasia that is difficult to deal with. For months the United States public has been looking at a photograph of Karen Quinlan as she used to be—calm, pretty, a typical high school senior. In Europe, people have been given a similarly distorted view of reality in photographs accompanying stories about Haemmerli. There have been pictures of well-coiffed elderly women smiling from their rocking chairs. Grandmother. Frail perhaps, but you wouldn't want to let her die. The German weekly *Der Spiegel* ran a cover picture of a young woman lying peacefully in a bed with a huge syringe lying on her abdomen. Thoughts of mercy killing come instantly to mind.

But Karen Quinlan, who has been described as having shriveled into a fetal position, should not be confused with Sleeping Beauty, and the elderly patients whom the staff of Triemli hospital let die are not relaxing in rocking chairs. They are comatose, and have been for months. They weigh practically nothing. Their skin hangs in heavy folds on their skeletons. And the only thing that keeps them alive is force-feeding, a procedure that can be extremely unpleasant. "These patients must be fed through gastric tubes pushed down their throats," Haemmerli explains, "and that can make even comatose patients retch and vomit." These patients are not fed intraveneously because of the great risk it poses. Once you introduce an i.v. needle into a vein, you introduce a high risk of infection that could lead to fatal embolisms. The patients, who are virtually immobile, expend hardly any metabolic energy. They can survive on only 300 calories a day. Eventually, those calories are withheld and water and saline are substituted. "I see these poor people suffering and I ask myself whether it is my duty to prolong their misery. I do not think it is. It is my duty to make them as comfortable as possible in their dying days."



Urs Peter Haemmerli

Haemmerli pushes hard to make clear the type of patients he is talking about. "These are not people who are just senile. They are not healthy except for a single infirmity that makes them unable to take

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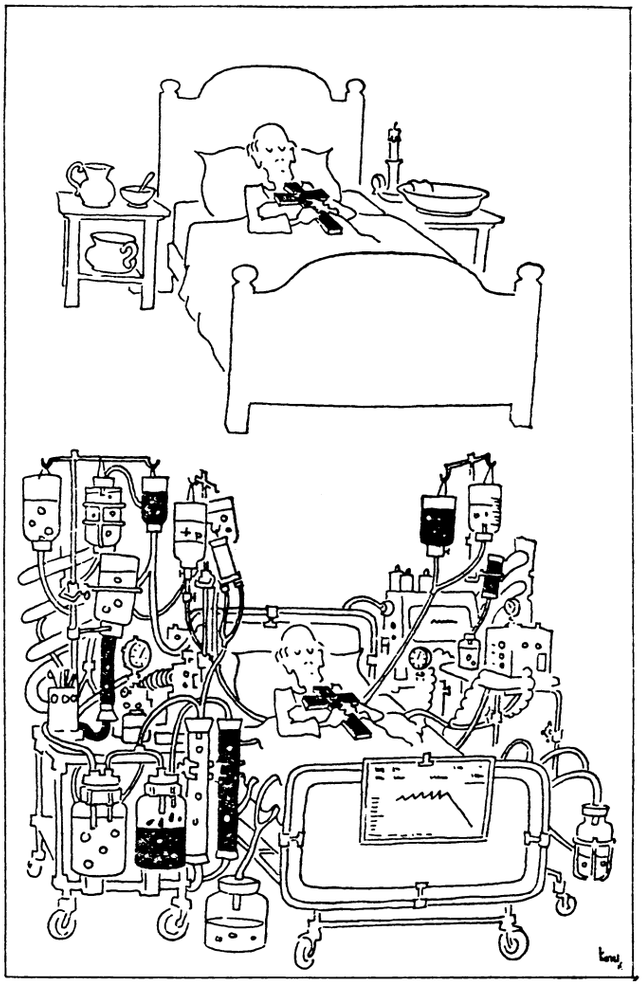

par KONK

From *Le Monde*, 12 May 1975.

*The Council of Europe, founded in 1949, is a consultative body of 18 European states dedicated to promoting closer cooperation among its members in maintaining democratic principles. Haemmerli addressed the Council's parliamentary assembly.

care of themselves. They are brain-damaged and it is irreversible."

The staff members caring for the patient make a collective decision to withhold nutrients when the time comes. "If even one person feels it is not time, we do not withhold," Haemmerli declares. What about the consent of the family? That is a different matter. Haemmerli says he talks to the family but it is clear he does not have high regard for consent. "Informed consent is something that is really only good for the physician. It is a matter of salesmanship. The physician can persuade the family to consent if he wants to. It is meaningless.

Opium-Free Poppy Under Study as Codeine Source

One of the less noted results of the 3-year Turkish opium ban that was lifted in 1974 has been enlivened interest on the part of the United States in a newly recognized poppy, *Papaver bracteatum*. This poppy does not contain opium. However, it does produce a substance from which codeine, the heavily used pain-killer and cough suppressant, can be processed. The U.S. Department of Agriculture (USDA) has a small but growing research project on the bracteatum. And the federal government's interagency Opium Policy Task Force, which is scheduled to report its findings to the President on 15 December, has been looking into the feasibility and desirability of domestic cultivation of the plant to reduce reliance on opium importation. The three U.S. drug companies licensed to process narcotics, alarmed by rising prices and the falling stockpiles of opium resulting from the ban, are also very interested in establishing a domestic source of codeine.

It was only in 1967 that an Iranian chemist discovered that the bracteatum, which grows wild in some parts of the Middle East, contains thebaine, which can be converted to codeine. The United Nations has since become very interested in the bracteatum as a potential substitute for the licitly grown opium poppy (*Papaver somniferum*). It has held annual conferences on the bracteatum since 1972, and for several years has done research on it at its narcotics laboratory in Geneva. Morphine, the base for heroin, cannot be obtained from thebaine except through a series of complicated and inefficient chemical processes, so the substance is thought to be immune from abuse by drug traffickers—particularly since there is no likelihood at present that illegal opium, which constitutes the vast bulk of opium grown and marketed worldwide, will be stamped out.

From the U.S. standpoint, a number of issues surround the question of whether to grow the bracteatum poppy, none of which has been fully resolved. Although the drug companies—Mallinckrodt, Merck and Co., and S. B. Penick and Co.—are interested in a degree of codeine self-sufficiency to buffer them from the vagaries and rising costs of doing business with foreign countries, the task force believes it is a mistake to equate codeine with oil: the country has a year's worth of emergency stocks of opium; there are substitutes for codeine that are effective, even though doctors prefer codeine; and, if worse comes to worse, the United States could plant its own crops of opium poppies.

The question of potential abuse and diversion of thebaine has been debated at length, and the task force has decided this does not pose a serious hazard. One task force member observes, however, that there is concern, in principle, about domestic production of a new substance that might let some unanticipated genie out of the bottle. After all, he says, remember when heroin was introduced in the early 1900's as a supposedly nonaddictive substitute for morphine. There already exists a family of thebaine-derived compounds that are highly potent (thebaine can also be obtained from the somniferum poppy), although their main use is for sedating large wild animals.

If the Administration should decide that bracteatum cultivation is economically desirable and necessary in view of the world supply and demand situation, there remains quite a big public relations problem, both internationally and domestically. No country is prohibited from growing poppies for home use, but now that the United States has decided to assume world leadership in the drug abuse problem, it might be impolitic, particularly since the United States has tried to discourage other countries from getting into the legal opium trade because of the difficulty of policing it. It would be a hard idea to sell domestically, too, says a task force person, because every time the idea is broached, someone like Jack Anderson will come out with a scary headline, such as, "Ford proposes growing narcotics in Arizona." It would take some education to create a differentiation in the public mind between somniferum and the non-opium-producing bracteatum.

If the United States did decide to sanction thebaine extraction—and the task force does not feel a decision is urgent—it would be several years before the first commercial crops could be harvested. It takes 3 years to produce mature plants from seed (the somniferum poppy takes only one), and there are considerable agronomic obstacles to be overcome. Currently more than a dozen countries around the world are doing research on the bracteatum, and none has succeeded yet in domesticating the plant. The three U.S. drug companies are cultivating experimental poppy patches, as is USDA, which, with a bracteatum budget of $200,000 this year, is growing it in four states—Maryland, Oregon, Washington, and Arizona. The bracteatum favors growing conditions very similar to those favored by wheat, but as a foreign import the plant raises novel pest and weed control problems.

Although the drug companies are eagerly awaiting government sanction, it is unlikely at this point that anything short of a widespread analgesic shortage would bring swift government action. In the long run, however, the bracteatum might in many places be substituted for the somniferum. Morphine has largely been replaced by synthetics—in fact, 90 percent of legal opium is converted to codeine worldwide, as is 98 percent of the opium processed in the United States. But world demand for codeine continues to increase.

Although U.S. stockpiles of opium are still low, some believe this will prove to be temporary, as emphasis is shifted to the importation of poppy straw (dried poppy tops) from that of opium gum, which is extracted from fresh pods. India, currently the main opium supplier to the United States, still exports the gum because this harvesting method is more labor-intensive, but the shift worldwide is to poppy straw, which is harvested and processed by machines and therefore less subject to diversion and abuse. If restrictions on the importation of poppy straw are loosened (the United States at present can only buy it from Turkey) this country may choose continued reliance on the somniferum poppy rather than withdraw its business from needy Third Worlders and risk censure for growing its own narcotics.—C.H.

Furthermore, in dealing with the family, you must consider whether they will act in the patient's interest or their own. Some people will give consent because they can't wait to inherit the patient's money. Sometimes, it is the other way. There have been families that have said, 'You must keep the patient alive until his brother or whomever dies for the sake of our inheritance.' "

In choosing passive euthanasia, Haemmerli believes that irreversibility of the patient's condition is the most important point. In his address to the Council of Europe, he suggested that irreversible loss of brain function be accepted as the definition of human, as opposed to biological, death. It is, he says, a definition that would extend already existing definitions of brain death. Those definitions, written with organ transplantation in mind, deal with total brain death, which includes destruction of brain functions that control the autonomic nervous system; there is no spontaneous breathing, but the body is kept on a respirator long enough for donor organs to be secured. "Probably more frequent in everyday practice, however, are patients whose brains have died but who have preserved their spontaneous respiration," says Haemmerli. The feeding and drugs that keep these people alive are, in his opinion, just as artificial a means of supporting life as is a respirator.

Acknowledging that irreversibility is difficult to determine, Haemmerli says, "What is important ... is an adequate period of observation.... In the case of heart arrest an observation period of less than an hour is enough.... In the case of failure of the brain function with continued spontaneous respiration, weeks and often months are necessary."

Once the determination of irreversible brain loss has been made, Haemmerli sees no distinction between pulling the plug on a respirator and withholding antibiotics or nutrients. In his hospital, he says, it is unlikely there would ever be a Karen Quinlan because they would not get caught up in the semantics of whether pulling the plug is a special sort of "act" just because it is so physical and easy to visualize. Haemmerli would pull the plug because he would think it "pointless" not to, not because he would think of himself as practicing euthanasia.

"Lawyers and other persons alien to medicine often find it hard to grasp this concept of pointlessness," Haemmerli told the Council. "For the doctor there is 'point' in any therapy which seems to him likely to succeed.... But if it is unsuccessful and if no other therapeutic possibilities exist, then the treatment begun clearly becomes pointless."

It is apparent that some changes are going to have to be made in order to come to grips with the terrible dilemma that medical technology has created. It may be true that what is needed is a new definition of the physician's duty, as well as a definition of death that distinguishes between "human" death and "biological" death. There is little doubt that such definitions will be difficult to formulate and initially controversial, particularly to individuals who may see them as undermining the value of life and opening the way to abuse. Nevertheless, they will have to come. As Haemmerli says, "All discussion and any new definitions and conclusions resulting from it should satisfy two simple criteria: common sense and the humanitarian principle."—BARBARA J. CULLITON

Arms Control Agency: New Law Seeks to End Its Period of "Eclipse"

Several amendments to the Arms Control and Disarmament Act that were signed into law without fanfare on 29 November could have a significant impact on decision-making about weapons systems.

The amendments are designed to strengthen the hand of the Arms Control and Disarmament Agency (ACDA) in its dealings with the Defense Department and to provide Congress with better information by which to analyze the merits of major military programs.

Among other things, they require that proposals for major—or potentially major—weapons systems be accompanied by an "arms control impact" statement analyzing the impact that such a weapons program would have on arms control and disarmament policy and negotiations. The goal is to get an early warning to Congress and the public about such weapons systems as the Submarine Launched Cruise Missile, which has become a major stumbling block to further arms control agreements between the United States and the Soviet Union. The amendments also give ACDA enhanced status within the executive branch, a greater ability to mount public relations campaigns, and a more explicit responsibility for keeping Congress informed.

No one is claiming the amendments portend an end to the upward spiraling arms race. But, taken as a whole, the amendments strike many arms control advocates as a surprising and hopeful step forward in the effort to inject an arms control viewpoint into high-level debate over national security issues. Adrian S. Fisher, dean of the Georgetown University Law Center and former deputy director of ACDA, calls the amendments "the most important legislative change in the structure of arms control matters since passage of [the original arms control legislation] itself."

The amendments were motivated by a feeling that ACDA, after a promising start in the 1960's, has "recently gone into somewhat of an eclipse," as a report by the House Committee on International Relations put it. The agency has always been something of a midget in the league populated by such giants as the Defense Department and the Energy Research and Development Administration, which inherited the nuclear weapons programs of the former Atomic Energy Commission.

ACDA was created in 1961 as part of an effort to make arms control a central goal of national policy, but from the start it was deliberately kept small and circumscribed by making it a subordinate unit of the State Department and by placing it under the guidance of a General Advisory Committee designed to ensure that no long-haired pacifists gained the power to undermine our military strength. The budget for ACDA has generally hovered around $10 million a year; the staff has recently numbered about 200.

During the 1960's ACDA played the key role in negotiating the nuclear Non-Proliferation Treaty and other arms control agreements. It also developed a systems analysis capability that is judged unique outside of the Pentagon. But in the 1970's, particularly under the Nixon Administration, the agency suffered several setbacks: it was stripped of a major role in SALT (Strategic Arms Limitation Talks); its budget was cut sharply for one year, though it has since rebounded; and its senior staff was depleted by forced resignations.