

ways on the go, ever ready to accept new responsibilities that would challenge her immense abilities.

On March 28, 1969, President Nixon appointed Mrs. Kabis 33d Treasurer of the United States, a position to which, Secretary Connally said earlier this week, she brought an extra dimension. The deep respect which she earned during her active career in Delaware and Washington cut across party lines; Delaware's State Treasurer, Mrs. Emily H. Womach, a member of the Democratic Party, demonstrated the universal affection in which Mrs. Kabis was held when she remarked earlier this week that Dottie Kabis, as Treasurer of the United States, brought great honor to Delaware and yet retained her personal sincerity and human warmth.

The flags on all State buildings in Delaware are at half-mast today, by order of Gov. Russell W. Peterson. They will remain that way in quiet tribute to a magnificent woman until services are completed. It is a most fitting gesture that a grateful people can offer to a woman who gave so much of herself for her State and her Nation.

From time to time individuals in public life are asked, "What can I as an individual do to change things?" and a simple answer is not always forthcoming. But I would suggest that the life of Dottie Kabis would serve as an outstanding example. When she came to Delaware, she apparently had no particular desire to become involved in politics. A few years ago, looking back over a remarkable career, Dottie described her initial interest in politics in this way:

I was shocked by the misuse of the ballot. Young as I was, I realized what was going on. You would have to be pretty stupid not to see it. Votes were being bought and this upset me.

She was then a member of the State Grange and she effectively used that position to plead for cleaner elections in Delaware, particularly for the use of voting machines. That she was effective in stirring up interest in this most vital aspect of our elective process is attested to by the fact that within a few years the paper ballot became a thing of the past in Delaware as voting machines were installed throughout the State.

From that point her rise in the ranks of the Republican Party continued, spurred always by the energy and dedication to a cause that were characteristic of this talented woman. Her tragic passing leaves a void that will not quickly be filled.

The news of her death last weekend in Massachusetts left me shocked and saddened. I extend my deepest sympathy to her mother and her husband, Walter Kabis, to whom she was married less than 10 short months ago.

Delaware has lost one of her finest citizens and the United States has lost a dedicated public servant. And I have lost a very dear friend.

Mr. BOGGS. Mr. President, I want to thank my distinguished colleague for his kind remarks.

I would like to yield at this time, if I may, to the distinguished Senator from Nebraska (Mr. CURTIS).

Mr. BYRD of West Virginia. Mr. President, I believe the junior Senator from Delaware has some time left. I am sure he will be glad to yield to the Senator from Nebraska.

Mr. CURTIS. Mr. President, will the Senator yield me about 2 minutes?

Mr. ROTH. I yield to the Senator from Nebraska.

Mr. CURTIS. Mr. President, it was not my privilege to know, in a personal way, the distinguished lady about whom we are speaking at this time, but I did know of her public career, and I want to join with the many friends of Dorothy Andrews Kabis in paying tribute to her public service.

She was an inspiration to many people. This was true when she came to Washington to serve. It was true of those who served with her in a political capacity. It was true of many of those who served with her officially.

She came to Washington after a very distinguished career in her own State. She was a businesswoman. She had been active in a number of worthwhile organizations, and was an effective and eloquent speaker.

It is indeed a loss to our country, and I am sure to her native State and her State by adoption, that she should leave us at such an early age. I wish to have the RECORD show my admiration and respect for her, and I send to her mother and brother and her other relatives my most sincere sympathy.

Mr. SCOTT. Mr. President, I wish to join with the distinguished Senators from Delaware, Mr. Boggs and Mr. ROTH, in paying tribute to Mrs. Dorothy Elston Kabis, Treasurer of the United States, whose untimely passing has grieved us all.

It has been my pleasure to have known Dotty for many years, and I have been privileged to work with her during the years she was president of the National Federation of Republican Women. Her activities as president of the Federation contributed greatly to increasing the participation of women throughout the United States in Republican Party activities.

As Treasurer of the United States she discharged her responsibilities to the credit of her position and to the Government of the United States.

Marion and I extend to Mr. Kabis our heartfelt sympathy in this hour of his bereavement.

RESUMPTION OF TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the period for the transaction of routine morning business, with statements therein limited to 3 minutes, be now resumed.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

LOUIS "SATCHMO" ARMSTRONG

Mr. MANSFIELD. Mr. President, it is with a sense of sadness that I note in the press the passing of the great Louis "Satchmo" Armstrong.

I may be what is called a "square," but I must admit that, like tens of millions of other Americans, I achieved a great deal of satisfaction and comfort from the music of this outstanding American. He was an ambassador of good will in the best meaning of the term, and he represented us and this country with humor, with dignity, with understanding, and, as far as his fellow citizens were concerned, we appreciated the representation which he gave to all of us.

In New Orleans, he came up from practically nothing. He learned his trade the hard way, but he developed a keen sense of musicology. He traveled the world. He spread the spirit of a real part of this Nation, and with that spreading there went a lot of good will.

I think I can say on behalf of all the Members of this body that the passing of Louis "Satchmo" Armstrong is a real loss. We extend to his wife, his relatives, and to all his friends, our deepest sympathy in their hour of sorrow, and we extend our condolences to all the rest of our fellow citizens on the passing of a great American.

QUORUM CALL

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

CONCLUSION OF MORNING BUSINESS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the period for the transaction of routine morning business now be closed and that the unfinished business be laid before the Senate.

The PRESIDING OFFICER. Without objection, morning business is closed.

CONQUEST OF CANCER ACT

The PRESIDING OFFICER. Without objection, the Chair lays before the Senate the unfinished business, which will be stated by title.

The legislative clerk read the bill by title as follows:

A bill (S. 1828) to amend the Public Health Service Act so as to promote the public health by strengthening the national effort to conquer cancer.

RECESS

Mr. BYRD of West Virginia. Mr. President, I move that the Senate now stand in recess until 3 o'clock p.m. today.

The motion was agreed to, and at 1:39 p.m. the Senate took a recess.

The Senate reassembled at 3 p.m., when called to order by the Presiding Officer (Mr. BUCKLEY).

CONQUEST OF CANCER ACT

The PRESIDING OFFICER (Mr. BUCKLEY). Pursuant to the previous order, the Senate will proceed to the consideration of S. 1828 to amend the Public Health Service Act on which there will be 3 hours of debate.

The Senate proceeded to consider the bill S. 1828, to amend the Public Health Service Act so as to promote the public health by strengthening the national effort to conquer cancer which has been reported from the Committee on Labor and Public Welfare with an amendment, to strike out all after the enacting clause and insert:

That this Act may be cited as the "Conquest of Cancer Act".

Sec. 2. The Public Health Service Act is amended by adding following section 406 the following:

"FINDINGS AND DECLARATION OF PURPOSE

"Sec. 407A. (a) The Congress hereby finds and declares—

"(1) that the incidence of cancer is increasing and is the major health concern of the American people;

"(2) that the attainment of better methods of prevention, diagnosis, and treatment of cancer deserve the highest priority; and

"(3) that a great opportunity is offered as a result of recent advances in the knowledge of this dread disease to conduct energetically a national program for the conquest of cancer.

"(b) In order to carry out the policy set forth in this part it is the purpose of this part to establish a Conquest of Cancer Agency as an independent agency within the National Institutes of Health.

"CONQUEST OF CANCER AGENCY

"Sec. 407B. There is hereby established a Conquest of Cancer Agency as an independent agency within the National Institutes of Health.

"Sec. 407C. (a) The Conquest of Cancer Agency shall be administered by a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall serve under the direction of the President. There shall be in the Agency a Deputy Director who shall be appointed by the President, by and with the advice and consent of the Senate. The Deputy Director shall perform such functions as the Director may prescribe and shall be the Acting Director during the absence or disability of the Director or in the event of a vacancy in the position of Director.

"(b) The Director is authorized to appoint within the Agency not to exceed five Assistant Directors.

"FUNCTIONS OF THE AGENCY

"Sec. 407D. In order to carry out the purpose of this part, the Director shall—

"(1) carry out all research activities previously conducted by the National Cancer Institute, together with an expanded, intensified, and coordinated cancer research program, and shall administer the authority of the Secretary under this Act with respect to cancer;

"(2) make such grants or contracts as are

desirable to accomplish the purposes of this part;

"(3) expeditiously utilize existing research facilities and personnel for accelerated exploration of the opportunities for the conquest of cancer in areas of special promise;

"(4) encourage and coordinate cancer research by industrial concerns where such concerns evidence a particular capability for such research;

"(5) strengthen existing cancer centers, and establish new cancer centers as needed in order to carry out a multidisciplinary effort for clinical research and teaching, and for the development and demonstration of the best methods of treatment in cancer cases;

"(6) collect, analyze, and disseminate all data useful in the prevention, diagnosis, and treatment of cancer, including the establishment of an international cancer research data bank to collect, catalog, store, and disseminate insofar as feasible the results of cancer research undertaken in any country for the use of any person involved in cancer research in any country;

"(7) establish or support the large-scale production or distribution of specialized biological materials and other therapeutic substances for research, including viruses, cell cultures, and animals, and set standards of safety and care for persons using such materials;

"(8) support research in the cancer field outside the United States by highly qualified foreign nationals, collaborative research involving American and foreign participants, and the training of American scientists abroad and foreign scientists in the United States;

"(9) support appropriate manpower programs of training in fundamental sciences and clinical disciplines to provide an expanded and continuing manpower base from which to select investigators and physicians for participation in the programs, including where appropriate the use of training stipends, fellowships, and career awards; and

"(10) prepare and submit an annual budget estimate for the program directly to the President for review and transmittal to Congress and receive from the President and the Office of Management and Budget directly the funds appropriated by Congress for obligation and expenditure by the Agency.

"ADMINISTRATIVE PROVISIONS

"Sec. 407E. (a) The Director is authorized, in carrying out his functions under this part, to—

"(1) appoint and fix the compensation of personnel of the Agency in accordance with the provisions of title 5, United States Code, except that (A) to the extent the Director deems such action necessary to the discharge of his functions under this part, he may appoint not more than fifty of the scientific, professional, and administrative personnel of the Agency without regard to provisions of such title relating to appointments in the competitive service, and may fix the compensation of such personnel, without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to pay rates not in excess of the highest rate paid for GS-18 of the General Schedule under section 5332 of title 5 of such Code; (B) to the extent that the Director deems necessary to recruit specially qualified scientific or other professional personnel without previous competitive service he may establish the entrance grade therefore at not to exceed two grades above the grade otherwise established for such personnel under such provisions;

"(2) make, promulgate, issue, rescind, and amend rules and regulations as may be necessary to carry out the functions vested in him or in the Agency and delegate any of his functions to any officer or employee under his direction or his supervision;

"(3) acquire (by purchase, lease, condemnation, or otherwise), construct, improve, repair, operate, and maintain cancer centers, laboratories, research and other necessary facilities and equipment, and related accommodations as may be necessary, and such other real or personal property (including patents) as the Director deems necessary; to acquire by lease or otherwise through the Administrator of General Services, buildings or parts of buildings in the District of Columbia or communities located adjacent to the District of Columbia for the use of the Agency for a period not to exceed ten years without regard to the Act of March 3, 1877 (40 U.S.C. 34);

"(4) employ experts and consultants in accordance with section 3109 of title 5, United States Code;

"(5) appoint one or more advisory committees composed of such private citizens and officials of Federal, State, and local governments as he deems desirable to advise him with respect to his functions under this Act;

"(6) utilize, with their consent, the services, equipment, personnel, information, and facilities of other Federal, State, or local public agencies with or without reimbursement therefor;

"(7) accept voluntary and uncompensated services;

"(8) accept unconditional gifts, or donations of services, money, or property, real, personal, or mixed, tangible or intangible;

"(9) enter into such contracts, leases, cooperative agreements, or other transactions without regard to section 529 of title 31, United States Code, as may be necessary in the conduct of his functions with any public agency, or with any person, firm, association, corporation, or educational institution, an make grants to any public or non-profit private agency, organization or institution;

"(10) allocate and expend, or transfer to other Federal agencies for expenditure, including the National Institutes of Health, for cancer-related programs, such funds made available under this part as he deems necessary, including funds appropriated for construction, repairs, or capital improvements;

"(11) take necessary action together with the Director of the National Institutes of Health so that all channels for the dissemination and cross-fertilization of scientific knowledge and information existing prior to the effective date of this Act between the National Cancer Institute and the other Institutes of Health shall be maintained between the Agency and the Institutes of Health to insure free communications between cancer and the other scientific, medical, and biomedical disciplines; and

"(12) take such other actions as may be required for the accomplishment of the objectives of the Agency.

"(b) Upon request made by the Director, each Federal agency is authorized and directed to make its services, equipment, personnel, facilities, and information (including suggestions, estimates, and statistics) available, to the greatest practicable extent consistent with other laws to the Agency in the performance of its functions with or without reimbursement.

"(c) Each member of a committee appointed pursuant to paragraph (5) of subsection (a) of this section who is not an officer or employee of the Federal Government shall receive an amount equal to the daily rate prescribed for GS-18 under section 5332 of title 5, United States Code, for each day he is engaged in the actual performance of his duties (including traveltime) as a member of a committee. All members shall be reimbursed for travel, subsistence, and necessary expenses incurred in the performance of their duties.

"(d) The Director shall, by regulation, provide for proper scientific review of all research grants and programs over which he has authority (A) by utilizing, to the maximum extent possible, appropriate peer review groups within the National Institutes of Health, and (B) when appropriate, by establishing, with the approval of the National Cancer Advisory Board, other formal peer review groups as may be required.

"REPORTS

"Sec. 407F. The Director shall, as soon as practicable after the end of each calendar year, prepare and submit to the President for transmittal to the Congress a report on the activities of the Agency during the preceding calendar year.

"NATIONAL CANCER ADVISORY BOARD

"Sec. 407G. (a) There is hereby established in the Agency a National Cancer Advisory Board to be composed of the Director of the National Institutes of Health and eighteen members appointed by the President, by and with the advice and consent of the Senate. Not more than twelve of the appointed members of the Board shall be scientists or physicians and not more than eight of the appointed members shall be representative of the general public. Appointed members shall be appointed from among persons, who by virtue of their training, experience, and background are exceptionally qualified to appraise the programs of the Agency. The Secretary, the Director of the Office of Science and Technology, and the Director shall be ex officio members of the Board.

"(b) (1) Appointed members shall be appointed for six-year terms, except that of the members first appointed six shall be appointed for a term of two years, and six shall be appointed for a term of four years as designated by the President at the time of appointment.

"(2) Any member appointed to fill a vacancy occurring prior to expiration of the term for which his predecessor was appointed shall serve only for the remainder of such term. Appointed members shall be eligible for reappointment and may serve after the expiration of their terms until their successors have taken office.

"(3) A vacancy in the Board shall not affect its activities and eleven members thereof shall constitute a quorum.

"(c) The President shall designate one of the appointed members to serve as Chairman for a term of two years.

"(d) The Board shall meet at the call of the Chairman but not less often than four times a year and shall advise and assist the Conquest of Cancer Agency in the development and execution of the program.

"(e) The Director of the Conquest of Cancer Agency shall designate a member of the staff of the Conquest of Cancer Agency to act as Executive Secretary of the Board.

"(f) The Board may hold such hearings, take such testimony, and sit and act at such times and places as the Board deems advisable to investigate programs and activities of the Conquest of Cancer Agency.

"(g) The Director shall submit to the Board for its evaluation, comments, and recommendations each year's program plan and budget prior to the formal submission of the budget request to the President.

"(h) The Board shall submit a report to the President for transmittal to the Congress not later than January 31 of each year on the progress of the Conquest of Cancer Agency toward the accomplishment of its objectives.

"(i) The Board shall supersede the existing National Advisory Cancer Council, and the members of the Council serving on the effective date of this section shall serve as additional members of the Board for the duration of their terms then existing, or for

such shorter time as the President may prescribe.

"(j) Members of the Board who are not officers or employees of the United States shall receive compensation at rates not to exceed the daily rate prescribed for GS-18 under section 5332, title 5, United States Code, for each day they are engaged in the performance of their duties, including travel-time, and while so serving away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703, title 5, United States Code, for person in the Government service employed intermittently.

"(k) The Director shall make available to the Board such staff, information, and other assistance as it may require to carry out its activities.

"(l) The board shall insure that the Director, by regulations, maintains scientific peer review of research grants and programs.

"DEFINITIONS

"Sec. 407H. For the purpose of this Act the term—

"(1) 'Director' means the Director of the Conquest of Cancer Agency;

"(2) 'Agency' means the Conquest of Cancer Agency;

"(3) 'Board' means National Cancer Advisory Board;

"(4) 'cancer center' means such cancer research facilities as the Director determines are appropriate to carry out the purposes of this part, including laboratory and research facilities and such patient care facilities as are necessary for the development and demonstration of the best methods of treatment of patients with cancer, but does not include extensive patient care facilities not connected with the development of and demonstration of such methods;

"(5) 'construction' includes purchase or lease of property; design, erection, and equipping of new buildings; alteration, major repair (to the extent permitted by regulations), remodeling and renovation of existing buildings (including initial equipment thereof); and replacement of obsolete, built-in (as determined in accordance with regulations) equipment of existing buildings;

"(6) 'function' includes power and duty; and

"(7) 'Federal agency' means any department, agency, or independent establishment of the executive branch of the Government including any wholly owned Government corporation.

"AUTHORIZATION OF APPROPRIATIONS

"Sec. 408. For the purpose of carrying out any of the programs, functions, or activities authorized by this part, there are authorized to be appropriated for each fiscal year such sums as may be necessary."

COMPENSATION OF THE DIRECTOR AND THE DEPUTY DIRECTOR

Sec. 3. (a) Section 5315 of title 5, United States Code, is amended by adding at the end thereof the following new paragraph:

"(94) Director, Conquest of Cancer Agency."

(b) Section 5316 of title 5, United States Code, is amended by adding at the end thereof the following new paragraph:

"(131) Deputy Director, Conquest of Cancer Agency."

Sec. 4. (a) The heading of title IV of the Public Health Service Act is amended to read "TITLE IV—CONQUEST OF CANCER AGENCY; NATIONAL RESEARCH INSTITUTES".

(b) The heading to part A of title IV of such Act is amended to read "Part A.—CONQUEST OF CANCER AGENCY AND NATIONAL CANCER INSTITUTE."

NATIONAL CANCER INSTITUTE MADE PART OF CONQUEST OF CANCER AGENCY

Sec. 5. (a) Section 401 of the Public Health Service Act, including the heading thereto, is amended to read as follows:

"NATIONAL CANCER INSTITUTE

"Sec. 401. The National Cancer Institute shall be a part of the Conquest of Cancer Agency."

(b) Section 402 of the Public Health Service Act is amended by striking out all that precedes clause (a) of such section, except the heading thereof, and inserting the following in lieu of such stricken matter:

"Sec. 402. In carrying out the purposes of section 301 with respect to cancer, the Conquest of Cancer Agency, in consultation with the National Cancer Advisory Board, shall—

(c) Section 403 of the Public Health Service Act is amended (1) (A) by striking out "Surgeon General" wherever it appears in such section and inserting "Conquest of Cancer Agency" in lieu thereof; (B) by striking out "he" and "him" wherever either appears in such section and inserting "the agency" in lieu thereof; and (C) by striking out "section 402" wherever it appears and inserting "section 402 and section 407D" in lieu thereof; and (2) by striking out "Institute" in subsection (b) thereof and inserting in lieu thereof "Agency or Institute".

MERGER OF FUNCTIONS OF NATIONAL ADVISORY CANCER COUNCIL

Sec. 6. (a) (1) Sections 301(d), 301(i), 403 (b), and 403(c) of the Public Health Service Act are amended by striking out "National Advisory Cancer Council" and "National Cancer Advisory Council" as it may variously appear therein, and inserting in lieu thereof "National Cancer Advisory Board". The word "Council" as used in any such section to describe the National Advisory Cancer Council or the National Cancer Advisory Council, is amended to read "Board".

(2) Section 217 of such Act is amended by striking out "the National Advisory Cancer Council" wherever it may appear.

(b) (1) Section 404 of the Public Health Service Act is amended by striking out "The council is authorized" preceding clause (a), and inserting in lieu thereof "The National Cancer Advisory Board is authorized".

(2) Such section is further amended (A) by striking out "Surgeon General" wherever it may appear and inserting in lieu thereof "Conquest of Cancer Agency"; (B) in clause (a) thereof by striking out "section 402" and inserting "section 402 or section 407D" in lieu thereof.

EFFECTIVE DATE

Sec. 7. (a) The amendments made by the preceding provisions of this Act shall take effect sixty days after the date of enactment of this Act or on such prior date after the enactment of this Act as the President shall prescribe and publish in the Federal Register.

(b) Notwithstanding the provisions of subsection (a), members of the National Cancer Advisory Board (as authorized under section 407G of the Public Health Service Act, as amended by this Act) may be appointed in the manner provided for in such section, at any time after the date of enactment of this Act. Such officers shall be compensated from the date they first take office, at the rates provided for in section 407G of the Public Health Service Act, as amended by this Act. Such compensation and related expenses of their offices shall be paid from funds available for the functions to be transferred to the Conquest of Cancer Agency pursuant to this Act.

The PRESIDING OFFICER. Who yields time?

Mr. BYRD of West Virginia. Mr. President, in view of the fact that, under the agreement, time will be under the con-

trol of the distinguished Senator from Massachusetts (Mr. KENNEDY) and the distinguished Senator from Colorado (Mr. DOMINICK), both of whom are on the same side of this question, I ask unanimous consent that the time be equally divided between and controlled by the distinguished Senator from Wisconsin (Mr. NELSON) and the distinguished Senator from Colorado (Mr. DOMINICK).

The PRESIDING OFFICER. Without objection, it is so ordered.

Who yields time?

Mr. DOMINICK. Mr. President, I yield myself 15 minutes.

The PRESIDING OFFICER. The Senator from Colorado is recognized for 15 minutes.

Mr. DOMINICK. Mr. President, I ask unanimous consent that, in addition to the cosponsors I have just submitted at the desk, the name of the Senator from Kentucky (Mr. Cook) be added as a cosponsor.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. DOMINICK. Mr. President, I do not think the importance of S. 1828, the Conquest of Cancer Act, can be overstated. It will set up the machinery for a greatly expanded national effort against cancer, the disease most feared by Americans. It has some 66 cosponsors, and is the result of a bipartisan, cooperative effort. Senator KENNEDY as chairman of the Health Subcommittee, and Senator WILLIAMS, chairman of the full committee, have presided over the deliberations with admirable impartiality and selflessness.

There was never any argument about the need for this legislation. Cancer strikes one out of four Americans. At current rates, 34 million of those now living will die of it. I do not think there is a Senator in this Chamber who has not had a close friend or relative affected by it. I have just returned from the funeral of a close friend in Colorado who was stricken by it. The only issues have been with respect to how to develop the most effective national program to find cures for it. S. 1828 represents the best thinking of the committee, the administration, the Panel of Consultants on the Conquest of Cancer, and members of the scientific community on this.

A quick summary of the background of this legislation will facilitate our discussion of it. On March 25, 1970, Senator Yarborough introduced Senate Resolution 376, which authorized the appointment of a Panel of Consultants on the Conquest of Cancer to conduct a study of the status of cancer research and to recommend a program designed to find cures for cancer within "the earliest possible time." He suggested that the Panel should direct "particular attention—toward the creation of a new administrative agency which would guarantee that the conquest of cancer becomes a highly visible national goal."

The resolution was passed on April 27, 1970, and about 7 months later, on November 25, 1970, the Panel submitted a report which recommended a national cancer program to be carried out by a new independent agency, the National Can-

cer Authority. The National Cancer Authority would assume the functions of the National Cancer Institute, and would administer the new cancer program outside of, and separate from the National Institutes of Health. On December 4, 1970, Senator Yarborough introduced legislation, S. 4564, to implement the Panel's recommendations. That bill was reintroduced in slightly different form as S. 34 by Senator KENNEDY and Senator JAVITS early this year.

Mr. President, let me interpolate here that every American should be grateful to the panel of consultants on the Conquest of Cancer, chaired by Mr. Benno C. Schmidt. They did an enormous amount of work in a relatively short period of time and did it with facility, with imagination, and at practically no cost. It is unique in our history to find a panel which will devote as much expertise and talent as they did to this particular report and do it at practically no expense to the taxpayers.

During hearings on S. 34, representatives of the Department of Health, Education, and Welfare—Dr. Egeberg, Assistant Secretary for Health and Scientific Affairs; Dr. Marston, Director of the National Institutes of Health; and Dr. Baker, Director of the National Cancer Institute—and members of the research community testified that establishment of an independent agency to administer the new cancer program separately from the National Institutes of Health would be a mistake. They voiced concern that such action would result in fragmentation of our overall biomedical research effort. They emphasized the importance of keeping the new cancer program within the framework of the National Institutes of Health in order to preserve the relationship between cancer research and other types of research conducted within and supported by the National Institutes of Health. Their views reflected the assessment of the research community generally that cancer research is not yet far enough advanced to enable us to isolate it from other types of biomedical research and adapt it to a strictly programmatic approach. The testimony of Dr. Phillip R. Lee, a chancellor of the University of California, and former Assistant Secretary for Health and Scientific Affairs, was representative. He said:

Cancer is not simply an island waiting in isolation for a crash program to wipe it out. It is in no way comparable to a moon shot, which required mainly the mobilization of money, men and facilities to put together in one imposing package the scientific knowledge we already possessed.

Instead, the problem of cancer—or rather the problem of the various cancers—represents a complex, multi-faceted challenge at least as perplexing as the problem of the various infectious diseases.

We do not yet have the single cancer cure. We have barely begun to perceive the fantastic array of causative factors involved in cancer, the methods by which they work and the agencies by which they can be controlled.

We are not yet ready to start a countdown for an anticancer blastoff, no matter what emotional appeal such an approach may have to the public.

On May 11, this year, I introduced with Senator GRIFFIN an administration bill,

S. 1828, which proposed a comprehensive national cancer program to be administered within the National Institutes of Health. It recommended establishment of a cancer conquest program within the National Institutes of Health, headed by an administrator reporting directly to the President. This approach reflected the thinking of the administration that in mounting an accelerated cancer effort, it was extremely important to maintain the relationship between cancer research and other biomedical research, and that this could most effectively be done within the framework of the National Institutes of Health. The President's Science Adviser, Dr. Edward E. David, Jr., had earlier said:

In structuring the [cancer] effort we must take account of the differences between this effort and the Apollo and Manhattan projects. When we embarked on those, Lisa Meitner's demonstration of fission and the launching of Sputnik had already been achieved. In cancer, we do not know whether the critical experiment has yet been done. . . .

It is the President's belief that having honed and sharpened our biomedical research mechanism, the National Institutes of Health, we should now use it and call upon it as we embark on this new adventure. To isolate the cancer effort would prejudice the very outcome we seek. The problem of cancer straddles virtually all the life sciences—molecular biology, biochemistry, virology, pharmacology, toxicology, genetics—any one of these, or all of them, will contribute to the final solutions. No one is wise enough to pick and choose just those components of the total biomedical spectrum that will be vital. Who knows what new discovery will become vital even next year? This aspect presents a stark contrast with Apollo and nuclear energy. Indeed, we do not believe in an AEC or NASA for cancer.

With that background, then, it can be seen that the only real issue presented to the committee was whether the new accelerated cancer program could most effectively be carried out within, or separate from, the National Institutes of Health. S. 1828, as reported, resolves that issue in favor of keeping the program within the National Institutes of Health. It will establish a "Conquest of Cancer Agency" as an independent agency within the National Institutes of Health. The National Cancer Institute will be the nucleus of the new agency. The Director of the Cancer Agency will be directly responsible to the President, and will submit the Agency's annual budget directly to the President, without intervening review by anyone.

The Cancer Conquest Agency would be assisted in carrying out its program by a National Cancer Advisory Board, which would replace the existing National Advisory Cancer Council. The Board would consist of 19 regular members—the Director of the National Institutes of Health, not more than 12 scientists and physicians, and not more than eight laymen. In addition, there would be three ex officio members—the Secretary of Health, Education, and Welfare, the Director of the Cancer Conquest Agency, and the Director of the Office of Science and Technology.

I feel, and I think most members of the committee agree, that S. 1828 is an excellent compromise. It will give the new

cancer program the kind of independence and high visibility it will need to carry out its mission. And, it will do this within the framework of the National Institutes of Health, rather than through a completely separate agency, thus avoiding the isolation of cancer research from other types of biomedical research.

It has been argued that S. 1828 gives the Cancer Agency too much independence, and will lead to fragmentation of the overall biomedical research effort. In this context, it has been suggested that it might be preferable to establish the National Institutes of Health as an independent agency separate from the Department of Health, Education, and Welfare. First, I think it is important to keep in mind that the President, in proposing this legislation, intended not only to give the new cancer program the kind of management and budget independence needed in order to quickly exploit new research opportunities and to mobilize a "total national commitment" against cancer, but also to maintain the integrity of the total biomedical research effort. The President has publicly committed himself to both objectives. I ask unanimous consent that the text of his statement upon introduction of S. 1828 be inserted in the RECORD at this point.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT BY THE PRESIDENT

Cancer has become one of mankind's deadliest and most elusive enemies. The conquest of cancer is one of the most important efforts of our time.

Success will test the very limits of our imagination and our resourcefulness. It will require a high sense of purpose and a strong sense of discipline.

In my message to the Congress on the State of the Union on January 22, 1971, and again in my special message to the Congress concerning a National Health Strategy on February 18, 1971, I expressed my determination to wage a successful campaign against this dread disease. I called upon the Congress to appropriate an additional \$100 million to support such an effort. I am pleased that in recent days the Appropriations' Committees in both the Senate and the House of Representatives have favorably viewed this request and I am hopeful that the House—which votes today—and the Senate will both follow the Committee recommendations.

FEARS AND HOPES ABOUT CANCER

Across the Nation, there is a growing consensus that our vast scientific and technological resources should promptly be marshaled in an unprecedented attack on this devastating disease.

This consensus springs both from fear and from hope.

Cancer is second only to heart disease in the number of lives it takes in this country. And the nature of its ravages makes it our most feared disease. If the present incidence of cancer were to continue some 52 million Americans who are alive today would contract this disease someday. This means that cancer would strike one out of every four individuals in this country—and two out of every three American families. It would mean that in the next ten years alone, three and a half million Americans would die from cancer. For many of its victims, death is a slow and painful process. And for many of their families, the personal tragedy is compounded by the financial implications of a prolonged disease.

At the same time, however, there is much reason for hope.

New vistas are now opening for further research into the treatment and prevention of cancer, the result of some remarkable advances which have been made during the past ten years as we have multiplied many times over our fundamental knowledge in this area. Virus research, for example, has demonstrated that cancer can be produced in animals by over 110 of the nearly 1000 viruses that science has identified. We have learned that animal cancers can be induced by over 1,000 chemical substances. Effective measures for preventing cancer have been developed in animals, and scientists have even demonstrated that human cancers can be prevented by avoiding exposure to certain chemicals. Other advances include new surgical procedures, more effective radiation therapy, and techniques for treating cancer with improved combinations of known drugs.

All of these developments have fueled our hopes and provided a broad frontier of possibilities for researchers in the months and years ahead. This is why I was able to suggest in my special health message to the Congress in February that "of all our research endeavors, cancer research may now be in the best position to benefit from a great infusion of resources."

MORE MONEY AND BETTER ORGANIZATION

The time has now come for us to put our money where our hopes are. In the first full budget developed by this administration last year, an increase of \$20 million was provided for cancer programs. For Fiscal Year 1972, the administration request for cancer programs is slightly over \$332 million—an increase of \$100 million from the 1971 Fiscal Year. If these resources are provided by the Congress, we should be able to finance a new and massive assault on cancer. If it should turn out that we need more money, however, I will not hesitate to ask the Congress to provide whatever funds can be effectively utilized. But I would also emphasize this important point: More money alone will not be enough. Money can help set the stage for faster progress, but in the end it is brainpower alone which can lead us to our goals. This means, of course, that we need to mobilize the intelligence and imagination of our doctors and scientists. And it also means that we must do a better job of tapping the Nation's administrative and organizational skills, which can help remove many roadblocks to success. Our capacities for efficient management were instrumental in our efforts to split the atom and travel to the moon. Now we need to apply those same capacities to the conquest of cancer.

This means, for one thing, that a wide variety of research activities in all parts of the country, in many areas of society and in a great number of disciplines must be carefully coordinated. There must be as much cross-fertilization as possible between various scientific pursuits.

In the past, the National Institutes of Health have had considerable success in fostering such coordination and cooperation and, in the process, they have earned both the respect of the scientific community and the gratitude of thousands who live happier and healthier lives because of NIH successes. It is for this reason that I have asked the Congress to establish a Cancer-Cure Program within the National Institutes of Health, where it can take the fullest advantage of other wide ranging research.

At the same time, it is important that this program be identified as one of our highest priorities, and that its potential for relieving human suffering not be compromised by the familiar dangers of bureaucracy and red tape. For this reason, I am asking the Congress to give the Cancer-Cure Program independent budgetary status and to make its Director responsible directly to the President.

This effort needs the full weight and support of the Presidency to see to it that it moves toward its goals as expeditiously as possible. I am further recommending that this Director be supported by a strong management group which has as its one goal: the cure of cancer—and which can pursue that goal with single-minded tenacity.

In addition, I am recommending that a new Cancer-Cure Advisory Committee be set up to provide a broad range of advice and assistance for the President and for others who lead the Cancer-Cure Program, particularly as they work to set intelligent priorities for the Nation's efforts in this area.

I am pleased to report that the detailed management and administrative mechanisms for carrying out these plans have been discussed in considerable detail within the National Institutes of Health, with experts in the field outside of Government, and in the Office of the Secretary of the Department of Health, Education and Welfare. As these plans are translated into action, I hope that the Congress will comment on them and suggest additional ways in which we can work toward these significant goals.

I would not want to discuss the subject of cancer research, however, without offering a word of caution. Many of the experts that we consulted with told us that biomedical research is a notoriously unpredictable enterprise. Instant breakthroughs are few and the path of progress is strewn with unexpected obstacles. As we undertake this crusade, we must put on the armor of patience, ready to persist in our efforts through a waiting period of unknown and possibly anguishing duration.

Yet I feel confident that with such funding as I have proposed, with such organizations as we are developing, with the dedicated efforts of thousands of men and women from many disciplines, and with the cooperation of the Congress and the people of the United States, we can make great strides against this terrible enemy, bringing new hope for all Americans—and indeed new hope for all the world.

Mr. DOMINICK, Mr. President, his emphasis on coordinating the accelerated cancer effort with other types of research, and on keeping the new program within the National Institutes of Health clearly indicates that he does not intend to permit this legislation to result in fragmentation of biomedical research. Admittedly, an "independent agency within the National Institutes of Health" is an unusual concept. But, the President's personal responsibility for the program, and his commitment to maintaining the coordination between cancer research and other types of research conducted within and supported by the National Institutes of Health, insure that fragmentation of the biomedical research effort will not result. In short, the President has ample power to see that the new cancer program is carried out consistently with his announced objectives.

Moreover, there are several provisions in S. 1828 which will insure continuation of the cross-fertilization and communication between cancer research and other types of biomedical research so highly valued by the scientific community. The Director of the Cancer Conquest Agency is specifically authorized to—

Take necessary action together with the Director of the National Institutes of Health so that all channels for the dissemination and cross-fertilization of scientific knowledge and information [are continued in order] to insure free communication between cancer and the other scientific, medical, and biomedical disciplines.

The bill requires the Director to utilize existing research facilities at the National Institutes of Health. This will mean that central services and facilities on the NIH campus will continue to be shared with other institutes. The Director will also be required to utilize "to the maximum extent possible" the existing peer review mechanisms of the National Institutes of Health. These peer review mechanisms have been key ingredients in the cross-fertilization of knowledge between cancer and other research areas. This provision will insure their continuance.

The fact that the Secretary of Health, Education and Welfare, the Director of the National Institutes of Health, and the Director of the Cancer Conquest Agency will all serve on the National Cancer Advisory Board, will facilitate coordination of the cancer effort with other health programs within the Department of Health, Education and Welfare and the National Institutes of Health. The board will review the cancer agency's annual program plan and budget, and will submit an annual progress report to the President. Although the Director of the National Institutes of Health will not have the authority to veto or change the agency's annual budget, the committee report suggests that he be given the opportunity to evaluate and comment on it to the President. He will also have that opportunity as a full member of the advisory board.

In summary, I believe these provisions of the bill, coupled with the President's commitment to maintain the integrity of the biomedical research effort, will insure that the cancer program will not become isolated.

With regard to the suggestion that the National Institutes of Health be separated from the Department of Health, Education and Welfare, and established as an independent agency, I have only two brief comments. First, I just don't think it makes good sense to completely isolate health research functions from other health functions. Secretary Richardson made this point when he testified before the committee and said:

The idea of establishing the National Institute of Health as an independent agency goes far beyond a proposal to establish a cancer agency reporting directly to the President but within the existing general health framework which includes research, delivery and regulations. It is our position that we must maintain a close organizational relationship between research, which can lead to improved methods for disease prevention, diagnosis and treatment, and health services and regulations. Therefore, we would find it impossible to support a bill which would separate the National Institutes of Health from the Health Services and Mental Health Administration and the Department of Health, Education and Welfare.

Second, since this suggestion was never offered as an amendment in committee, it was not fully explored and developed, as the legislation before us was.

The PRESIDING OFFICER (Mr. BUCKLEY). The time of the Senator has expired.

Mr. DOMINICK. Mr. President, I yield myself an additional 5 minutes.

The PRESIDING OFFICER. The Sen-

ator from Colorado is recognized for an additional 5 minutes.

Mr. DOMINICK. Mr. President, in conclusion, while I believe S. 1828 offers our best hope for solving cancer, it is extremely important that it not create unrealistic expectations of quick success. Cancer is in reality many complex diseases, none of which is yet well understood. There have been several important breakthroughs recently, but more are necessary, and they cannot be forced. There is simply no basis for predicting with any certainty when they will come. It can be stated with certainty, however, that substantially increased effort and resources will shorten the time necessary to achieve those breakthroughs, and this legislation rests on that proposition. I hope it can be enacted quickly.

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. DOMINICK. Mr. President, I would be happy to yield to the Senator from New York, who has done an enormous job on the bill.

Mr. JAVITS. Mr. President, the Senator from Colorado is very kind. I thank the Senator for his very fine words in respect to his advocacy of the pending bill. I shall have my own time to speak, which I am sure the Senator will arrange for me.

Mr. President, I rise to point out that the maturation of this bill and the bringing of it to the floor represents one of the finest acts of statesmanship and cooperation I have seen in this or the other body, and I have served in both for almost a quarter of a century.

I pick this out as a single example. The Senator from Colorado (Mr. DOMINICK) introduced the administration bill. The Senator from Massachusetts and I introduced a bill which implemented the work of a commission which had been provided for by Senate Resolution 376, aided by a distinguished New Yorker, Benno C. Schmidt, who with Dr. Farber, served as cochairmen of the national panel of consultants on the conquest of cancer.

The administration was very firm in its approach through NIH. The Senator from Massachusetts and I were equally convinced that the commission was right. Through the statesmanship of Mr. Schmidt, the Senator from Massachusetts (Mr. KENNEDY), the Senator from Colorado (Mr. DOMINICK), and the administration, we concluded the arrangement and the plan which is incorporated in this bill.

Many people always think that we are very strong-minded and that we want to have our imprimatur on everything and will never yield a single prerogative or permit the name of anyone else to get on a bill except our own names, but in this instance we had to finally prevail on the Senator from Colorado (Mr. DOMINICK) who felt he wanted the Senator from Massachusetts (Mr. KENNEDY) to bring the bill to the floor. It is an extraordinary legislative achievement and I want the Senate and the country to know of it.

Mr. DOMINICK. I thank the Senator. The Senator from New York was one of the moving forces behind this cancer legislation. His contributions have been tremendous. I owe a deep debt of gratitude

to him for his flexibility and for his work in trying to solve the difficult administrative problems we had in the bill on which he has already commented.

The PRESIDING OFFICER. Who yields time?

Mr. KENNEDY. Mr. President, I yield myself 15 minutes.

The PRESIDING OFFICER. The Senator from Massachusetts is recognized.

Mr. BYRD of West Virginia. Mr. President, will the Senator yield for a brief unanimous consent request?

Mr. KENNEDY. I yield.

Mr. BYRD of West Virginia. Mr. President, once again modifying the previous request, I ask unanimous consent that the time on the bill be equally divided and controlled by the Senator from Colorado (Mr. DOMINICK) and the Senator from Massachusetts (Mr. KENNEDY) on the one side and the Senator from Wisconsin (Mr. NELSON) on the other side.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. NELSON. Mr. President, will the Senator from Massachusetts yield for a unanimous consent request?

Mr. KENNEDY. I yield.

Mr. NELSON. Mr. President, I ask unanimous consent that Mr. John Steinberg of the Committee on Labor and Public Welfare be allowed on the floor during the course of this debate.

Mr. BYRD of West Virginia. Mr. President, reserving the right to object, and I shall not object. I understand that this is the fifth member of the committee staff and unanimous consent would, therefore, be necessary.

I do not object.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. KENNEDY. Mr. President, at the outset I wish to express my own deep personal appreciation to the distinguished Senator from Colorado (Mr. DOMINICK), who was a principal sponsor of this legislation. As the Senator from New York (Mr. JAVITS) pointed out, he and I introduced S. 34 earlier this year. That bill was based upon the efforts in the last Congress which were led by the then distinguished chairman of the Health Subcommittee Senator Ralph Yarborough.

Although there was much in both pieces of legislation that was similar, there were rather dramatic and fundamental differences.

I would like to pay tribute to the Senator from Colorado (Mr. DOMINICK) for the work he has done on this legislation and for the interest he has provided in connection with the hearings on the bills. It is because of his active participation that we are where we are today.

In any consideration of legislation of this dimension it is only appropriate that we mention the wonderful leadership that was provided by former Senator Yarborough in this area of the conquest of cancer. It was through his initial efforts that the distinguished panel of cancer consultants was appointed. He took great personal interest in the work and the deliberations of the committee and the panel of consultants.

I have worked extremely closely with the Senator from New York (Mr. JAVITS)

in connection with S. 34. He was extraordinarily attentive in our hearings and to the matters that arose throughout the development of S. 34 and S. 1828. And he was extremely active in working out adjustments and accommodations which led to the bill before us now. His brilliance as a lawyer is reflected in more than one of the sections of the legislation. I think the form of the legislation we are considering today is a great tribute to him and I want to express my warm sense of appreciation to him for his efforts.

Mr. President, the Senator from Colorado (Mr. DOMINICK) has outlined in considerable detail where we are this afternoon in considering this piece of legislation. I think the report that has been made available to the Membership is one of the most comprehensive reports that has ever come out of the Subcommittee on Health. It goes into the various recommendations made by the panel of consultants, and it goes into them in considerable detail. I am hopeful that the report will reflect the interest of those who share in the support of S. 1828 as well as allay the concerns of those who raised questions about the bill. The separate and individual views speak for themselves.

I know Senator NELSON will discuss certain matters about which he is concerned and I hope to be able to respond to those points.

We have a special piece of legislation before us in the Senate this afternoon. It is a special piece of legislation because the conquest of cancer is a special problem of such enormous concern to all Americans. We can quote statistics, but I think every one of us in this body, and most families across the country have been touched by this disease one way or another. There are 200 million Americans today, 50 million of those people alive today will contract cancer, and 35 million of them will die from it unless progress is made. This number is twice the size of the population of the New England States. If we had a natural disaster of those dimensions, we consider it to be intolerable.

While we may be able to refer to the fact that other health diseases might strike down more Americans, I do not think there is any disease Americans genuinely fear more or are more concerned about than cancer. We have to recognize that fact.

I think one of the most interesting revelations of the cancer panel was that we are medically advanced to the point where an individual organization with special funding, special managerial technique, and special programming, may well have rather dramatic impact in combating this dreaded scourge. I think the way this panel went about justifying that position has been reaffirmed in the last week or 10 days with the recent discoveries in the cancer field regarding the isolation of a virus which may cause certain cancers in human beings.

The most distinguished laymen and scientific personnel feel that with the kind of significant advances made to date, more significant advances are

ahead if we are willing to take the steps outlined in S. 1828.

Next, the panel of experts, chaired by Mr. Benno Schmidt and Dr. Sidney Farber, as well as laymen, scientists, and others concerned with cancer, have recommended the procedure of establishing an independent agency with separate programming, separate managerial skills, separate budgeting and direct line authority to the President and the Congress, but within the NIH.

We had a series of hearings in March and June of this year. We listened to the panel of consultants. We listened to the AAMC, the spokesmen for the medical schools. We listened to those who would be most affected by this program in NIH. And we listened to the most eloquent testimony of the Secretary of HEW.

One of the reasons why we are where we are today is the great interest of the President of the United States in cancer. In several Presidential messages he has stated that cancer was the one area on which he would focus attention with great specificity. He has stated he will request of the Congress whatever funds are necessary in order to conquer cancer. And the President of the United States has indicated his support for an independent type of agency with direct line authority to him. This was, of course, very heartening.

So, with the interest of the President, and with the inclusion in the report of the endorsement of the Secretary of HEW as to whether this would be a workable procedure, and with the support of the panel of experts, I think we can now proceed. I think all Americans are indebted to the panel, made up of men and women who have given of their time and interest to the problems of cancer, who gave weeks and months to the development of the panel report, a panel which I think represents the best in government, in which busy people in private life are willing to put aside their own businesses and tax their talents to developing a report such as this, and to continue to support it and help Congress, and particularly those on the health subcommittee, to fashion this legislation. We are very much indebted to these ladies and gentlemen.

Mr. President, today the Senate has the opportunity to authorize landmark legislation. As reported by the Senate Committee on Labor and Public Welfare, the Conquest of Cancer Act would enable the President to initiate a bold program aimed at the eventual conquest of this dread disease.

The background of this legislation, Mr. President, began in March of 1970 with the introduction of Senate Resolution 376, which called for a study of cancer, cancer research and the causes and cures of cancer. Underlying the broad-based support for that resolution was:

First, that cancer is the No. 1 health concern of the American people. It is the disease most dreaded by a majority of Americans, and its incidence is increasing. According to current statistics, of the 200 million Americans alive today, 50 million will be afflicted by some type of cancer, and 34 million will die of it, if

better methods of prevention and treatment are not discovered;

Second, that recent advances in cancer research have brought this field to the verge of important and exciting developments in the early detection and possible control of this dread disease; and

Finally, that as a Nation we are neither putting forth the effort nor deploying the resources needed to exploit the full potential of these gains against cancer.

To assist in carrying out the new cancer study required by Senate Resolution 376, the Senate Labor and Public Welfare Committee established in June 1970, a panel of consultants on the conquest of cancer, composed of 13 eminent laymen and 13 eminent scientists, chaired by Mr. Benno C. Schmidt, managing partner of J. H. Whitney and Co., New York City, and with Dr. Sidney Farber, founder and scientific director, Children's Cancer Research Foundation, Boston, as cochairman.

As the panel began its deliberations, a further resolution from the Congress underlined the importance of the study undertaken: On July 15, 1970, the House of Representatives passed Concurrent Resolution 675, later passed by the Senate, expressing the unanimous sense of the Congress that "the Conquest of Cancer is a national crusade" and that "the Congress should appropriate the necessary funds so that the citizens of this land and all other lands may be delivered from the greatest medical scourge in history."

The report of the panel of consultants, entitled "A National Program for the Conquest of Cancer" was transmitted to the Committee on Labor and Public Welfare on November 25, 1970. Part I of the panel's report provides a brief summary of the cancer problem, identifies areas of special promise which offer unusual opportunities for intensified effort, and states the recommendations of the committee. The second part of the report sets forth the scientific and medical background in more detail.

Briefly, Mr. President, the special panel of consultants recommended:

First, that there be created an effective administration with clearly defined authority and responsibility;

Second, that there be created a comprehensive plan for a coherent and systematic attack on cancer, and

Third, that the necessary financial resources be made available.

At the end of my statement I shall include for the record the brief summary of the panel's recommendations.

At the beginning of the 91st Congress, I introduced S. 34 along with the distinguished ranking minority member of the Senate Labor Committee, Mr. JAVRS. S. 34 was designed to implement the recommendation of the special panel of consultants. It was cosponsored by more than half of the entire U.S. Senate. Briefly, S. 34 proposed:

First, that the prevention, diagnosis, and cure of cancer be declared of the highest national priority;

Second, that an independent cancer

authority be established to conduct and support research on cancer, and to collect and disseminate information on cancer to the public and scientific community;

Third, that a national plan be submitted to the Congress, through the President, for the conquest of cancer which would include: measures to be taken in combating cancer; a timetable for the accomplishment of the measure; cost estimates for major portions of the plan.

Fourth, that an 18-member National Cancer Advisory Board be approved by the President with the concurrence of the Senate to advise and assist the administrator of the cancer authority.

As a part of his state of the Union message and in an additional message, the President has demonstrated his strong support for a major effort to conquer cancer essentially consistent with the recommendations of the special panel of consultants and S. 34. For example, in his special message of May 11, the President stated:

In the past, the National Institutes of Health have had considerable success in fostering such coordination and cooperation and, in the process, they have earned both the respect of the scientific community and the gratitude of thousands who live happier and healthier lives because of NIH successes. It is for this reason that I have asked the Congress to establish a Cancer-Cure Program within the National Institutes of Health, where it can take the fullest advantage of other wide-ranging research.

At the same time, it is important that this program be identified as one of our highest priorities, and that its potential for relieving human suffering not be compromised by the familiar dangers of bureaucracy and red-tape. For this reason, I am asking the Congress to give the Cancer-Cure Program independent budgetary status and to make its Director responsible directly to the President. This effort needs the full weight and support of the Presidency to see to it that it moves toward its goals as expeditiously as possible. I am further recommending that this Director be supported by a strong management group which has as its one goal the cure of cancer, and which can pursue that goal with single-minded tenacity.

At the end of my statement, Mr. President, I shall include for the RECORD a copy of the President's statements.

Subsequent to the President's statement, Senator DOMINICK, the esteemed ranking minority member of the Health Subcommittee, introduced S. 1828 on behalf of the administration.

Public hearings on the bills were held in March and in June of this year. A wide range of witnesses, including the administration, the Association of American Medical Colleges, and the special panel of consultants, testified in support of the basic objective which underlies both bills—to substantially enhance this Nation's commitment to the conquest of cancer at the earliest possible time.

Within the context of that broad consensus though, there has been considerable discussion in respect to the best organizational manner in which to implement the program envisioned by both bills. Specifically, Mr. President, there are those, particularly within the academic scientific community, who were alarmed at the notion of the creation of a separate agency of the Government to im-

plement the cancer program. To a substantial degree, their concerns go to the need to insure the viability of the National Institutes of Health as the lead agency for the support of biomedical research. In addition, there was concern that the new program might not rely upon the principle of scientific peer review which has characterized the NIH since its creation in 1937; and that the new agency might well be precedent-setting, thereby inevitably leading to the creation of a host of additional, separate programs with the attendant destruction of the NIH.

Now, Mr. President, the bill as reported by the committee deals with each of these concerns.

First, the most vexing question has been the organizational location of the new program. S. 34 envisioned the creation of a National Cancer Authority outside of the Department of Health, Education and Welfare, but with close substantive relationship with the NIH. S. 1828 as introduced called for the creation of a cancer cure program within the NIH, but reporting to the President except with respect to those functions as the President might delegate to the Secretary of HEW.

The bill as reported by the committee combines the best of both of those proposals. It calls for the creation of a Conquest of Cancer Agency within the NIH, but with direct access to the President and the Congress with respect to all matters of policy and substance. The committee's action in this matter, supported by the President himself, is deliberately designed to assure the closest cooperation between the programs of the new agency and the NIH, while simultaneously assuring the independence of management, planning, budgeting, and the assessment of priorities which are requisite to a successful program to conquer cancer as quickly as possible. Only the President of the United States has the authority to mandate this unique organizational pattern. And the President has given the American people his assurance in this regard.

Second, the bill and its accompanying report make it crystal clear that it is—and always was—the committee's intention to preserve and enhance the excellence that is the National Institutes of Health. Every member of the committee shares that view. No nation on earth can challenge the preeminence of the United States regarding the generation of biomedical knowledge.

Clearly, the NIH and its grantee institutions are principally responsible for that unquestioned preeminence. In large measure, the evolution of a scientific system of peer review has assured the quality and scientific merit of the research which the NIH has sponsored. Since the creation of the NIH in 1937, the peer review process has been an essential element in the NIH equation of excellence. That process has been successful because it has been appropriately modified as the scope of the NIH has increased since 1937. The committee expects that the objectivity, impartiality, and vigilance of outside peer review that has characterized the NIH over the past 34 years will

also characterize the activities of the Conquest of Cancer Agency.

To a considerable extent the committee has recommended that the Conquest of Cancer Agency be within the NIH in order that its programs and those of the NIH can have a synergistic effect upon one another. The committee's bill specifically deals with the interrelatedness of the substantive programs of the NIH and those proposed to be undertaken by the Conquest of Cancer Agency. For example, the director of the Agency is authorized to:

First, take necessary action together with the Director of the National Institutes of Health so that all channels for the dissemination and cross-fertilization of scientific knowledge and information existing prior to the effective date of this act between the National Cancer Institute and the other Institutes of Health shall be maintained between the Agency and the Institutes of Health to insure free communication between cancer and other scientific, medical, and biomedical disciplines; and

Second, by regulation, provide for proper scientific review of all research grants and programs over which he has authority; first, by utilizing, to the maximum extent possible, appropriate peer review groups within the National Institutes of Health, and second, when appropriate, by establishing, with the approval of the cancer advisory board, other formal peer review groups as may be required. Furthermore, the National Cancer Advisory Board, authorized by section 407G of the bill, shall:

First, include the Director of the NIH as a member; and

Second, insure that the Director of the Conquest of Cancer Agency, by regulations, maintains scientific peer review of research grants and programs.

The committee understands and expects that the Directors of the NIH and the Conquest of Cancer Agency, as well as their respective staffs, shall work in comity with one another. For example, the committee intends that the Director of the Agency will make available to the Director of the NIH a copy of the Agency's budget and program plan not later than the time of its submission to the President.

Mr. President, I also want the record to be clear on the fact that there is reason to believe that a broader and more systematic attack on cancer will increase the likelihood that a major breakthrough can be made. Just last week there was reported the research results of Dr. Leon Dmochowski and his associates at the M.D. Anderson Hospital and Tumor Clinic in Houston, Tex. His group has for the first time succeeded in isolating and growing in large quantities of the virus that has been associated with certain types of human cancer, such as leukemia, and which is known to be causative in producing certain animal leukemias. This achievement will now permit studies in man to further pin down the likelihood as to whether this virus is in fact causative for a human cancer. Such studies should lead to control measures for prevention.

Mr. President, this discovery is analogous to the elucidation of the EB virus a few years ago with regard to another of the cancers—Burkitt's lymphoma. Each of these efforts has been sponsored by the special cancer virus program of the National Cancer Institute, and this program will be one which may well provide powerful insights into the mysteries of cancer.

Mr. President, cancer experts have defined a number of areas which are deserving of a special effort. And I am including at the end of my statement a description of some of the broad areas which the Conquest of Cancer Agency will probably want to vigorously explore.

Finally, Mr. President, there is the concern that the creation of this Agency within the NIH will somehow inevitably lead to the destruction of the NIH as a result of analogous efforts for a whole host of other diseases, the most prominent of which is heart disease. The committee was fully aware of that concern at the time of its public hearings and executive sessions. In that regard, I want to quote briefly from the committee's report on the bill because we have dealt with this matter in our report:

The Committee, in recommending this far-reaching program for the Conquest of Cancer, has not attempted to reach any conclusions with respect to the applicability of its approach to other diseases. The Committee has had no opportunity to consider that question. No hearing record or legislative record with regard to any other diseases has yet been made. This unique approach we are now recommending for cancer amounts, at this point, to an empirical proposition. Prudence requires that there be an adequate opportunity for assessment of this program before considering whether to extend its approach to other critically important diseases.

In summary, Mr. President, this is an excellent bill. It is the product of intensive efforts of both distinguished private citizens and scientists, working in concert with the members of the Senate Health Subcommittee. The provisions of the bill before the Senate today come largely from S. 34 as it was introduced earlier this year. The modifications which have been included have improved the bill and should allay the concerns which have been raised as the committee worked on the bill.

The important thing is that the American people want action on the cancer front, and they want action now. The Senate has an opportunity to set in motion a series of events which is likely to benefit millions upon millions of people throughout the world. Surely this is an effort in which we can all take pride. I urge my colleagues to vote for the passage of S. 1828 as reported.

I ask unanimous consent to have printed in the RECORD a portion of the committee report concerning the Report of the Panel of Consultants and President Nixon's statement of May 11, 1971, regarding a national cancer cure program.

There being no objection, the extract and statement were ordered to be printed in the RECORD, as follows:

REPORT OF THE PANEL OF CONSULTANTS

The Report of the Panel of Consultants, entitled "A National Program for the Conquest of Cancer" was transmitted to the Com-

mittee on Labor and Public Welfare on November 25, 1970. The Report (Report No. 91-1402, 91st Congress, 2nd Session) was ordered to be printed on December 4, 1970. On April 14, 1971, it was ordered to be re-printed with illustrations, as Senate Document No. 92-9.

Part I of the Panel's Report provides a brief summary of the cancer problem, identifies areas of special promise which offer unusual opportunities for intensified effort, and states the recommendations of the Committee. The second part of the Report sets forth the scientific and medical background in more detail.

The principal findings and recommendations of the Panel were as follows:

1. Cancer is the No. 1 health concern of the American people. A poll conducted in 1968 showed that 62 percent of the public feared cancer more than any other disease. Of the 200 million Americans alive today, 50 million will develop cancer at present rates of incidence, and 34 million will die of this painful and often ugly disease, if better methods of prevention and treatment are not discovered. About one-half of cancer deaths occur before the age of 65, and cancer causes more deaths among children under age 15 than any other disease. Over 16 percent of all deaths in the United States are caused by cancer, making it by a wide margin our second greatest killer (after cardiovascular diseases). Cancer often strikes as harshly at human dignity as at human life, and more often than not it represents financial catastrophe for the family in which it strikes.

2. The amount spent on cancer research is grossly inadequate today. For every man, woman, and child in the United States, we spent in 1969: \$410 on national defense; \$125 on the war in Vietnam; \$19 on the space program; \$19 on foreign aid and only \$0.89 on cancer research. Cancer deaths last year were 8 times the number of lives lost in 6 years in Vietnam, 5½ times the number killed in automobile accidents, and greater than the number of Americans killed in battle in all 4 years of World War II. Given the seriousness of the cancer problem to the health and morale of our society, this allocation of national priorities seems open to serious question. In addition to the poignancy of the disease, and the death and suffering that it causes, the economic loss is staggering, with estimates of its costs to the Nation running as high as \$15 billion per year, of which some \$3 to \$5 billion represents direct care and treatment costs and the balance is loss of earning power and productivity.

3. The incidence of cancer is increasing. This is partly due to the fact that a greater number of our citizens are reaching more advanced ages, where cancer strikes more frequently, but it is also due to the sharp increase in lung cancer, undoubtedly attributable to the air pollution in certain environments and most importantly to the self-pollution of those who smoke cigarettes. It is estimated that if the American people stopped smoking cigarettes this alone would eliminate about 15 percent of all cancer deaths.

4. The nature of cancer is not yet fully known. We know that human cancers are caused by certain chemicals, by certain types of radiation, and probably by viruses. The precise mechanisms by which these carcinogenic agents cause, or interact to cause, cancer is not known, and very little is known about the natural defense mechanisms that prevent cancer in some cases and not in others. A great deal more must be learned about chemical carcinogens, radiation, and viruses, and how they work. We must also learn more about what takes place at the cellular level when cancer occurs. There is very strong suggestive evidence that viruses cause some human cancers, but which viruses, how they are transmitted, and how they operate are unknown. It is erroneous to think of cancer as a single disease with a

single cause that will be subject to a single form of immunization (as in the case of polio) or a single cure. Cancer comprises many diseases and results from a variety of causes that will have to be dealt with in a variety of ways. However, as our knowledge is expanded, more and more cancers will become preventable or curable.

5. The cure rate for cancer is gradually improving. In 1930 we were able to cure only about one case in five; today we cure one case in three; and it is estimated that the cure rate could be brought close to one in two by a better application of knowledge which exists today, i.e. detection at an earlier stage through the more widespread use of existing techniques (such as the Papanicolaou test for women and mammography), coupled with an extension to all citizens of the same quality of diagnosis and treatment now available at the best treatment centers. There are three methods for curing cancer today; surgery, radiation therapy, and chemotherapy. Often two or even three of these methods are used in combination. Some types of cancer are far more curable than others. For example, early breast cancer treated by surgery, cancer of the cervix by radiation or surgery, and choriocarcinoma and Burkitt's tumor by chemotherapy, are among those most susceptible to cure today. Treatment techniques are improving markedly, particularly in radiation therapy and chemotherapy, and more widespread availability of the best quality detection and treatment will give us more and more cures. However, it is still true that those cancers which disseminate rapidly are seldom curable today, and this represents a major gap in our existing knowledge. Where we stand today in our knowledge of the causes, nature, prevention, diagnosis, treatment, and control of cancer is set forth in detail in part II of this report.

6. There have been major advances in the fundamental knowledge of cancer in the past decade, and these advances in knowledge have opened up far more promising areas for intensive investigation than have ever heretofore existed. These areas of special promise must be explored with vigor, if we are to exploit the great opportunities that lie before us. They are examined in detail in part II of this report.

Among the areas of special promise which must be aggressively pursued are:

- (a) The identification and study of the chemical, physical, and other environmental factors that cause cancer (food additives, air pollutants, industrial hazards, radiation, and other carcinogens);
- (b) Viruses causing cancer (what viruses cause cancer, how are they transmitted, and how do they act);
- (c) Cell and tumor biology (including cell surface phenomena, molecular functions, differentiation and genic expression, controls of cell division mechanisms of metastasis, nutritional requirements and other biological factors);
- (d) Immunology (host resistance against cancer, its nature, causes and therapeutic use);
- (e) Epidemiology (the variables in cancer incidence and types stemming from geographic, social, economic, nutritional, occupational, and constitutional differences);
- (f) Cancer prevention (more effective utilization of existing knowledge and intensified research on preventive measures);
- (g) Diagnosis (the development of new and improved diagnostic techniques);
- (h) Chemotherapy (the development of new and better drugs and improvement in their uses);
- (i) Radiotherapy (development of new and better techniques and apparatus for radiation therapy);
- (j) Surgery (the best techniques in cancer surgery coupled with earlier diagnosis must be made generally available in order to fur-

ther increase the cure of cancer. Better rehabilitation techniques must be further developed and utilized to return the cancer patient to an active and full life);

(k) Combinations of treatment modalities (improvement in treatment results by better combinations of surgery, radiotherapy, chemotherapy, and immunotherapy).

7. A national program for the conquest of cancer is now essential if we are to exploit effectively the great opportunities which are presented as a result of recent advances in our knowledge. However, such a program will require three major ingredients that are not present today:

First, effective administration with clearly defined authority and responsibility;

Second, the development of a comprehensive national plan for a coherent and systematic attack on the vastly complex problems of cancer. Such a plan would include not only programmatic research where that is appropriate, but also major segments of much more loosely coordinated research where plans cannot be definitively laid out nor long-range objectives clearly specified; and

Third, the necessary financial resources.

At the present time there is no coordinated national program or program plan. The National Cancer Institute has done excellent work itself and has supported grants and contracts in the scientific community which have resulted in much outstanding work, but the overall research effort is fragmented and, for the most part, uncoordinated. The effort in cancer should now be expanded and intensified under an effective administration charged with developing and executing a comprehensive national plan for the conquest of cancer at the earliest possible time. The three foregoing elements are considered separately in more detail in the succeeding paragraphs 8, 9, and 10.

8. *Administration.*—An effective major assault on cancer requires an administrative setup which can efficiently administer the coherent program that is required in this formidable and complex scientific field. Such a setup will not be easy to achieve within the Federal Government. The effective implementation of such a program will require a simplification of organization arrangements and a drastic reduction in the number of people involved in administrative decisions. This type of straight-line organizational efficiency does not exist today in the National Cancer Institute, the National Institutes of Health, or the Department of Health, Education, and Welfare. Obviously, from many standpoints it can be argued that any cancer programs should be in the Department of Health, Education, and Welfare and indeed that it should be in the National Institutes of Health. However, there is real doubt whether the kind of organization that is required for this program can in fact be achieved within the National Institutes of Health or within the Department of Health, Education, and Welfare. Apart from the question of whether it can be done, there is also the question of whether it would be wise to require the Secretary of Health, Education, and Welfare to attempt to give cancer the priority necessary to carry out the congressional mandate in a department charged with the multiple health and other responsibilities of that Department.

In the past when the Federal Government has desired to give top priority to a major scientific project of the magnitude of that involved in the conquest of cancer, it has on occasion, with considerable success, given the responsibility for the project to an independent agency. Such an agency provides a degree of independence in management, planning, budget presentation, and assessment of progress which is difficult if not impossible to achieve in a large government department. Accordingly, if the Congress and the administration are truly committed to making the conquest of cancer a "national crusade", as

expressed in the concurrent resolution of the Congress, it is the view of the Committee that a National Cancer Authority should be established whose mission is defined by statute to be the conquest of cancer at the earliest possible time. All the functions, personnel, facilities, appropriations, programs, and authorities of the National Cancer Institute should be transferred to the National Cancer Authority. The Authority should be headed by an Administrator appointed by the President with the advice and consent of the Senate, and he should report directly to the President and present his budgets and programs to the Congress. In considering the feasibility of an independent agency, it should be borne in mind that we are talking about a major scientific program and, as pointed out in subsequent paragraphs, not the delivery of patient care generally in cancer cases. The only patient care involved in this program will be that associated with clinical research and teaching and the development and demonstration of improved methods in the delivery of patient care undertaken as a part of the comprehensive program plan.

The powers of such a National Cancer Authority should be very broadly defined in order to accomplish a mission of this complexity. It would not be useful to attempt to enumerate here all the powers that such an Authority should have and in the writing of the implementing legislation, the Committee believes that the powers should be broadly defined and not enumerated. However, the following are illustrative of the kinds of powers which the National Cancer Authority will have to be able to exercise in order to carry out a comprehensive program of the type envisaged:

(a) The power to enter into prime contracts with authority in the prime contractor to enter into subcontracts;

(b) The power to commit available funds until expended rather than on a year-to-year basis;

(c) The power to authorize exceptions to existing regulations, where necessary, to permit the use of experimental drugs, biologicals, and devices in cancer research;

(d) The power to establish or support the large-scale production of specialized biological materials for cancer research, such as viruses, cell cultures, animals, and the like, as well as the power to set standards of safety and care for those using such materials;

(e) The power to support research outside the United States by highly qualified foreign nationals, collaborative research involving American and foreign participants, and training of American scientists abroad and foreign scientists in the United States, to the extent that such activities will promote the accomplishment of the mission. The Committee believes that cancer research offers a particularly fruitful field for collaboration with other nations, including those nations with whom present cooperation is limited but with whom greater collaboration is desired;

(f) The power to fund by loan, grant, contract, or otherwise any facilities or programs, or to take such other actions, as may be required for the accomplishment of the mission.

9. *Program plan.*—A comprehensive national plan for the conquest of cancer should be developed as promptly as possible. The development of a coherent overall program plan should include the following features:

(a) The present research activities now being carried forward under the National Cancer Institute should in no way be impeded or interrupted while plans are being made for the expansion, intensification, and coordination of the cancer research program;

(b) Existing research facilities and manpower should be used as promptly as possible for the accelerated exploitation of the

opportunities in the areas of special promise. There is substantial unused capacity in this country today that should be utilized in order to attract and retain the manpower that is needed. It is a myth that we could not spend effectively on cancer very much more than is now being spent. The fact that Federal support for cancer research has leveled off since 1967 and that, due to inflation, the actual amount of work done has decreased, has created a serious gap between what we are doing now and what we could and should be doing in cancer research. It is estimated that current expenditures could be doubled within the framework of the existing facilities and manpower potential of this country today, exclusive of the great industrial research capability in this field which should be brought to bear on an appreciable scale in high priority areas to which this type of capability is particularly suited.

(c) Existing cancer centers should be strengthened and additional cancer centers in different parts of the country should be created. The solution of the cancer problem lends itself to a multidisciplinary effort, where teams of highly qualified specialists are available to interact on problems of research, both clinical and nonclinical, teaching, diagnosis, preventive programs, and the development of improved methods in the delivery of patient care, including rehabilitation. Among those who work in the cancer field, there is great emphasis on the advantages of critical mass—a critical mass of scientists and physicians committed to the cooperative solution of the cancer problem, of research facilities, of patients, and of financial and other resources. This is simply another way of saying that the comprehensive cancer center offers the best organizational structure for the expanded attack on cancer. In addition to the few comprehensive cancer centers that exist in the United States today, there are a number of other institutions which combine all or most of the capabilities for a multidisciplinary effort in cancer. These could serve as a base for the creation of additional centers. The new centers should have appropriate geographic distribution and should, wherever possible, be created where a nucleus of scientific, professional and managerial personnel already exists and preferably where a university or a medical school affiliation exists or is planned.

In the creation of new cancer centers, manpower limitations should be taken into account, and new centers should not be created where there would be a dilution in the effectiveness of existing centers which would offset any gain from the new center. There should be a realistic operating plan for each center which assures the scientific and managerial commitment and ability necessary to the creation and operation of a successful center.

It should be emphasized that the strengthening of existing cancer centers and the creation of new cancer centers does not mean that under this program general responsibility should be undertaken for the care of the Nation's cancer patients. The delivery of patient care in cancer cases is a part of the general problem of the delivery of patient care and should be so dealt with. However, this inhibition must not prevent the cancer centers from including such patient care facilities as are necessary for clinical research and teaching and for the development and demonstration of the best methods of treatment in cancer cases.

(d) The cancer centers should also serve as administrative coordinators of those programs which require regional coordination. Such centers should support and assist clinics and community medical centers in their own geographic areas in order to assure the widespread use of the best available methods for

early detection and treatment of cancer. They should also serve to collect data useful in the prevention and cure of cancer, including patient follow-up information, and be responsible for the dissemination of information, both at the lay and professional levels, that is useful in the prevention, diagnosis and cure of cancer. The effective dissemination and utilization of such information is a most important part of any national plan to conquer cancer.

(e) A national plan of the type envisaged must take account of the manpower requirements for this effort. There is a critical need for training and career opportunities for young scientists, physicians, and other personnel in this program. We must reaffirm to young investigators our confidence in the future of American science and in our national dedication to success in the conquest of cancer. A manpower program in this field should include training stipends, predoctoral fellowships for particularly promising candidates, postdoctoral fellowships for brilliant investigators, and career positions where appropriate through career initiation awards, career development awards, and senior career awards.

(f) A national plan for the conquest of cancer should provide for the generous use of grants as well as contracts and other methods of funding. There should be increased emphasis on the grants mechanism in order to stimulate continued independent exploration, particularly in those areas where knowledge is not sufficiently mature for a coordinated program aimed at reaching defined objectives.

(g) A comprehensive national program requires optimum communication and centralized banks of information. There must be an accurate and prompt information flow in both directions. This will call for integrated data processing, storage, and retrieval in order to rationalize the decision-making and to make information available when and where needed. As indicated above, the centers can be important foci in both the collection and dissemination of this information.

(h) A coordinated national program plan should, to the greatest possible extent, be generated by the voluntary productive interaction and joint planning of the scientists who will be responsible for doing the work. The program should not be the result of the happenstance of a multitude of random decisions independently arrived at. An integrated and coherent plan resulting from the joint effort of representative scientists who will be responsible for its execution is fundamentally different from the hierarchical imposition or direction of a research program from above. However, the effective use of collective planning does not mean that centralized administration or management of resources should be sacrificed.

10. *Funding.*—The Committee estimates that a coordinated national program aimed at the conquest of cancer at the earliest possible time, as envisaged by the concurrent resolution of the Congress, would require an appropriation in fiscal 1972 of approximately \$400 million. Thereafter, the cost of the program would increase at the rate of approximately \$100 to \$150 million per year, reaching a level of \$600 million to \$1 billion in 1976. These sums are not large in terms of our national resources or of the human suffering and economic loss attributable to cancer. A program of the type herein recommended is so important to the American people and to the world that we feel that the amounts called for should be provided even if this necessitates the raising of additional revenues. It is of utmost importance that the financing of this program not result in cutbacks in other health programs.

11. *National Cancer Advisory Board.*—Both the public and the scientific community must be effectively represented in this effort, and must have a part in its planning as well as

its execution. To this end, a National Cancer Advisory Board should be created with 18 members, nine of whom are distinguished scientists and doctors in the field of cancer, and nine of whom are distinguished laymen. The members should serve for a term of 6 years with the terms of one-third of the members expiring every 2 years. Members of the Board should be appointed by the President of the United States with the advice and consent of the Senate. The Chairman of the Board should be elected by the members and should serve for a term of 2 years. The Board should meet not less than once each quarter and its function should be to advise and assist the National Cancer Authority and its Administrator in the development and execution of the program. The Administrator should be an ex-officio member of the Board. The Board should have statutory responsibility for the approval of each year's program plan and budget, but the responsibility for administering the program should rest with the Administrator. The Board should have full investigatory powers and should be required to report once each year to the President and the Congress on the progress of the National Cancer Authority in the accomplishment of its mission. This Board should supersede the presently existing National Advisory Cancer Council, and the members of that Council should serve as additional members of the National Cancer Advisory Board for the duration of their present terms.

12. Cancer is an implacable foe and the difficulty of eliminating it as a major disease must not be underestimated. A top priority commitment by the Congress, the President, and the American people is required if we are to mount and sustain an assault on cancer of the magnitude envisaged by Senate Resolution 376 and the concurrent resolution of the Congress. Such a commitment involves a recognition not only of the difficulty and complexity of cancer but also of the time and resources required to attack it effectively. While it is probably unrealistic at this time to talk about the total elimination of cancer within a short period of time or to expect a single vaccine or cure that will eradicate the disease completely, the progress that has been made in the past decade provides a strong basis for the belief that an accelerated and intensified assault on cancer at this time will produce extraordinary rewards. The Committee is unanimously of the view that an effective national program for the conquest of cancer should be promptly initiated and relentlessly pursued.

PRESIDENT NIXON'S STATEMENT OF MAY 11, 1971, REGARDING A NATIONAL CANCER CURE PROGRAM

Cancer has become one of mankind's deadliest and most elusive enemies. The conquest of cancer is one of the most important efforts of our time.

Success will test the very limits of our imagination and our resourcefulness. It will require a high sense of purpose and a strong sense of discipline.

In my message to the Congress on the State of the Union on January 22, 1971, and again in my special message to the Congress concerning a National Health Strategy on February 18, 1971, I expressed my determination to wage a successful campaign against this dread disease. I called upon the Congress to appropriate an additional \$100 million to support such an effort. I am pleased that in recent days the Appropriations Committees in both the Senate and the House of Representatives have favorably viewed this request and I am hopeful that the House—which votes today—and the Senate will both follow the Committee recommendations.

FEARS AND HOPES ABOUT CANCER

Across the Nation, there is a growing consensus that our vast scientific and technological resources should promptly be mar-

shaled in an unprecedented attack on this devastating disease.

This consensus springs both from fear and from hope.

Cancer is second only to heart disease in the number of lives it takes in this country. And the nature of its ravages makes it our most feared disease. If the present incidence of cancer were to continue, some 52 million Americans who are alive today would contract this disease someday. This means that cancer would strike one out of every four individuals in this country—and two out of every three American families. It would mean that in the next 10 years alone, 3½ million Americans would die from cancer. For many of its victims, death is a slow and painful process. And for many of their families, the personal tragedy is compounded by the financial implications of a prolonged disease.

At the same time, however, there is much reason for hope.

New vistas are now opening for further research into the treatment and prevention of cancer, the result of some remarkable advances which have been made during the past 10 years as we have multiplied many times over our fundamental knowledge in this area. Virus research, for example, has demonstrated that cancer can be produced in animals by over 110 of the nearly 1,000 viruses that science has identified. We have learned that animal cancers can be induced by over 1,000 chemical substances. Effective measures for preventing cancer have been developed in animals, and scientists have even demonstrated that human cancers can be prevented by avoiding exposure to certain chemicals. Other advances include new surgical procedures, more effective radiation therapy, and techniques for treating cancer with improved combinations of known drugs.

All of these developments have fueled our hopes and provided a broad frontier of possibilities for researchers in the months and years ahead. This is why I was able to suggest in my special health message to the Congress in February that "of all our research endeavors, cancer research may now be in the best position to benefit from a great infusion of resources."

MORE MONEY AND BETTER ORGANIZATIONS

The time has now come for us to put our money where our hopes are. In the first full budget developed by this Administration last year, an increase of \$20 million was provided for cancer programs. For fiscal year 1972, the administration request for cancer programs is slightly over \$332 million—an increase of \$100 million from the 1971 fiscal year. If these resources are provided by the Congress, we should be able to finance a new and massive assault on cancer. If it should turn out that we need more money, however, I will not hesitate to ask the Congress to provide whatever funds can be effectively utilized. But I would also emphasize this important point: More money alone will not be enough. Money can help set the stage for faster progress, but in the end it is brainpower alone which can lead us to our goals. This means, of course, that we need to mobilize the intelligence and imagination of our doctors and scientists. And it also means that we must do a better job of tapping the Nation's administrative and organizational skills, which can help remove many roadblocks to success. Our capacities for efficient management were instrumental in our efforts to split the atom and travel to the moon. Now we need to apply those same capacities to the conquest of cancer.

This means, for one thing, that a wide variety of research activities in all parts of the country, in many areas of society, and in a great number of disciplines must be carefully coordinated. There must be as much cross-fertilization as possible between various scientific pursuits.

In the past, the National Institutes of Health have had considerable success in fostering such coordination and cooperation and, in the process, they have earned both the respect of the scientific community and the gratitude of thousands who live happier and healthier lives because of NIH successes. It is for this reason that I have asked the Congress to establish a Cancer-Cure Program within the National Institutes of Health, where it can take the fullest advantage of other wide-ranging research.

At the same time, it is important that this program be identified as one of our highest priorities, and that its potential for relieving human suffering not be compromised by the familiar dangers of bureaucracy and red-tape. For this reason, I am asking the Congress to give the Cancer-Cure Program independent budgetary status and to make its Director responsible directly to the President. This effort needs the full weight and support of the Presidency to see to it that it moves toward its goals as expeditiously as possible. I am further recommending that this Director be supported by a strong management group which has as its one goal the cure of cancer, and which can pursue that goal with single-minded tenacity.

In addition, I am recommending that a new Cancer-Cure Advisory Committee be set up to provide a broad range of advice and assistance for the President and for others who lead the Cancer-Cure Program, particularly as they work to set intelligent priorities for the Nation's efforts in this area.

I am pleased to report that the detailed management and administrative mechanisms for carrying out these plans have been discussed in considerable detail within the National Institutes of Health, with experts in the field outside of Government, and in the Office of the Secretary of the Department of Health, Education, and Welfare. As these plans are translated into action, I hope that the Congress will comment on them and suggest additional ways in which we can work toward these significant goals.

I would not want to discuss the subject of cancer research, however, without offering a word of caution. Many of the experts that we consulted with told us that biomedical research is a notoriously unpredictable enterprise. Instant breakthroughs are few and the path of progress is strewn with unexpected obstacles. As we undertake this crusade, we must put on the armor of patience, ready to persist in our efforts through a waiting period of unknown and possibly anguishing duration.

Yet I feel confident that with such funding as I have proposed, with such organizations as we are developing, with the dedicated efforts of thousands of men and women from many disciplines, and with the cooperation of the Congress and the people of the United States, we can make great strides against this terrible enemy, bringing new hope for all Americans—and indeed new hope for all the world.

Mr. KENNEDY. Mr. President, the Special Panel of Cancer Consultants identified certain broad areas of cancer research which in their expert judgment warrant particularly vigorous exploration. These are:

(1) *Epidemiological Research* can identify intrinsic influences (such as chemicals, viruses, and radiation) that may play substantial roles in determining the frequency of cancer. Different types of cancer are known to occur with varying incidence in different geographic regions and under varying circumstances of social, economic, nutritional, and occupational conditions. Epidemiological identification of intrinsic conditions such as genetic predisposition, immunological impairment, hormonal effects,

or metabolic differences may elucidate other factors affecting the incidence of cancer which could be clinically controlled.

(2) *Chemical Carcinogenesis* is a research area of prime importance because of the variety and quantity of new compounds introduced into the biosphere. Preliminary efficient screening should be used to eliminate or reduce this hazard. The ability to evoke neoplastic change in isolated tissue in culture should accelerate the research in defining hazardous compounds and the mechanisms by which cancer is caused. Further research is needed on:

(a) The basic cellular and molecular mechanisms of action of carcinogenic chemicals, viruses and radiations. There may be several mechanisms (both genetic and epigenetic) for each class of carcinogens.

(b) The kinds of interactions of viruses, chemicals, and radiations which result in the production of neoplasms in experimental animals and man.

(c) The proportion of tumors in man induced by viruses, chemicals, radiations, and combinations of these agents.

(d) The prevention of chemically induced cancer in man by the identification and removal of causative chemicals.

It is known that in most circumstances, a compound is transformed to a proximate carcinogen, which is then directly involved in the carcinogenic process. There appear to be common chemical characteristics of the proximate carcinogens and also common characteristics of the cellular metabolites with which they can react. Further research is called for on how to interfere chemically with the metabolism which produces the proximate carcinogens or to inactivate it once it is formed.

(3) *Virology*. The recognition that a variety of neoplastic diseases in domestic and wild animals are due to viruses makes it appear increasingly probable that some types of human neoplasia are due to viruses. Although viruses have been found in human cancers, proof of their etiologic relationship is still incomplete. An expanded study of viruses in cancer should include the mechanisms of (a) how a virus initiates cancer, (b) how a virus may be carried in cells for long periods of time without expressing its cancerous potential, (c) how a natural defense against viral oncogenesis occurs, (d) how a virus can sometimes cause tumors and sometimes other, non-neoplastic diseases, (e) how the presence of a virus can be detected by characteristic and special chemical reactions, and (f) how the interactions between viral infection and chemical carcinogens occur which sometimes can evoke tumors.

(4) *Tumor Antigens*. The characterization, isolation, and purification of antigens from normal cells and from specific tumor cells are important both to the understanding of differences in cellular chemistry in the neoplastic state and to the development of tools for the study of tolerance or rejection of tumors. Some of these antigens may be identical with those found in embryonic tissues, and some may be specifically associated with virus infection.

(5) *Cellular Immune Mechanisms*. Much further work is needed on the chemical, biochemical, and antigenic nature of cancer cell membranes in comparison with those of normal cells, especially in terms of the role of the membranes in coordinating cell activity with bodily needs. Substantial evidence indicates that some, if not all, tumors have surface antigens different from normal cells. These differences allow recognition and possible eradication of the tumor by cells of the lymphoid or reticuloendothelial system of the host. This surveillance mechanism is known to be influenced by genetic, hormonal, chemical, and physical factors, and perhaps by many others. The characteristics of production, distribution, and mech-

anism of action of the effector cells that participate in the defense against tumors are of great importance. Failure of cellular mechanisms to eradicate emerging tumor populations may be the final step before a tumor becomes established and begins to grow and so is worthy of intensified study.

(6) *Humoral Immunity* is conveyed through the agency of one or more of the five immunoglobulins and perhaps by other proteins in the plasma. Humoral effects on tumor cells span the range from lethality to apparent protection of the cell by interfering with cellular immune mechanisms. The interrelation of the immunoglobulins with other proteins, their relation to receptor sites on the cell, and their influence on cellular immune mechanisms, urgently need clarification.

(7) *Immunoprophylaxis and Immunotherapy* have both been shown to be effective in experimental animals, and useful immunotherapy has been reported in some children with acute leukemia. Specific and nonspecific stimuli may enhance immunologic response of the host's own immunocompetent tissue, both *in vivo* and *in vitro*. Techniques of using specific tumor antigens, additional immunocompetent cells, and nonspecific immunologic stimuli, are worthy of intensified study. The timing of immunotherapy with respect to other procedures needs clarification, but this form of treatment would appear to be most useful after maximal reduction in tumor size by surgery, radiation, or chemotherapy.

(8) *Diagnosis*. Precise and highly sensitive techniques of diagnosis prior to the appearance of clinical symptoms or of large masses of cancerous tissue are of major importance to advances in therapy. It is suspected that many, if not most, neoplasms secrete materials into the blood which have remote effects on the patient and which are not yet recognizable with tests available. Immunological assay methods have been successfully used to quantify tumor products in biological fluids. For example, chorionic gonadotropin indicates the presence of trophoblastic neoplasia and its detection allows diagnosis and appropriate therapy before a tumor mass is recognizable. A carcino-embryonic antigen appears in the blood of patients with carcinoma of the bowel, and a sarcoma antigen in patients with sarcomatous tumor growth. Continuing research to seek biochemical and immunological means of detecting cancers early deserves expansion. Automated analytic techniques with comparisons of results against computer-banked data for the healthy population and for the same individual at an earlier date would provide a more precise method for early diagnosis.

(9) *Chemotherapy*. Several disseminated human tumors have been cured with drugs alone, giving ample testimony to the proposition that selective toxicity does exist and that a potential for cure is present. Effort must be extended to understand the interaction of drug, host, tumor, oncogenic agent, and host defense mechanisms in this equation. Research on which drugs to give for which tumors, in what combinations, and when in the course of the disease (before operation, after operation, with radiotherapy, after widespread metastasis, etc.) are areas of great importance.

(10) *Tumor Cell Kinetics*. Only a portion of tumor cells are in an active growth cycle at any one time, and the synthesis of critical cellular constituents is known to occur during specific phases of that cycle. A much deeper understanding of selective toxicity during different phases of the cell cycle is needed in addition to elucidation of the natural death of cells within the tumor, the fraction of cells in the tumor which can reproduce, and techniques of killing cells which are not in the critical phases of synthesis. These types of information are required particularly for slow growing spon-

taneous neoplasms in experimental animals and in man.

(11) *Sanctuary.* Tumor cells lodged at a distance from the closest capillary or beyond the blood brain barrier may enjoy a pharmacological sanctuary where adequate drug concentrations cannot reach them to exert lethal effects. Experimental and clinical research of this problem is required.

(12) *New Drugs.* Chemical syntheses of compounds or polymers designed to interfere with critical steps in cancer cells biosynthesis and metabolism are important. The specific targets and techniques of selecting the compounds for trial must be arrived at by chemists and biologists in coordination, and these synthetic programs must be carried out in close proximity to biological testing, so that rapid feedback occurs. Empiric screening of natural products, particularly plant extracts and antibiotics, continues to provide compounds of major clinical usefulness. Nearly a dozen substances of botanical and microbiological origin are now in clinical use and have demonstrated therapeutic benefits against cancer. The programs of search for botanical and antibiotic drugs against cancer should be extended together with relevant biological screening in close proximity. Much additional research is also needed on:

(a) Metabolic or enzymatic differences between normal and malignant cells, which might lead to new drug design.

(b) Sophisticated testing of compounds, particularly antibiotics, against various important biosynthetic enzymes. Drugs which may affect enzymes unique to oncogenic viruses hold particular promise for neoplasms found to be caused by viruses.

(c) Pharmacology and metabolic disposition of known active compounds in human cancer patients.

(d) Development of growth-inhibiting compounds that are not immunosuppressive.

(e) Synthesis and structure-activity analyses of series of compounds that inhibit key enzymes, with the aim of discovering species or tissue differences in affinities for the drugs.

(f) Attempts to lay the groundwork for the development of new classes of drugs that would affect processes of malignancy other than growth, such as invasion and metastasis.

(g) Elucidation of the mechanisms whereby certain drugs potentiate the lethal effects of heat on tumor cells.

(h) Attempts to find new and effective drugs to produce a radiosensitization of tumors.

Predictive Testing of Drugs before human use is of major value and must be extended. The optimal dose, route, schedule and conditions of administration may be learned from experimental animals in addition to the toxicities and side effects which may develop. What is more, development of methods by which a drug can be tested in the laboratory for its effectiveness on the patient's own tumor prior to its clinical use is an area where important advance can be made.

Clinical Investigations in chemotherapy provide an essential link in cancer research, since the ultimate goal is prevention and relief of the disease in man. Cooperative group studies bring earlier results of higher precision and validity because of the positive intellectual input of several investigators in planning the research.

(13) *Radiotherapy.* Use of new radiation sources may allow avoidance of the problems of anoxia in tumor tissues and so substantially improve radiotherapeutic results. Another area of great importance is the continued and expanded study of the effects chemotherapeutic agents in combination with radiotherapy where the optimal choice of drug, schedule, dose, and radiation regimen needs wide investigation.

(14) *Surgical Improvements* can be made which should substantially increase cure

rates. These involve the early use of surgery as a prevention of the development of invasive and metastatic cancer by removing precancerous tissues. In addition, the combination of radiation and surgery in the eradication of established neoplasms is subject to major improvement by appropriate design, precise scheduling, and the use of drugs, to take advantage of the small residual tumor populations after the initial major reductions. Organ transplantation should be developed as an aid to the extension of curative surgery.

(15) *Fundamental Biological Studies* are of the greatest importance in disclosing information about the causes of cancer and strategy for its cure and prevention. Molecular biology can elucidate DNA mutations. A change in DNA structure as a random event or as a response to an environmental trauma may lead to cellular death, or, if the injury is compatible with cellular survival, a mutation. Following such a mutation, a series of descendants may appear whose change in the DNA, if unrepaired, may be heritable and could be the cause of neoplastic transformation. In the course of normal growth and maturation, this change in DNA would be reflected in the composition of RNA, which in part provides messages specifying particular protein syntheses which determine the character of the cell's enzymes and thus its whole metabolic machinery. Mutations and derangements in the repression and derepression of genetic material are susceptible of study by a wide range of experimental systems. These studies must be pursued in great detail because of their relevance to cancer. Further work is needed in the area of biochemistry to support both the search for preventive and therapeutic measures:

(a) Further documentation of biochemical diversity in cell components and in responses to control factors is necessary to depict the true magnitude of the cancer problem and perhaps to sort out the threads of unity which must exist.

(b) Examination of tumors in terms of isozymes is particularly important because, if two different enzymes can catalyze the same reaction but possess different three-dimensional structures, they may respond differently to chemotherapeutic agents, and the information may suggest new modes of chemotherapy. Isozyme research is also important because it is relevant to the understanding of gene regulation in differentiation, in transformation of normal cells to cancer cells, and in the understanding of the relation of the two processes.

(16) *The Nature of Cell Surface* is imprecisely known. Its chemical and physical composition, its mediation of the cell's antigenic identity, its function in nutrition and in drug intake, are poorly understood. The mechanism by which the surface affects the control of a cell's mobility and the role of how this is distorted to allow the characteristic invasion and metastasis of cancer is not understood and merits continuing research.

(17) *Biological Organization.* Intercellular communication in a multicellular animal is an obvious reality. The right number of particular types of cells of given architectural relationships accumulate to make up our characteristic normal organs. Among the most typical features of cancers is a loss of normal architectural arrangement suggesting a major alteration in intercellular communication. Mediators of this intercellular communication must be sought. Tumors evoke a new blood supply and a chemical complex responsible for this activity, known as the angiogenesis factor, has recently been isolated and is worthy of major additional exploration. More research is needed on:

(a) The development of assay systems for sensing and measuring the growth-regulating chemicals which operate between different cells in specific growth situations and neoplastic conditions.

(b) The isolation and characterization of the active principles.

(c) The synthesis of precursors, analogs, and antagonists of these important intercellular regulators.

(d) The elucidation of the cell cycles and the manner in which new agents and analogs modify steps in the cell's replication cycle.

(e) The use of cell biological and genetic methods for modifying the cell's response to the action of such controlling factors.

(f) The mechanisms of action of known hormones and nutrients in the control of cell replication and differentiation.

(g) The application of this knowledge in the effective staging of cells for more efficient use of existing chemotherapeutic agents.

In addition to opening new avenues to cancer therapy, the knowledge derived from these approaches to the biology of growth control has the extra advantage of being widely applicable to other growth dyscrasias such as vascular and kidney disease, nerve regeneration or replacement, immune defects, and aging.

PROGRESS AND OPPORTUNITY HIGHLIGHTS FOR CANCER PREVENTION AND TREATMENT

MANY CANCERS ARE CAUSED BY EXTRINSIC FACTORS

Many of the types and numbers of human cancers are caused by chemical, physical or biological factors in the environment or by sociologic patterns of life which increase one's risk to these factors.

This is important because, with the realization that genetic factors play a limited role in cancer, it means that it is not man's inherent destiny to develop cancer. It means further that we can improve the means to detect cancer-causing agents in the environment and thereby devise and implement better procedures to irradiate such factors, to prevent exposure, or to increase man's resistance to these agents.

CANCERS ARE PREVENTABLE NOW

The prevention of some cancers in man is not new—we have been doing this or have known how to do it for many years. Better utilization of diagnostic X-rays, diminution of tobacco consumption and the restriction or modification of commercial chemicals have clearly resulted in substantial reductions of the number and types of cancer in exposed individuals and populations.

This is important because it shows that cancer can be prevented following identification of causative factors and that this and additional know-how holds great promise for the prevention of other types of cancer in larger segments of our population.

VIRAL VACCINES PREVENT CANCER IN ANIMALS

Over one hundred ten different viruses have already been identified as causes of many different types of cancer in all major groups of laboratory and domestic animals. Highly effective vaccines have already been developed and used for the prevention of leukemias, sarcomas, and lymphomas like Hodgkin's disease in different animal systems.

This is important because it extends the principle of vaccine protection from the classic infectious diseases such as polio to cancer and is providing the intellectual and technological base upon which to prevent cancers in people (see below).

VIRUSES HAVE BEEN ISOLATED AND GROWN FROM HUMAN CANCERS

Viruses of four different types have been isolated from patients with leukemia, Hodgkin's disease, tumors of the womb, and breast cancer. We are particularly intrigued with the type B virus from human breast cancer because (1) this virus has many characteristics in common with a type B virus known to be a major cause of breast cancer in animals and (2) breast cancer is the most com-

mon cause of death in women at ages of peak risk to this cancer.

These very recent findings are important because the availability of large quantities of viruses isolated and grown from human cancers will make it possible to determine whether these viruses are actually major causative factors of these cancers in man. Such studies may very well lead to the development of means for the prevention of these cancers in people. These studies may also provide important clues as to how to better treat existing cancer patients with available drugs or with drugs that might be tailor-made for the control of these tumors.

IDENTIFICATION OF PRECANCEROUS LESIONS OR OF INCREASED RISK OF CANCER

Research leads are available and are developing which in addition to the Pap Test for cervical cancer may provide means for detecting diseases or non-apparent lesions which may predispose to the development of cancer. In particular, intensive studies are being conducted on the "Gold" antigen which may be diagnostic of colon cancer and on analyses of cells in sputum which may indicate early changes associated with lung cancer.

This is important because in many patients early diagnosis substantially increases the chances of successful treatment of the disease. People who show early predictive signs of cancer can be brought in to the physician's office or the clinic for more frequent and more intensive examination so that if they do develop cancer they can be treated early with a higher probability of success.

BETTER TESTS TO IDENTIFY CANCER-CAUSING CHEMICALS

Studies conducted over many years have shown that approximately one thousand chemicals are capable of causing cancer in mice and other animals. About twenty of these are known to be carcinogenic in man. Over the past three years alone three hundred thousand new chemicals have been synthesized per year throughout the world. About ten thousand of these are produced in quantities of at least one ton. At present approximately only three hundred chemicals can be tested in this country each year. Each test requires at least two hundred mice and two hundred hamsters which must be treated and held for two years at a total cost of \$40,000 per chemical tested. More tests of the type that determined the hazardous potential of cyclamates, DDT, asbestos and other chemicals will be performed with additional funding. Perhaps more importantly, new tests are being developed that appear to be able to detect cancer-causing potentials of drugs, food additives and commercial chemicals within four to six weeks in a smaller number of animals or with animal cells grown in tissue culture and at greatly reduced cost.

This is important because with advancing technology, including the continuous introduction of new consumer and industrial products, we must develop sensitive relatively short term tests to safeguard man against undesirable products and contaminants of his environment.

DEVELOPMENT OF A UNIFYING HYPOTHESIS ON THE CAUSES OF CANCER

Substantial evidence has been obtained which suggests that cancer-causing information from silent or hidden viruses is inherited by the newborn of most animals, including man. Factors, such as other viruses, other diseases, chemical and physical contaminants, and old age itself, may enhance or trigger the virus or its information for the production of cancer. Most recently, an apparent unique chemical substance (called a polymerase) has been detected in virtually every virus known to cause or be associated with leukemias, sarcomas, Hodgkin's-like cancers and breast cancer. This substance is

also found in the cancers themselves but not in normal tissues.

These findings are important because the detection of this unique enzyme is supportive evidence for the "oncogene hypothesis" in that it suggests the causative presence of viral activity. Secondly, the detection of this material in certain individuals may well provide a sensitive means of early diagnosis of cancers at a time when they are nondetectable clinically. Thirdly, this is important because if the polymerase is essential for the continuation of the cancer as a cancer then specific drugs can be found or designed to interfere with this activity thereby preventing the development of cancer or interrupting the development of an existing cancer. Within the past six months three classes of drugs have already been identified which are capable of interfering with this substance in the test tube. Plans are well under way to develop other drugs and to test them in the clinic.

CANCERS CAN BE CURED WITH DRUGS

About fifteen per cent of man's cancers are of the fast growing type. These include tumors of the female afterbirth (choriocarcinoma), tumors predominantly of young children (Wilm's neuroblastoma, acute lymphocytic leukemia, and Burkitt's lymphoma) and Hodgkin's disease. Up to ninety per cent of patients with these diseases can be put into symptom-free remission for long periods of time following treatment with drugs under controlled dosages and regimens. A considerable number of these patients have survived symptom-free for more than five years and in some cases are considered to be cured.

This is important because it shows clearly that effective treatment of some cancers is a reality and because this technical know-how provides a base for even more effective treatment of the majority of cancers which are of the slow growing type.

There is excellent justification for the optimistic view that substantial progress has been made and will be made for the prevention and treatment of cancers in people. It must be stressed, however, that most such studies are complex, long term and expensive. Several years elapse between the detection of activity of a new drug for animal cancers and its effective utilization in man. Optimal testing for cancer-inducing properties of environmental chemicals now takes two years. The effectiveness of present vaccines for polio, measles, mumps, and other infectious diseases was proven in one season (4-6 months). When testable vaccines became available for cancers (e.g., childhood leukemia and adult breast cancer) it could take 5-45 years respectively to determine the goodness of the appropriate vaccine. Unquestionably, additional resources will substantially decrease these time frames by virtue of our ability to support present and to recruit and motivate additional investigators for the development of new and the exploitation of existing leads. Nonetheless, it must be appreciated that long term understanding and support are essential for the attainment of common major goals—effective prevention; and in the interim, cure of disease.

Mr. President, I ask unanimous consent to include in the RECORD at the conclusion of my remarks on S. 1828 a set of issue papers which extract from the committee's report on the bill, the hearing record, and the CONGRESSIONAL RECORD which extract relevant material with regard to the bill now under consideration.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

ISSUE—WILL CANCER BE THE FIRST OF MANY SEPARATE AGENCIES?

The Committee, in recommending this far-reaching program for the Conquest of Cancer, has not attempted to reach any conclusions

with respect to the applicability of its approach to other diseases. The Committee has had no opportunity to consider that question. No hearing record or legislative record with regard to any other diseases has yet been made. This unique approach we are now recommending for cancer amount, at this point, to an impractical proposition. Prudence requires that there be an adequate opportunity for assessment of this program before considering whether to extend its approach to other critically important diseases.

SENATOR CRANSTON'S FLOOR SPEECH MAY 21, 1971 ON SENATE RESOLUTION 126

This resolution must be considered in light of S. 34, the proposed Conquest of Cancer Act, now pending before the Subcommittee on Health of the Committee on Labor and Public Welfare.

I firmly support the move to make a massive attack on cancer, which killed 323,330 Americans in 1969. However, we cannot rationally or conscientiously ignore the No. 1 cause of death in this country, heart and cardiovascular diseases.

It is my hope that the submission of this resolution about which I intend to speak in more detail next week will mark the beginning of a massive, national attack on the No. 1 killer—heart and other cardiovascular diseases.

ISSUE

Position of the Panel with respect to the need for a separate agency.

Mr. SCHMIDT. Now, I would like to say in that regard, Mr. Chairman—of HEW prior to the President's recent statement, we reconvened our panel and we met in New York—I believe the date of that meeting was April 29. At that meeting, only thirteen members of our panel were present, and at that meeting we reconsidered this question of whether the independent agency was the right approach to this problem, or whether we should reconsider and revise that recommendation for some form of inclusion of the program within the NIH.

Dr. Henry Kaplan, who had been an active participant in the deliberations of the panel, stated at that meeting that he had on further reflections developed misgivings about the separation of the agency from the NIH, and that he would like to go on record as saying that he would like to see some solution found which would leave the agency within the NIH, but which would give it the independence and management planning, budget presentation and assessment of progress that we have proposed.

So, at that time the panel then—that portion of the panel present at that meeting—was divided by a vote of 12 to 1 on that issue. So that that will give you the background as I understand it, and I was present and presiding at all the meetings of the panel which were held.

Senator KENNEDY. Have there been any other votes taken other than those two?

Mr. SCHMIDT. No. As I said—No, we never voted other than at the time of the final recommendations. . . .

Senator NELSON. The only point I was making was before you got to clean-up position, so to speak, where you decided as in all organizations and you say, let us make it unanimous—the vote was 16 to 10, wasn't it?

Mr. SCHMIDT. No sir, I don't recall any 16 to 10 vote at all. We didn't follow a procedure of taking votes normally.

Senator NELSON. There was no 16 to 10 vote at any time?

Mr. SCHMIDT. I don't recall that there was. At a preliminary time in the panel's deliberations, I think we did ask for—I did go around the table in this room and ask for indications of where people stood on various points, and I never recorded those votes and I never—I don't recall that this particular issue was ever put to that kind of a vote."

ISSUE

Can the new agency work independently within NIH?

Senator JAVITS. Do you believe that the degree of autonomy which can be attained with the highest interests of the conquest of cancer at heart is capable of being attained through an independent agency within the National Institutes of Health headed by a director, appointed by the President, subject to the advice and consent of the Senate, and who will serve under the direction of the President?

Secretary RICHARDSON. Yes, I believe so. Senator DOMINICK. Mr. Secretary, I just have a very short series of questions here which parallel very much, I think, what the Senator from New York was saying.

It is my understanding that under the proposal which we have before us in S. 1828, upon which conferences have been held to see how we can put together the proper bill, that the director will report to the President, but will be working within the NIH on a mutually agreeable basis so that the cross fertilization of ideas in the other institutes will still be available, is that correct?

Secretary RICHARDSON. Yes.

ISSUE

Will basic research be undercut?

Dr. FARBER. May I make a brief remark about biomedical research in cancer? We have spoken here as though—this morning, as though these are different entities. There is no cancer research without bio-medical research. It rests heavily upon biomedical research and it returns to the rest of biomedicine an eminent amount of valuable information. The Cancer Institute has supported with its grants and funds a great deal of basic bio-medical research, and there has been interchange among and between these enterprises.

Just recently, within the last year, Senator Nelson is familiar with this, I am sure, the research worker, Professor Demon, in a cancer institute in Wisconsin, made an observation, quickly made also by Dr. Bolter, which has completely shaken the dogma of DNA. The foundation of modern molecular biology when these men showed that there is an enzyme working on RNA, which permits RNA to work upon DNA, and protean synthesis in a manner which was never thought possible by other people in molecular biology or biomedical science. This is a two-way street. It will be unthinkable for anyone in charge of a cancer enterprise to neglect biomedical research.

The whole purpose of the recommendations which were originally in S. 34 and now I understand are in your bill is to expand the relationship between cancer and biomedical research, and all other research supported by governmental bodies, by the government in various research bodies in Washington.

ISSUE

Will a "business-like" approach cure cancer?

Senator KENNEDY. There has been some suggestion that this kind of approach which has been made by the Panel itself is just trying to apply some managerial efficiency of the medical-industrial complex and that this will really not be—not contribute positively in a significant way to be—

Mr. SCHMIDT. Well, I certainly agree with Senator Nelson that it is possible to overestimate what "business-like methods" do in a program of this complexity and of this scientific depth. That does not, however, it seems to me, mean that we shouldn't do the best we can to have clearly defined authority and responsibility, to have a comprehensive overall plan, albeit one that includes a big segment of basic scientific research, and to have an independent budget and a clearly defined mission so that we can measure progress against that mission.

I don't think we necessarily do things better by keeping them in a larger compartment. I think sometimes the world's unfinished business can get done better if it is bit off in bites that people can define and take as a specific mission. I think that is what we are trying to achieve here. I don't know of any belief that there is any magic business formula here that is going to do this job.

All we are after is just good organization, good planning, and clear definition of mission.

ISSUE

Does the bill overpromise of an instant cure of cancer?

Senator KENNEDY. Let us take this issue of the question about an instant cure. As I understand from your testimony, both in terms of the recommendations of the commission itself, your testimony here on two other occasions, your presentations to the members of the Senate that was sponsored by the majority and minority leader, you were never really representing that there would be an instant cure as a result of this legislation.

Mr. SCHMIDT. Absolutely. On the contrary, Mr. Chairman, one of the points that we have made and made repeatedly is that cancer is not a single disease. It will not lend itself to a single form of immunization or a single cure, in all probability. We have endeavored in everything we have done to avoid raising false hopes. No one wants to raise false hopes, but it doesn't seem to me that the counterpart of that is that we should not make a greater effort.

ISSUE

Will peer review be undercut?

Secretary RICHARDSON. I think insofar as the National Institutes of Health as an entity overall established a peer review system which it believes valid, that it is appropriate for and desirable that NIH make this applicable to all the institutes. Here, however, we are dealing with legislation that would create a somewhat different kind of entity, one reporting directly to the President, although within the framework of the National Institutes of Health.

Therefore, we think since we are considering new legislation that this legislation should, while mandating a requirement of peer review, nonetheless leave open the possibility that the director of the new effort might, in mutual consultation with the Director of the National Institutes of Health and on the advice of his advisory body decide to do it some other way.

Dr. FARBER. Mr. Chairman, gentlemen, the peer review has been referred to as though it was a sacred cow, something which was once established remains the same over the years. That is not the case at all. In the 25 years I have known the NIH intimately, the peer review system has been shaped and reshaped many times and improved always. But two features have always remained, and these two will continue with the Cancer Authority or any other operation of this kind, I am perfectly certain. These features are, first, complete fairness to every applicant with honesty integrity on the part of those who participate in the peer review. The second is expertise. Not all sixty study sections may be needed for this cancer authority, but the pattern which is there will certainly be used by anyone who wants to make a success of an enterprise of this magnitude. It may be that a smaller number would be required, but experts who are capable of giving advice in a dispassionate manner with complete fairness to any applicant from any part of the country, this will continue.

Senator NELSON. Will you feel better if we wrote in the report that it was our urging that we follow, so long as we insist that there is some review, that the new Director follow the time-honored and tested procedures that have been followed in the NIH in the past?

Mr. MURTAUGH. That would be reassuring.

In large measure, the evolution of a scientific system of peer review has assured the quality and scientific merit of the research which the National Institutes of Health has sponsored. Since the inception of the National Institutes of Health, the peer review process has been an essential element in its equation of excellence. That process has been successful because it has been appropriately modified as the scope of the National Institutes of Health has increased. The Committee expects that the objectivity, impartiality, and vigilance of outside peer review that has been characteristic of the National Institutes of Health over the past 34 years will also characterize the activities of the Conquest of Cancer Agency.

Mr. SCHMIDT. Now, so far as peer review is concerned, no committee could have been more dedicated to the proposition of peer review than our panel was, and it is not the desire of our panel to impinge in any way on the reflective necessity of peer review, nor do we believe that our recommendations would lead to that result. So far as any thought of a systematic—Mr. Chairman, I am just attempting to hit what I think have been some of the highlights of the testimony this morning, and then I will conclude.

ISSUE

To what extent will the President delegate authority to the Secretary?

Secretary RICHARDSON. Under U.S.C. Section 301, I have now found out, the President has authority to redelegate any authority vested in him anyway, so to that extent S. 1828 is redundant. But we put it in there for the reason essentially that the President's office shouldn't have to exercise any purely administrative function that he believes could better be vested somewhere else.

S. 1828, as originally introduced, provided that the Director would serve under the direction of the Secretary of Health, Education, and Welfare with respect to such functions as the President might prescribe. This provision was not included in the bill as reported, because under existing law—3 U.S.C., Sec. 301—the President has broad delegational authority. The Committee understands, however, that since the President has stated he will assume personal command of the program, and that he wants the Director to be personally accountable to him, he does not intend to make broad use of this authority.

ISSUE

What should be the composition of scientists and laymen on the Advisory Board?

The National Cancer Advisory Board will be composed of the Director of the National Institutes of Health and eighteen members appointed by the President, by and with the advice and consent of the Senate. No more than twelve of the appointed Board members shall be scientists or physicians, and no more than eight shall be members of the general public. The Committee felt that the National Cancer Advisory Board would be required to make decisions and recommendations that are largely scientific in nature, and therefore it should contain a predominance of scientific and medical personnel, while at the same time, having the laymen public point of view represented.

The Secretary of Health, Education, and Welfare, the Director of the Cancer Conquest Agency, and the Director of the Office of Science and Technology will be ex officio

members of the Board. The Committee understands that all members of the Board may participate fully in discussions, hearings, voting, etc., and that there will be no distinctions made in such activities between appointed and other members. The Committee views the Board as an effective mechanism through which communications between the Cancer Conquest Agency and the National Institutes of Health can be further maintained.

Mr. SCHMIDT. Now, on the point of ratio of the board, I have no strong feeling about the 9-9 ratio on the board. We thought a lay participation was desirable and we came to the numbers of equal participation, but I can say from my own experience on the panel that it was the scientific members on the panel who contributed most and were most effective, although the lay members contributed very substantially, so that if it were the view of the committee or the view of the Congress that those proportions were troublesome, I would certainly have no problem with that.

ISSUE

Should the bill funnel the Agency's budget through NIH?

The Director of the Cancer Conquest Agency will prepare and submit its annual budget directly to the President. The new Agency must clearly have access to the funds and resources necessary to accomplish its mission in the shortest possible time. The President has already announced his intention to ask for whatever funds can be effectively used.

It is therefore the Committee's intent that the Director be treated under the Budget and Accounting Act of 1921 as a head of a department or establishment of Government. The Office of Management and Budget should give technical budget guidelines directly to the Agency, and the Agency will formulate its budget and submit it directly to the OMB for the President's approval. Subject only to limitations imposed by the President and the Congress, the Director will have full authority to reallocate funds among program activities within his overall budget. This flexibility is necessary if the Agency is to be able to respond promptly to changing priorities or unanticipated research opportunities. For that reason, the Committee rejected an amendment offered by Senator Nelson which would have required the Cancer Conquest Agency budget to go to the Director of the National Institutes of Health for review and evaluation before going to the President.

It is, however, expected that plans and budgets will be developed in close coordination with the National Institutes of Health. The Director of the Cancer Conquest Agency should have an opportunity to review and comment on the plans and budget of the National Institutes of Health that are in any way related to cancer research. The Director of the National Institutes of Health should have an opportunity to review and comment on the plans and budgets of the Cancer Conquest Agency.

In this regard, the Committee intends that the Director of the Cancer Conquest Agency will make a copy of the Agency's annual budget and program plan available to the Director of the National Institutes of Health not later than the time of its submission to the President. This will give the Director of the National Institutes of Health an opportunity to submit his comments to the President, without interfering with the Cancer Conquest Agency's budget independence. The Committee believes that such reviews and comments, particularly in development phases, will facilitate progress in both cancer research and in biomedical research generally.

Finally, Mr. President, I ask unanimous consent to have included in the RECORD at the conclusion of my remarks a letter to the editor of the New York Times by Mr. Benno Schmidt. Mr. Schmidt was a member of the special panel of cancer consultants and its excellent cochairman. His letter in response to a Times editorial is a systematic explanation of the views of the panel with regard to the need for legislation as contained in S. 1828 as reported.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

JUNE 3, 1971.

EDITORIAL PAGE EDITOR
The New York Times,
New York, N.Y.

DEAR MR. EDITOR: The New York Times in its editorial of May 31, 1971, *War on Cancer*, presents so misleading a picture of the political, scientific and organizational aspects of present discussions looking to an increased national effort in cancer research that some comment seems desirable. The purpose of this letter is to review briefly the recent history on this subject and to attempt to put the present discussions and differences into perspective.

In April of last year the Senate of the United States appointed a Panel of Consultants to study the cancer problem and develop recommendations for making the "conquest of cancer" a major national goal. Thirteen members of that Panel were drawn from among the nation's outstanding cancer scientists and doctors, and thirteen members were lay representatives of the public. The Panel had no interest other than to discharge the mission given it by the Senate of preparing the best possible report on:

- (1) Where we stand today in the field of cancer;
- (2) What are the areas of greatest promise for significant advance; and
- (3) What steps should be taken to make the conquest of cancer a major national goal?

After six months of the most wide-ranging and intensive study, including the consideration of the written or verbal testimony of 289 witnesses and advisers, the Panel arrived at its findings and recommendations which were presented to the Senate on December 4, 1970.

The Report of the Panel has been called by the American Association for Cancer Research, an organization that includes 1600 of the country's outstanding cancer scientists, "the most comprehensive, realistic and constructive analysis of the state of cancer medicine and cancer research that has ever been made."

First, let us look briefly at the facts relevant to the Times charge that President Nixon and Senator Edward Kennedy are engaged in a "duel to gain political advantage from cancer." The member of the Senate who worked most closely with the Panel during its deliberations and the formulation of its findings and recommendations was Senator Ralph Yarborough of Texas, then Chairman of the Health Subcommittee of the Senate Committee on Labor and Public Welfare. It was Senator Yarborough whose Resolution created the Panel and it was he who introduced in the last session of the Congress the *Conquest of Cancer Act* (S. 34) to enact into law the recommendations of the Panel. At the time of Senator Yarborough's work with the Panel, and at the time of his introduction of the Cancer Bill, he had already been defeated for reelection to the Senate in the Democratic primary by Senator Lloyd Bentsen. I have no question that

Senator Yarborough's support of the Conquest of Cancer Act was nonpartisan and nonpolitical, and this was certainly what the Panel desired and intended. The Panel was bipartisan in its makeup and unanimous in regarding the cancer issue as wholly outside of politics. Having had an intimate connection with the early history of this legislation, I know from the bipartisan support which we received that the legislation was similarly regarded by all concerned.

When the new Congress was organized, Senator Kennedy became the new Chairman of the Health Subcommittee of the Committee on Labor and Public Welfare of which Senator Javits was the ranking Republican member. Accordingly, Senators Kennedy and Javits became the sponsors of the Conquest of Cancer Act in the new Congress, along with 51 bipartisan cosponsors in the Senate. This hardly qualifies as an effort on the part of Senator Kennedy to gain political advantage from cancer, unless political advantage accrues from a good faith effort by the Chairman of the Health Subcommittee to implement the nonpartisan recommendations of a nonpartisan panel on a nonpartisan subject within the jurisdiction of his Committee.

Turning now to the organizational point referred to in the Editorial, after a most thorough study of the pros and cons the Panel concluded that a major program of cancer research of the type envisaged by the Congress could best be conducted by an independent authority under an administrator appointed by the President and responsible directly to the President and to the Congress. It was thought desirable to get the cancer program out from under the six layers of bureaucracy and the red tape which overlay it today, and to give it clearly defined authority and responsibility and the independence in management, planning, budget presentation, and assessment of progress which are so necessary to the success of a complex and major scientific effort of the magnitude of that involved in the cancer problem.

In criticism of this conclusion, the TIMES editorial points out that the analogy to the splitting of the atom or the space program (where independent agencies were given the job) is not valid because we do not have the basic scientific knowledge in cancer that we had in those fields, and therefore this program is not a program of engineering implementation of existing knowledge as those programs were. I assure you that the Panel was thoroughly aware of this distinction in making its recommendations, and we took it into full account. The valid analogy is not the scientific analogy, but the organizational analogy. The cancer program, in order to succeed, needs the same independence in management, planning, budget presentation and assessment of progress that those programs needed and in those respects the organizational analogy is a valid one.

The TIMES editorial also speaks of the dangers of fragmenting basic biomedical research if the recommendations of the Panel are adopted. The direct opposite is true. Today there is no comprehensive and coherent overall plan for the conduct or the coordination of the cancer research program itself or for its coordination with other biomedical research. The Panel recommendations, strongly influenced on this point by the views of the Director of the National Cancer Institute, call for an overall plan to be generated primarily by a representative cross section of the best of the scientists who will be responsible for its implementation. Furthermore, our recommendations call for the kind of coordination of the effort which will enable the scientists at work on this program to know what other scientists are doing in the same and related fields.

This does not mean that we are calling for an unbalanced programmatic approach, because the Panel's plan envisages a substantial increase in unprogrammed, basic biomedical research supported by grants. But the recommendations do envisage a comprehensive overall program with important segments of programmed research in those areas which are ready for that approach.

"Fragmentation of medical research" is not necessarily related to common funding. Its avoidance depends upon the existence of a plan and the effectiveness of the coordination thereunder. However, this has become a favorite phrase of those opposed to the independent management of the cancer effort, although I have never seen it accompanied by any analysis of the degree of fragmentation that exists today or the effect of the recommended coordination under the new proposals.

Understandably, the recommendation of the Panel for an independent organization met with opposition from the National Institutes of Health, of which the National Cancer Institute is now a part. Our recommendations would not move, terminate or interrupt the activities of the National Cancer Institute, but they would make that Institute the nucleus of a National Cancer Authority with its own management, planning, and budgetary responsibility. It seems to be in the nature of things that organizations fight against losing any of their component parts, particularly the largest single component part. Therefore, it is not surprising that the Director of the N.I.H. opposed this aspect of the recommendations of the Panel. Similarly, it is not surprising that the Secretary of Health, Education and Welfare supported him in this opposition and that the great majority of the noncancer scientists who receive support from N.I.H. joined in support of the N.I.H. position. In particular, the medical schools have been virtually unanimous in expressing their distrust of the proposed new arrangements, in spite of the fact that, in fact, medical schools would receive greater support for their cancer-related activities under the Panel recommendations than they have received heretofore. Also, I believe that the example of greater support for cancer would also result in greater support for biomedical research generally.

I would like to emphasize that our Panel is strongly of the view that cancer research should not be funded at the expense of other biomedical research or medical education. But the way to avoid this is not to divert funds appropriated to cancer to these purposes, but to use the cancer funds for cancer and look squarely at the funding needs of these other areas.

I would also like to emphasize that no member of our Panel desires to weaken the other activities of the National Institutes of Health. Many members of our Panel have worked closely with the N.I.H. for a number of years and we recognize that the N.I.H. has done outstanding work in certain of its intramural programs and in funding grants and contracts made in response in applications throughout the country. But the Panel believes that the time has come for more comprehensive overall planning of the cancer effort than that which results from the happenstance of the sum total of the approved grants and contracts, and that independent management can best give us this new emphasis in moving away from the status quo. We see no need for this to weaken other activities of the N.I.H. Quality need not be a function of size (in fact, the opposite is more often true), and the Congress and the Executive have the power to keep the N.I.H. in its very important remaining roles as strong as they want it to be.

President Nixon, recognizing the validity of the arguments for clearly defined authority and responsibility and for eliminating

what he describes as "the familiar dangers of bureaucracy and red tape," has indicated a desire to provide the cancer program with independence in management, planning, budget presentation, and assessment of progress. At the same time, he is aware of the fears that exist among the medical schools and many biomedical scientists that taking this program out of the N.I.H. will weaken N.I.H. and thereby weaken biomedical sciences outside the field of cancer. Therefore, he has made recommendations which attempt to resolve this problem by leaving the program in the National Institutes of Health, while at the same time giving it the stature and independence envisaged by the Panel's recommendations. He has also called for a strong cancer advisory committee, in line with the Panel's recommendations, which would assure the representation of the scientific community and the public in the planning and execution of this effort. Far from playing politics with this issue, he is, it seems to me, joining Senators Kennedy, Javits and others in attempting to give the American people what they want—a higher priority for cancer and the most effective possible use of our scientific and technological skills to reduce the impact of this most dreaded of all diseases.

The New York Times, which has been in the forefront of those calling for a reorientation of our priorities, should applaud President Nixon, Senator Kennedy and the many others who are attempting to make intelligent progress in this most difficult field. Admittedly, the organizational issue is a difficult judgment decision, upon which opinions can intelligently and honestly differ, but insofar as I have been able to see from a very close vantage point, the President and the Senators involved in this matter are working diligently and without partisan motives to find the best answers for the American people.

In many ways, the most disturbing aspect of the New York Times editorial is not the misleading quality of its political observations or its simplistic approach to a difficult organizational question, but its negativism on cancer research itself. Of course, no general cure for cancer is in sight and there is still much ignorance about the origin of cancer, but there are vast new insights in cell biology, in immunology, in virology, in detection and diagnosis, in chemotherapy and radiotherapy, and in other areas which offer the promise of extraordinary rewards if they are pursued with diligence, intelligence and efficiency. Nobody wants to hold out false hopes. Cancer is not a single disease, and it probably will not lend itself to a single form of immunization or a single cure, and certainly there is no suggestion of a fixed date for all the answers. However, in the past two decades there has been a broad and powerful wave of advances in cancer research. In some places, the tide has raced ahead, providing enough knowledge for the prevention or cure of certain types of cancers. The momentum of advances, the breadth and depth of current knowledge, and the recognizable goals in research are such that a greater effort can and should be sustained.

Cancer is an implacable foe and the difficulty of eliminating it as a major disease should not be underestimated. No one is suggesting that "the country's entire yearly military budget," or anything approaching that amount could properly or efficiently be spent in this field. What is being suggested is a top priority commitment by the Congress, the President and the American people, recognizing not only the difficulty and complexity of cancer, but also the time and resources required to attack it effectively. The Panel believes that this would involve expenditures commencing at \$400 million per year and moving up over a 5-year period to an annual rate of \$800 million to \$1 billion.

We believe that an effective and well managed program of this magnitude should be promptly initiated and relentlessly pursued. Without holding out false hopes, we can give our cancer effort new impetus and new emphasis, and move away from the defeatism that has so long characterized our attitude toward cancer and that is so evident in the tone of the New York Times editorial. Such a program can be an important step in the reorientation of our national priorities. Where could we find a better field in which to make our advanced technologies and scientific skills work for us and for all humanity?

Sincerely yours,

BENNO C. SCHMIDT, *Chairman,*
National Panel of Consultants on Cancer.

The PRESIDING OFFICER. Who yields time?

Mr. NELSON. Mr. President, the chairman of the Health Subcommittee, the Senator from Massachusetts (Mr. KENNEDY), as well as other members of the committee, including the Senator from Colorado (Mr. DOMINICK) and the Senator from New York (Mr. JAVITS), have quite obviously put in a lot of time, conducted extensive hearings, and worked very hard to prepare a bill which has as its objective expanding our efforts to find better methods of treatment and care for the victims of cancer, with the ultimate objective being the conquest of cancer itself.

No one, so far as I know, would quarrel with the efforts of those who have been involved in preparing this bill, as well as the panel that carefully evaluated this question over a long period of time and recommended this approach in the important undertaking to ultimately conquer cancer.

Insofar as I know, no one in the United States would quarrel with the objective, and everybody in the Congress, and the public, too, would be prepared to appropriate and spend whatever amount of money could be effectively spent in seeking to accomplish the objective in which we are all interested.

My reservation about the bill is that it creates a separate institute outside of the National Institutes of Health. In my opinion, this particular provision is going to hamper the effort to successfully conquer cancer. I fear that this will handicap the effort more than it will enhance it.

Furthermore, creating a separate independent institute, with its own board bypassing the Director of NIH, reporting directly to the President, is going to establish a precedent which will require the Congress, if we are going to act in a logical fashion, to create other separate institutes. In fact, the National Heart and Lung Institute has now requested that they be treated in the same fashion. So that there will be a National Heart and Lung Institute housed within the building of NIH, but reporting, with its own advisory board, its own Director, directly to the President of the United States.

Their case will be just as good as a case for a separate cancer institute outside of NIH.

In fact, the statistics are that 38.4 percent of the people who die in this country die from diseases of the heart. That is the jurisdiction of the National Heart and Lung Institute. Malignant

neoplasms cause 16.9 percent of the deaths; cerebral vascular diseases, 10.8 percent of the deaths; accidents, 5.9 percent; influenza and pneumonia, 3.7 percent; uncertain causes of infant mortality, 2.2 percent; diabetes, 2 percent; arteriosclerosis, 1.8 percent; bronchitis, emphysema, and asthma, 1.6 percent; cirrhosis of the liver, 1.6 percent; all other causes, 15.1 percent.

I have repeatedly asked the proponents of this measure—that is, the proponents of creating an independent institute outside of NIH—just what is to be gained by it. You can search the testimony, and you will find that there is not much of a reason for it except a kind of emotional commitment to do something with an independent institute that they think cannot be done if they remain within the NIH, the finest institution of its kind anywhere on earth.

The Senator from California (Mr. CRANSTON) joined me in filing individual views. I should like to read into the RECORD our comments on the bill, as spelled out in our individual views:

We voted to report S. 1828 as amended in Committee, and to co-sponsor the original S. 34, because we strongly support the objective of the bill.

The bill is designed to expand the resources and intensify the effort to achieve better methods of treating and controlling cancer with the final conquest of cancer as the ultimate objective.

There is no doubt that the Congress, the Administration and the Nation are prepared to give extensive support to expanding the effort to eliminate cancer. This is amply demonstrated by the fact that the President asked for, and Congress appropriated, an immediate additional \$100 million for cancer research in the Second Supplemental Appropriations Bill (PL 92-18) for fiscal year 1972.

However, while we agree with the intent of the bill, we have serious reservations about the design and structuring of the approach as spelled out in the language of the bill.

The bill provides that a newly-created independent Conquest of Cancer Agency will be established within the National Institutes of Health with the Director of the Agency and the National Cancer Advisory Board each reporting independently and directly to the President on all matters respecting cancer research, including programs, plans, budget proposals and annual progress reports.

Thus, the Director of NIH is specifically by statute bypassed in the chain of command and communications. We think this is a serious error because the NIH Director has under his jurisdiction the other nine Institutes, several of which are engaged in continuing cancer and cancer-related research, and he is, therefore, the only individual in or outside of NIH with the overview and responsibility for all cancer-related activities and research.

No credible rationale for bypassing the NIH Director can be found in the testimony. The proponents assert that bypassing the NIH Director will somehow expedite the program, enhance the prestige of the enterprise and assure the acquisition of a higher quality Director. A better argument can be made, we think, that this approach will tend to handicap the program rather than improve and expedite it.

For all practical purposes, this bill creates an independent Agency, with its own Director and independent Advisory Board housed within the NIH but in no way responsible to the Director of NIH.

Of course, it is intended by language in the bill (as reported from Committee) that the Director of NIH and the Director of the Cancer Agency will engage in whatever co-

operative efforts are indicated to implement the program effectively.

We think this arrangement raises very serious practical and policy questions that will impair the effort and set a very bad precedent.

While it is our view that the best approach was spelled out in our proposal to create a special cancer authority within an independent NIH, (described in our joint floor statement of May 21, 1971, set forth at the end of our view) we think that at the very minimum, this bill should require that the annual budget and program be submitted to the Director of NIH and that he submit it to the President with his comments and evaluations.

We recognize that the Committee Report states:

"The Committee intends that the Director of the Cancer Conquest Agency will make a copy of the Agency's annual budget and program plan available to the Director of the NIH not later than the time of its submission to the President. This will give the Director of the NIH an opportunity to submit his comments to the President, without interfering with the Cancer Conquest Agency's budget independence. The Committee believes that such reviews and comments, particularly in development phases, will facilitate progress in both cancer research and in biomedical research generally."

We feel this report language is insufficient.

It is anomalous that the only person in government with overall responsibility for cancer-related research in the various Institutes within NIH does not have the formal responsibility for presenting his evaluation of the cancer program and budget to the President. The NIH Director's only statutory role concerning the cancer budget and program is as a member of the Cancer Advisory Board, where he is only one voice of 22 members.

Furthermore, there are sharp divisions within the medical and scientific community over the best approach or approaches to the conquest of cancer. When, in fact, there are such substantive divisions over a particular research program or budget, it should be the NIH Director's formal responsibility to so advise the President.

We also believe that in the interest of efficiency and sound management, the NIH Director should be made responsible for coordinating the cooperative activities of the Cancer Agency with the other NIH Institutes.

The Congress and the public should recognize that by creating a totally independent Cancer Agency reporting directly to the President, a compelling precedent will have been set for creating similar agencies to deal with other afflictions—for example, an independent Heart and Cardiovascular Disease Institute. The case for creating such an Institute can surely be presented in an equally convincing way, and it will be difficult to deny such Institute the same status. Inevitably, cases will be developed for other Institutes with arguments for independent status presented as forcefully as Cancer's or Heart and Cardiovascular Diseases.

Advocates of heart and cardiovascular disease research already have written the Secretary of HEW seeking status for the National Heart and Lung Institute equal to that established for cancer research.

Arthritis is a disease which affects literally millions of persons; why shouldn't the National Institute of Arthritis and Metabolic Diseases be given equal status?

In short, we believe that totally independent status for any Institute will tend to weaken NIH, and to hinder the success of an attack on cancer or any other disease, rather than strengthen it.

The breakup of NIH, probably the finest biomedical research structure in the world, would be, in our opinion, highly undesirable and unwise. S. 1828 as reported poses a clear and present threat of this breakup.

Dr. James A. Shannon (who served as Director of NIH during its period of greatest growth) stated in a letter submitted as testimony on March 9-10, 1971, during hearings on S. 34 before the Health Subcommittee:

"The several Congressional actions which propose that the new program be mounted under a separate Authority, perhaps reporting directly to the President, and, as a corollary, to be operated outside the NIH, is to my mind without merit and dangerously destructive. The NIH is many things, but above all, it symbolizes a set of processes for the governance of the orderly growth and development of science . . . the NIH, in the sense described above, is an invaluable and irreplaceable guarantor to the nation that order, stability, sound judgment, balance, flexibility, responsiveness, and responsibility will characterize the country's assault on the problems of disease, disability, and death."

A large number of management problems arise when a research effort is made independent of others in NIH. Cancer research is heavily dependent on extensive supporting resources of NIH, such as clinical facilities, animals, instrumentation, computer services, central research grant services and a variety of logistical services. The various Institutes share scientific and manpower resources. They deal with the same grantee institutions and the same contractors. They should be governed by common and consistent policies.

We fully recognize that those joining in the Committee Report have only the best intentions in inserting language calling for communication and coordination between the Cancer Agency and NIH. We believe, however, that what is needed is an interrelationship under the overall direction of the NIH Director, which would be stronger than could be achieved among research Institutes of clearly differing rank and authority.

As Dr. Phillip R. Lee, former Assistant Secretary for Health and Scientific Affairs in HEW, testified at the March 9-10 hearings:

"Cancer is not simply an island waiting in isolation for a crash program to wipe it out. It is in no way comparable to a moon shot . . . which requires money, men and facilities to put together in one imposing package the scientific know-how we already possess. Instead, the problem of cancer—or rather the problem of the various cancers—represents a complex, multifaceted challenge at least as perplexing as the problem of the various infectious diseases . . . We do not know where the breakthroughs will come and I think it would be a great mistake to begin to dismantle NIH in favor of an untested approach."

Therefore, we see no compelling reason to set up cancer research as an independent entity, an approach which we suspect may turn out to be more detrimental than beneficial to conquering cancer or any other disease. We believe the answer to a successful attack on cancer is to strengthen NIH as much as possible.

And we should expand the resources as we are doing in the field of cancer research and cancer treatment.

I point out that when we look at the organizational chart of NIH, we note that there are ten institutes. One of those is the National Cancer Institute. Each of the 10 institutes has its own advisory council. Several other institutes within the NIH work on cancer and cancer-related research.

So if this bill is passed unamended, we will have a budget of about \$332 million being spent by the Cancer Institute and \$100 million more being spent on cancer-related research in other Institutes.

I have no doubt that all that money

and more can be usefully spent in seeking a solution to the problem about which we are all concerned. But note that under this bill, \$332 million will go to the National Cancer Institute, which is set up independent of and outside the NIH but is physically housed within it, with its own board, not under any direction at all of the Director of NIH, reporting directly to the President, while several other institutes under the direction of the Director of NIH will be spending approximately \$100 million in cancer-related research. So we will have the anomalous situation of the Director of NIH being responsible, under this bill, for the 9 other institutes, several of which will be spending a total of approximately \$100 million on cancer-related research—mainly, the General Medicine Institute, the Neurological Diseases and Stroke Institute, the Institute of Child Health and Human Development. So he will have the overall direction of that research or the overall supervision of it.

Then we will have another \$232 million being spent by an independent cancer institute established legally outside of NIH, housed there, however, and reporting, as I said earlier, directly to the President. It does not make much sense at all. I think that if everybody sat down and thought about it for a while, they would recognize that this is not the best approach to accomplish the end we all seek.

I also note one other aspect: The President did not support this independent institute. The President did not endorse it. The President was for keeping the National Cancer Institute within NIH. But he changed his mind and came out in support of the proposal for a separate agency as advocated by Senator KENNEDY.

I think the President was right on that point in the first place, and he should have adhered to this position.

I did not agree with the aspect of his position which would continue to have these institutes operating through the various bureaucratic layers of HEW. I favored an independent NIH with a special cancer authority within NIH and under the Director of NIH, with just the Director of NIH between the cancer authority and the President of the United States.

Everyone who knows anything about how government operates knows very well that at some stage the President will have to delegate the responsibility to somebody else to handle the Cancer Institute's budget and program. No President is an authority in this field. So is the science adviser, who may or may not know anything about it, going to do it? Or will it be done as the President originally considered—that he delegate it back to the Director of NIH? Then we will have created a bureaucratic kind of Rube Goldberg thing, where we bypass the Director of NIH, go straight to the President with the budget and plan and program, and then the President has to have somebody overview that, and he cannot do it, so he refers it back to the Director of NIH.

That was the original proposal, and that was dropped. But somebody is go-

ing to handle this; and I think that good commonsense dictates that when the budget and plan and program for the cancer institute is drafted by the director of the institute and prepared on the advice and counsel of the advisory board, that it then should go to the director for his formal comments and evaluation. With all the disputes that there are and will continue to be, about the best approaches in seeking the conquest of cancer the President, the Congress and the country should have the benefit of the independent observations of the Director of NIH. Important disputes within and medical and scientific community should be pointed out by the Director of NIH.

The Director of the NIH is responsible for all the institutes. Let us take a look at the NIH structure for a moment. There are 60 study sections made up of distinguished scientists from the various disciplines under NIH. These study sections are composed of scientists from the various scientific disciplines such as biochemistry, medicine, surgery, genetics, and so forth. So we have the 60 study sections within NIH with scientific expertise from all over the country. These 60 study sections evaluate the scientific proposals, coming from various institutions and individuals are the basis of their scientific merits. Then they are sent or referred to the appropriate advisory councils for the various institutes within the NIH. So that some will be sent to the National Heart and Lung Institute, some to the Cancer Institute, some to the National Institute of Allergies and Infectious Diseases, and so forth. Then each one of these institutes has an advisory board. The National Advisory Board then decides which one of the programs that have been submitted to them, after evaluation by one or more of the 60 study sections, should be funded. All of this activity is also under the Director of the NIH.

The money for these projects, about \$100 million worth, in the field of cancer related research, will be in other institutes within the NIH, not the Cancer Institute.

Who should be responsible for the coordination of all cancer related activities within NIH and activities and relationships between all institutes involved in cancer research?

Obviously, it is the Director of the NIH. All we have in the bill is some language which indicates that they should cooperate. But, do not be misled by it. The National Cancer Agency is an independent, legal entity reporting directly to the President, period.

I think we are setting a dangerous precedent that will haunt us for a long time to come. I want to know what is the argument when the next institute comes, the National Heart and Lung Institute, as they are now requesting, to say that they want the same treatment on the same ground, on the same basis, with the same merit as an independent institute outside of the NIH reporting directly to the President, just the same as the Cancer Institute.

I have yet to hear what answer there is to that.

The answer is "Yes," if it is valid for the

Cancer Institute, it is valid for the Heart and Lung Institute, for metabolic diseases. This is the beginning of the dismantling of NIH, which I think is the greatest institution of its kind anywhere on earth. I do not believe that we should be going that route; whereas I am sure I will not be able to persuade this House, as I could not persuade the committee, to accept my viewpoint on this, I hope that the House of Representatives will take a good, hard look and take all the good parts of the bill, of which there are many without any doubt, plus the funding which I am happy to support, but correct this aspect of the bill so that we do not begin to dismantle the NIH.

Mr. President, I ask unanimous consent to have printed in the RECORD some NIH comments in response to Dr. Solomon Garb's questions and answers relating to management subjects, contained in his letter of April 26, 1971, on a national cancer authority.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

NIH COMMENTS ON DR. SOLOMON GARB'S QUESTIONS AND ANSWERS RELATING TO MANAGEMENT SUBJECTS, CONTAINING HIS LETTER OF APRIL 26, 1971, ON A NATIONAL CANCER AUTHORITY TO MEMBERS OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

ALLEGATIONS OF INEFFICIENCY, OVERLAPPING, ET CETERA

1. *Statement—page 3: Question—*"What is the evidence of inefficiency, delay, duplication of review and overlapping of responsibility in HEW?" *Answer—*"Statements and testimony by HEW administrators brought the Panel around from its original position of keeping the cancer agency in NIH to liberating it from HEW altogether. The evidence on which this was based would be most easily accessible now in a book by Dr. A. L. Levin entitled 'The Satisficers' and in the report of the General Accounting Office entitled 'Administration of Contracts and Grants for Cancer Research—NIH, HEW Report B-164031(2).'"

Comment: The Panel did not interview anyone in the DHEW above the level of the National Cancer Institute. The only contact made with the Office of the Director, NIH, was an introductory meeting by the Panel's Staff Director with the Director, NIH, at the beginning of the study.

"The Satisficers" was written by a young physician who had served his two years of military duty in the Public Health Service Commissioned Corps. It consists of a series of anecdotes all designed to show, in the words of its preamble, that "Officials do not try to maximize but, instead, they 'satisfice' (satisfy and suffice)." Without discussing the specific aspects of the book (it does not contain material directly related to the cancer issue), I can only comment that, if things are as universally bad within the spectrum of Government observed by Dr. Levin as they are portrayed in his book, there would appear to be no reason to suppose that the rest of the Government is not afflicted by the same bureaucratic syndromes and, indeed, that independent agencies would be exempted from them. Those who know NIH can make their own judgment as to whether or not it is managed by "satisficers."

The GAO report points to certain delays which are involved in the NIH scientific review process for research grants and its final review and signature of research contracts and in the appropriations and funding process. It recommends that research grants be awarded up to a specified dollar limit with-

out review by study sections and that authority be delegated to the National Cancer Institute for final negotiation of research contracts. The Department commented that it would study the recommendation on grants and pointed out that the decision to delegate final contract authority to NCI had already been made as a consequence of a study made within the Department. The problem of uncertainties of funding results, of course, from causes external to NIH; however, in the case of cancer research, the request for an additional \$100 million was submitted in the form of a 1971 supplemental estimate, so that the funds would be available by this July 1 (rather than await the normal 1972 appropriation action later in the year). Certainly none of this supports the conclusion that the cancer research program can only be effectively managed outside of NIH.

2. *Statement—page 3: Question*—"What specifically in the H.E.W. structure do you feel leads to the problems mentioned?" *Answer*—"The National Cancer Institute is one of ten institutes in the National Institutes of Health. A recommendation from the Director of the NCI must go through several assistant directors of the National Institutes of Health to the Director of that organization. But NIH itself is one of three bureaus under the Surgeon General, so the recommendation then moves to the assistants to the Surgeon General and the Surgeon General himself. From there, it goes to the Assistant Secretary for Health and his assistants and staff who head one of three divisions of HEW. From there, the recommendations next go to the Deputy Secretary for HEW, then to the Secretary for HEW, and finally to the Office of Management and Budget."

Comment: This description of the hierarchy is inaccurate. First, NIH is not "one of three bureaus under the Surgeon General." Since 1968, it has been one of three operating agencies reporting directly to the Assistant Secretary for Health and Scientific Affairs. The Surgeon General functions as a deputy to the Assistant Secretary and has acted for him in his absence. Second, deputies and assistants participate in the budget process on an advisory basis; they do not constitute separate layers of management decision-making. The Under Secretary is not a separate level of review. Reviews by deputies and staff assistants facilitate final decisions by the responsible line managers.

3. *Statement—page 5: Question*—"Wouldn't moving cancer research to a separate agency increase overhead costs?" *Answer*—"On the contrary, it would decrease those costs. Right now, there is enormous wastage of time, energy, and money getting through the levels of bureaucracy. The individual grantee may not always be aware of this, but he is nevertheless affected. Large sums are wasted on superfluous offices and personnel in the NIH and HEW hierarchies. This wastage reduces the money available for grants and fellowships. Time is wasted at many levels, and time costs money. The energies of N.C.I. officials and scientists are dissipated in dealing with a large number of nominal superiors in the bureaucracy; superiors who sometimes know little or nothing about cancer."

Comment: These are rather sweeping allegations concerning the nature of the management processes within NIH and DHEW. We have not seen the evidence to support them. In fact, the Questions and Answers enclosed with Dr. Garb's letter reflect considerable misunderstanding of these processes. This will be evident in the discussion later in this document on the budget process.

4. *Statement—page 2: Question*—"Why do people in HEW object to a National Cancer Authority?" *Answer*—"We understand the question raised by some in the Department of Health, Education and Welfare and by the director of the National Institutes of Health, because no one likes to admit that overlap-

ping delays in decision making, duplication and inefficiency exists, but the fact is that they do exist and we see no potential for removing them other than through a new organizational arrangement."

Comment: The basis for objecting to a National Cancer Authority is much more substantial than this suggests. There are undoubtedly some delays and overlaps. However, we have seen no "evidence" to support a conclusion that progress in cancer research has been significantly impeded by administrative problems and that existing inadequacies are not correctable within the organizational framework of NIH and HEW.

We would further point out that the Panel's report provides no specific information to support its conclusions on organization and management. All of the discussion in the report on these subjects is contained on pages 4 and 5 of the Summary. It consists merely of (1) a series of generalized assertions and conclusions without any supporting examples or other evidence and (2) a listing of powers which should be vested in the new Authority without pointing out wherein these powers were lacking in the current situation. As a matter of fact, NCI already has most of the cited powers and we are advised that NIH has taken steps to obtain others.

RELATIONSHIPS WITHIN NIH

1. *Statement—page 4: Question*—"I have heard it said that moving cancer research out of H.E.W. into a new agency would cut cancer off from all other biomedical communication. Is this true?" *Answer*—"Not at all. Cancer scientists would continue to communicate and interact with other scientists just as they always have. They never had to rely on N.I.H. for that. . . ." On page 7, it is pointed out that "the present NCI buildings would be assigned to the National Cancer Authority."

Comment: The problem is not merely one of scientific communication. It is one of insuring appropriate coordination and management of closely related programs and achieving a balanced allocation of resources among them in accordance with priorities. Various Institutes and Divisions of the NIH are engaged in and support research work that is highly relevant to the areas of special promise listed by the Panel. The virologists, immunologists, cell biologists, epidemiologists, pharmacologists, and others involved in such studies are focused on fundamental life processes undoubtedly vital to the understanding of cancer, even though they may be addressing their research with different problems in mind. Also, cancer research is heavily dependent on the extensive, central supporting resources of NIH—e.g., clinical facilities, animals, instrumentation, computer services, central research grant services, and a whole variety of logistical services. The various Institutes compete, in many ways, for the same scientific and technical manpower resources. They deal with the same grantee institutions and the same contractors and must be governed by common policies to avoid confusion and to insure a consistent approach to the overall problems of these institutions and contractors. Scientists and other staff living side by side at NIH should be treated under policies which are equitable for all concerned. These are but a few illustrations of the need for overall program and management action across the several areas of biomedical research.

2. *Statement—page 4: Question*—"If cancer research would be helped by taking it out of H.E.W., wouldn't heart research and other research also be helped by taking them out of H.E.W.?" *Answer*—"Perhaps, I hope that H.E.W. can be effectively reformed before that becomes necessary." However, it is further stated on page 5 that "the reform of HEW at this time appears to us to be a political impossibility. The rescue of one part

of it, NCI, is possible, and in time may help speed other reforms."

Comment: This recognizes the precedent the Cancer Authority proposal would provide for intensive pressure by other categorical interests for similar treatment. Apparently, it reflects the view that the future of NIH as a national leader in biomedical research is not a paramount consideration—a view which we certainly cannot share. Nor does it confront the management problems which would be involved for the Executive Branch through such a fragmentation of biomedical research programs and their organizational separation from responsibilities for other health programs of the Department of Health, Education, and Welfare.

THE BUDGET PROCESS

1. *Statement—page 9: Question*—"It is hard to believe that H.E.W. officials would oppose more funds for cancer research. Why would they do such a thing?" *Answer*—"Those who deal with them intimately say it is a desire to demonstrate their willingness to keep federal expenditures down. Each tries to outdo the other and when this is compounded five or six times through the whole superstructure above the N.C.I., the result is disaster. The National Cancer Authority would eliminate this cumulative folly."

Comment: In the first place, HEW officials do not oppose more funds for cancer research. Both the 1971 and 1972 budgets of the President included substantial increases for cancer research.

In the second place, the above description reflects a totally erroneous concept of how the budget process works. It does not begin at the bottom and go up through echelons with each taking a slice off the estimate. In fact, the formal process usually begins with the establishment of fiscal policies at the top. A critical factor is the overall dollar ceiling initially provided the Department by the Office of Management and Budget. The Department in turn allocates ceilings and provides other guidelines to the agencies as a basis for formulating their budgets. Agencies submit their budgets within these ceilings but are usually offered the opportunity of outlining urgent needs which cannot be covered under the ceiling. Not infrequently, higher echelons will increase an estimate for a given program either because of a different judgment on priorities, an easing in the overall dollar ceiling, or a combination of the two. There are negotiations and appeals at various levels before decisions are finally made. In short, it is a complex process and one which is not accurately described in terms of cumulative effects up through the hierarchy. It is emphasized that decisions at the top—namely, by the Office of Management and Budget, as the President's management arm—are major determinants in the process of formulating the budget as well as in the presentation and defense of the budget before Congress. Expenditure ceilings set by the Congress and the President are also important controls over the execution of the budget.

2. *Statement—pages 8 and 9: Question*—"Why couldn't we compromise, forget about moving the National Cancer Institute out of H.E.W., and just settle for getting the extra funds for research?" *Answer*—"because the extra funds would not materialize. . . . For the years 1968, 1969, and 1970, the H.E.W. officials who testified before the House and Senate appropriations subcommittee asked for decreases in cancer research funding. . . . During these years the professional judgment budgets of the NCI were high enough but they were cut in turn by NIH, PHS, several layers of HEW and the Bureau of the Budget. What we propose now is to have the director of the National Cancer Authority go directly to the Office of Management and Budget with his professional judg-

ment figure and prevent the six layers of cuts that winds us up in despair."

Comment: This goes back to the misconception about the budget process which have already been discussed. The overall constraints come from the Office of Management and Budget in the first place. HEW witnesses are obliged to defend the President's decisions before Congress. The "decreases" requested by HEW were not from existing levels but in the amounts of proposed increases; the HEW action was required for defense of decisions made by the President and the Office of Management and Budget.

"Professional judgment" budgets have little meaning in the context of fiscal realities. A separate Cancer Authority, like NSF and NASA, would be subject to the overall fiscal policies established in the Executive Office of the President and would be obliged to defend the President's decisions before Congress.

It is simply not true that extra funds for cancer research will "not materialize." The President, a year ago last February, asked for an increase in cancer research of \$21 million for fiscal year 1971 and last January, approved the obligation of the full amount of the \$49 million increase finally appropriated by Congress. For fiscal year 1972, he has asked for another \$100 million to be available this coming July 1, which, in effect, will raise the total increase to \$250 million above the program level for fiscal year 1970 and most of fiscal year 1971 (that is, until the 1971 appropriation was approved by Congress in January).

3. *Statement—page 9:* "In his book, 'The Satisficers', on p. 100, Dr. Arthur Levin, who had been in the Surgeon General's office, writing of a secret meeting of top H.E.W. officials at the Linden Hill Hotel, stated: 'The Bethesda health plan, however was different. The plan proposed, among other things, that the federal government cut its spending for health research by 30 percent. . . . The plan proposed, in effort, to mark time in our research efforts and to spend the money in other ways.'"

Comment: We are not familiar with the Linden Hill Hotel meeting in the Spring of 1967. However, the "proof of the pudding" is that the next budget submitted by the President included an increase of 7 percent in funds for biomedical research. As mentioned previously, the Office of the Surgeon General echelon no longer exists.

4. *Statement—page 2:* (Quote from the Panel Report) "In the past when the federal government has desired to give top priority to a major scientific project of the magnitude of that involved in the conquest of cancer, it has on occasion, with considerable success, given the responsibility for the project to an independent agency."

Comment: The positive arguments for a separate authority and some of the criticisms of the present system are not entirely without merit, particularly if viewed from the narrow perspective of "what's best for cancer," as if this could be disjointed from and pursued independently from the health goals of the Nation.

Careful analysis, however, suggests that the advantages of independent agency status are due less to organizational status than to the nationally perceived climate of urgency surrounding the problem with which the organization deals. NSF has not experienced meteoric growth, despite such independent status, for the simple reason that science qua science is not a flag around which non-scientists readily rally. Nor is independent agency status insuring favorable budget treatment to NASA, now that the public no longer feels as intensely about the space race as it did a decade ago. If the President and the Congress, with broad public support, commit this Nation to a continuing crusade against cancer, their intent will be implemented, in whatever organizational setting.

THE PANEL'S DELIBERATIONS

1. *Statement—page 3: Question—*"In view of some of the questions or points of opposition to the Panel's recommendations and to S-34, is it possible that the Panel did not consider the entire problem thoroughly enough?" *Answer—*The Panel Chairman is quoted as follows: "I am pleased to be able to say that none of the questions or points of opposition which I have seen is new. These same questions and points of view were thrashed out at great length in the Committee's own deliberations before our final recommendations were arrived at." The following statement is also made on page 3: "If the salvation of this nation depended upon our success in dealing with the cancer problem, I doubt that anyone familiar with the situation would recommend continuation of the present organizational arrangements."

Comment: From the foregoing questions and answers as well as the Panel Report, it would appear at least doubtful that the Panel did have before it a thorough exposition of the questions or points of opposition and that it was indeed fully familiar with the present organizational arrangements and the way in which the budget process works within HEW.

Mr. NELSON. Mr. President, critical to cancer research is the need to maintain a wide range of basic research, which has in the past, and no doubt will produce in the future, breakthroughs in cancer research.

It is essential that cancer research be closely integrated with research being conducted by other NIH Institutes and with all basic research.

The biomedical community is concerned that by setting cancer research apart from other disciplines, such an integration with basic research may be diminished.

The following are examples of cancer breakthroughs, and discoveries in other diseases, that have occurred unexpectedly.

Mr. President, I ask unanimous consent that these examples of serendipity be printed in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

EXAMPLES OF SERENDIPITY IN BIOMEDICAL RESEARCH

Research frequently produces unexpected knowledge that is useful in a direction quite different from the original purpose of the investigation. Recognition of the usefulness of such incidental knowledge, by the original investigator or by others, leads to concentrated research efforts in the new areas, which may pay high dividends. It is the occurrence of such observations and their utility that led Pasteur to state that "chance favors the prepared mind." One should not lose sight of the interdependence of biomedical science, taking account of the productivity of research in one field and failing to identify the original incidental finding from another field which stimulated it. A few examples are cited below.

Oncogenicity of SV 40 virus. During work on poliomyelitis vaccines, which were produced by growing the poliovirus in monkey kidney cell tissue cultures, a simian virus was found to be a common contaminant of the tissue cultures. When such cultures were inoculated into baby hamsters, tumors were produced at the site of inoculation. This was one of the early observations that stimulated a rebirth of the theory of viral induction of cancer.

T antigens in virus-induced tumors. Adenoviruses are the causes of a variety of diseases of the upper respiratory tract in children and

young adults. In work to develop vaccines against these agents, the viruses were tested for tumor-inducing potential. Some adenoviruses were indeed found to be oncogenic. They were also found to produce special antigens in the tumors even when the virus could no longer be detected in these lesions. These are the so-called "T" antigens, which are footprints of the virus. After this finding, "T" antigens were looked for, and identified, in tumors caused by other viruses.

Immune mechanisms in cancer. Efforts in transplantation, to control the immune response against grafted tissues or organs, included the use of immunosuppressive agents, and resulted in an increased incidence of tumors. This has, conversely, stimulated the search for mechanisms of enhancing the immune response to cause suppression or elimination of cancers.

Rifampicin. This substance is an antibiotic which was originally produced as an antibacterial agent. It and its derivatives were later shown to have activity against poxviruses and reoviruses. This led to testing of these drugs against RNA tumor viruses, with recent results indicating that they are effective in inhibiting transformation of cells by such viruses.

RNA-dependent DNA polymerase. DNA is the principal genetic material of animal and plant cells. It serves as the template for making more of itself and of RNA, which is the messenger substance, carrying information from the nucleus to the cytoplasm of the cell. RNA is also the basic substance of cell constituents on which the cell manufactures its enzymes, hormones, etc. There are viruses, however, which have only RNA, and the mechanism by which they reproduced was unknown. Enzymes involved in the synthesis of nucleic acids were discovered to be part of the mature virus particle in infectious agents such as pox- and reoviruses. This discovery led to the search for such enzymes in RNA tumor viruses. Eventually it was shown that one of the enzymes involved is able to produce DNA on the RNA template, which explains the mechanism of tumor-induction by an RNA virus. As a corollary, the mode of action of rifampicin is explainable.

L-Dopa. This substance and its metabolic derivative dopamine have been known for many years, as an intermediate in the formation of certain hormones, norepinephrine and epinephrine, involved in nerve transmission and in the control of blood pressure. A great deal of attention on the control of blood pressure was related to the study of the mode of action of a substance called reserpine, its effect on levels of serotonin, and the further relationships of these to the adrenal glands. About 10 years ago, some studies of basal ganglia in the brain, where the adrenal hormones are found only in low level, revealed high concentrations of dopamine. This was followed by the finding that in Parkinson's disease, which is a disease of the basal ganglia, dopamine is virtually absent. This led to attempts to ameliorate Parkinsonism by restoring brain levels of dopamine. Since, as had been learned from other unrelated studies, dopamine does not enter the brain from the blood, l-dopa was used, and was found to be effective in high doses. Thus, work focused originally on neural hormones and their mechanisms of action, which led to the Nobel prize for Axelrod and von Euler, also led to an unanticipated and spectacular therapeutic agent because of certain incidental and unrelated findings.

Discovery of the rheumatoid factor. The rheumatoid factor is an immunoglobulin found in patients with rheumatoid arthritis and related disease. Research related to this substance has added immensely to the knowledge of rheumatoid disease. The observation which led to its discovery was made purely by chance. While working on an epidemic disease transmitted by mice, a research worker was testing antibody pro-

duction in patients, including herself because she had contracted a laboratory infection. Some of the reagents for the complement-fixation test, which she was doing, were set up the night before the test was to be completed by the addition of the final reagent, complement. The following morning she noticed that the sheep red blood cells in the tubes containing her serum had agglutinated, while all the others had not. A flash of insight correlated this observation with the fact that she was the only case of rheumatoid arthritis in the group. This hypothesis was confirmed on further investigation.

Chemotherapy of cancer with methotrexate. In the 1940's, a considerable amount of attention was devoted to the synthesis of drugs that would interrupt certain chemical pathways which depended on enzymes associated with definite vitamins. A series of compounds were synthesized as antifolate agents for use against bacteria and other infectious agents. Some of these were tested in other systems, because of the relationship of diet to hormone activity. Folic acid was found necessary for response to estrogen. Methotrexate, one of the anti-folate agents, depressed estrogen response in animals on regular diet. Some observations of the effect of methotrexate on hormone-production by tumors which occasionally produce hormones showed a depression of such hormone-production. This observation led to trial of methotrexate in choriocarcinoma, a tumor of the placenta which regularly produces hormones. The drug was shown to be effective in eradicating this tumor. It is currently one of the key drugs in the chemotherapy of acute leukemia.

Thus, research initially undertaken to study the interactions of hormones and vitamins, led to an agent effective against a lethal tumor in young women, and in leukemias and lymphomas.

Prednisone. It was observed, in early studies of steroid hormones, such as ACTH and cortisone, used originally in the treatment of rheumatoid diseases, that they had a striking effect on lymphoid tissue, with dissolution and decreased production of lymphocytes. This led to trials on the use of prednisone in tumors of the lymphatic system, where it has contributed to therapy of various leukemias.

When alternate methods of synthesis of cortisone were being studied, two steroids were made as intermediates. Biological studies of these showed that they had potent and unexpected activities. One was prednisone which is a corticoid used in treatment of arthritis because it does not produce edema, and, as already mentioned, in treatment of leukemias. The other is flornorin which is used by patients with adrenal disease, because it is a potent salt-retaining substance.

These are but a few examples of unexpected and profitable leads from research focused in another direction. There are so many of these examples that two books have been published describing accidental discoveries. These are:

Science and Serendipity; Great Discoveries by Accident. By D. S. Halacy, MacRae-Smith, Philadelphia, 1967.

Great Accidents in Science that Changed the World. By J. S. Meyer. Publisher Unknown 1967.

The PRESIDING OFFICER (Mr. BUCKLEY). Who yields time?

Mr. DOMINICK. Mr. President, I yield 15 minutes to the distinguished Senator from New York (Mr. JAVITS).

The PRESIDING OFFICER. The Senator from New York is recognized for 15 minutes.

Mr. JAVITS. Mr. President, I believe that even Senator GAYLORD NELSON's presentation evidences the degree of de-

votion which has gone into the study of this problem. Although we disagree, I think that the Senate can be satisfied that every conceivable way of looking at this matter has been met. But there is a fundamental difference, and this is what it is—and I know that my colleagues with spirit enough will tell me if they think it is an incorrect diagnosis.

There is the added position that if we proceed within the context of all existing research, including biomedical and research in the life sciences, and the whole thing goes forward, as it were, together, the likelihood of success in cancer is just as great, or if it is slightly less great, the advantages to be gained by the other disciplines, from the fact that they will go in tandem with cancer research, is worth the minor difference which we might have in the breakthrough program on cancer.

That is one point of view, which has been eloquently and very well expressed by the Senator from Wisconsin (Mr. NELSON).

On the other hand, Senators DOMINICK, KENNEDY, and I, and a majority on the committee, feel that we are so close to breakthroughs in cancer, that cancer represents to the people such an awesome disease or illness, that we must, as a national effort, quite apart from the scientific question, undertake a crash program under a unified direction, to make the final breakthroughs.

Now the feeling is a real one. The whole difference, in my judgment, the fulcrum of the answer to the eloquence of the argument of the Senator from Wisconsin (Mr. NELSON), supported by many professionals and scientists in the field, is the twin proposition that the country finds the death rate from cancer unacceptable because it thinks it is imminently avoidable.

That is the question we think we are close enough to breakthroughs on, and that one final drive will do it; whereas, in these other fields, including the heart field, there is such a diversity, whether diet or many other things, that we do not feel we are as close to a breakthrough, which will mean as much as it did in infantile paralysis, as to warrant a crash effort.

That is our whole effort. We believe that we are that close. We believe that the findings of the commission, which are very imminent, prove that we are close. That is why we take our position. We do not take our position to shatter everything that we have done in the health field. We believe that this deserves one final push and that it is worth it.

We have done the best we could to avoid the difficulties in our drafting of the legislation to every extent possible. However, we are fundamentally legislating a massive drive aimed at the conquest of most cancers.

If Senators will note item 1 on page 4 of the committee report, they will see that that pictures why we think the public is so taken with this situation. Aside from the fact that it is the No. 2 killer—heart disease and stroke being No. 1—the fact is that cancer often strikes as harshly at human dignity as at human life and, more often than not, it repre-

sents financial catastrophe for the family in which it strikes.

Then, if we look at page 16, we will see the key to this situation as we see it. That is that we get the feeling of the imminence of a possibility of a breakthrough. We have that imminence of the possibility of a breakthrough plus the awesomeness of the illness which we are trying to eliminate. We have the rationale of our views as to what is the right program. Everything else that I will add to this is justification. These are the essential elements of the situation as we see it. And if the Senate agrees with us, then the bill should be passed and this is the right prescription.

Page 16 reads in part:

There is broad agreement that cancer research has advanced to the stage where a substantial increase in resources and effort could be very productive. There seems to be a consensus among cancer researchers that they are within striking distance of achieving the basic understanding of cancer cells which has eluded the most brilliant medical minds in the world for all this time. Several significant breakthroughs have occurred recently, and cancer researchers feel they are close to others.

While it is true that such breakthroughs are often "serendipitous", and cannot be forced, the Committee feels that a substantial increase in resources, along with increased organizational efficiency, will shorten the time necessary to achieve them.

Mr. President, stated in colloquial terms, I know many a person, as does every other Member of the Senate, who loses a member of the family to cancer and says to himself, "If only this death could have been put off for 1, 2, 5, or 10 years, we are sure that a cure would be found and that this life could have been saved."

Mr. President, this is unlike any other major killer. We are trying to accelerate the finding of a cure for this dread disease. That is the justification for this approach. And it is supported both by the civilian and professional side in this magnificent landmark report of the national panel of consultants on the conquest of cancer. This report has been printed as a Senate document.

Mr. President, I ask unanimous consent, since these men and women have rendered such remarkable service to the country, that the list of the members of that panel, together with their connection, be printed at this point in the RECORD.

There being no objection, the list was ordered to be printed in the RECORD, as follows:

Panel of Consultants on the Conquest of Cancer, composed of 13 eminent laymen and 13 eminent scientists, chaired by Mr. Benno C. Schmidt, Managing Partner of J. H. Whitney and Company, New York City, and with Dr. Sidney Farber, Founder and Scientific Director, Children's Cancer Research Foundation, Boston, as Co-Chairman. Other members of the Panel were:

Mr. I. W. Abel, president, United Steelworkers of America,
Mr. William McC. Bialer, Jr., general director, the John F. Kennedy Center for the Performing Arts,
Mr. Elmer Bobst, chairman of board, Warner Lambert Pharmaceutical Co.,
Dr. Joseph Burchenal, vice president, Sloan-Kettering Institute for Cancer Research,
Dr. R. Lee Clark.

Dr. Paul B. Cornely, president, American Public Health Association.
 Mr. Emerson Foote,
 Mr. G. Keith Funston, chairman of board, Olin Corp.,
 Dr. Solomon Garb, scientific director, American Medical Center at Denver,
 Mrs. Anna Rosenberg Hoffman,
 Dr. James F. Holland, chief of medicine A, Roswell Park Memorial Institute for Cancer Research,
 Dr. William B. Hutchinson, president, Pacific Northwest Research Foundation,
 Dr. Henry S. Kaplan, chairman, Department of Radiology, Stanford University Medical Center,
 Dr. Mathilde Krim, Sloan-Kettering Institute for Cancer Research,
 Mrs. Mary Wells Lawrence, Wells, Rich & Green Advertising Agency,
 Dr. Joshua Lederberg, professor of genetics, Stanford University School of Medicine,
 Mr. Emil Mazey, secretary-treasurer, United Automobile Workers,
 Mr. Mike O'Neill, managing editor, New York Daily News,
 Mr. Jubal B. Parten, member of board, Fund for the Republic,
 Mr. Laurance S. Rockefeller, chairman, Rockefeller Brothers, Inc.,
 Dr. Jonathan E. Rhoads, chairman, department of surgery, University of Pennsylvania School of Medicine,
 Dr. Harold P. Rusch, professor of cancer research, McArdle Laboratory, University of Wisconsin,
 Dr. Wendel G. Scott, clinical professor of radiology, Washington University,
 Mr. Lew Wasserman, president, Music Corp. of America, Inc.,

Mr. JAVITS. Mr. President, everything else goes by way of confirmatory evidence. The Senator from Wisconsin (Mr. NELSON) very graciously, as his wont, stated exactly what we are relying on. We give the director of the conquest of cancer agency and the director of NIH a common track. He gets the material at the same time the President does. We give very strict instructions, referring to page 25 of the report, for the director of the conquest of cancer agency to work in tandem with the Director of NIH so as to be sure that all channels for the dissemination and cross-fertilization of scientific knowledge and information existing prior to the effective date of the act between the National Cancer Institute and the other Institutes of Health shall be maintained between the Agency and the Institutes of Health to insure free communication between cancer and the other scientific, medical, and biomedical disciplines.

Mr. President, this is not only a national question. It is also an international question because there are no secrets. We want to get information from the other countries of the world by telling them everything that we know.

We have emphasized very strongly the question of peer review of a scientific reporting of the research programs and projects by those who are doing the research.

We have tried—and I think we have done a workmanlike job—to meet the arguments that have been properly advanced against our plan and that of the panel. However, we must bear in mind that this is a massive attack upon a given target in a specialized way.

Mr. President, I have one last point which I think is critically important. The

argument was made that the next people to come along will be the heart people, then the kidney people, then the diabetes people, and that all will ask for the same thing. I think it is only fair to say, that as far as I am concerned, I have the suspicion—and I believe this goes for other Senators as well and others who are engaged in this effort—that if we think we have the same promise of a breakthrough and the situation commends itself to our judgment, we are certainly entitled to invoke the authority of this panel with great importance and with mass resources, as I have said.

We could then make a breakthrough. When the time comes for a breakthrough in heart disease, kidney disease, or any other major killer—as we think the time has come with respect to cancer—we can attack that problem. It may have come or may not have, but it could not be any worse than it is, and it can be very much better.

Let us remember that just as in the case of infantile paralysis, through this agency we might be able tomorrow to save a life that would have been taken by this dread disease of cancer. I believe that we can do this if we accelerate our effort.

Mr. President, I could not conclude my advocacy of this bill without referring to a man with whom I served in the Armed Forces of the United States 25 years ago—C. P. Rhodes, then the director of the Medical Division of the Chemical Division of the Army.

C. P. Rhodes came to us from the presidency or the head or medical director of the Sloan Kettering Institute, for years the leading and outstanding cancer research of a voluntary character in the United States. Twenty-five years ago, C. P., or "Dusty," Rhodes, as he was called in the Army, preached this very doctrine. He said:

There are so many hypotheses that we have to knock down in order to arrive at a final resolution of what may be the answer, that the faster we can knock them down, the faster we will get the answer. We must always allow for that great scientist, that genius, sitting in his attic with chin in the palm of his hand, who will come up with the answer. But we cannot sentence millions to death while waiting for the answer.

It may happen. If it does, that is fine. In the meantime, let us accelerate this dreadful, painstaking process of knocking down one more hypothesis as fast or faster until we get some answers. We are getting a good many answers now and that is what makes us feel—and we have this tremendous authority to back us up—that a massive offensive is justified and necessary. I deeply believe in it, the Senator from Colorado (Mr. DOMINICK) does, the Senator from Massachusetts (Mr. KENNEDY) does, and a great majority of the committee does. I know that the Senator from Wisconsin (Mr. NELSON), the Senator from California (Mr. CRANSTON), and others who do not agree with us will join with us in the fervent hope that we are right.

Mr. President, I hope very much the Senate approves the bill.

Mr. President, I would like to, in closing, again make clear the remarkable

nature of this bill. It has been a truly bipartisan measure, as indeed it should be; for there is no place for politics in our efforts to conquer cancer. I would like to call to the attention of my colleagues the remarkable exercise of statesmanship, by the administration—the President and Secretary Richardson—the chairman of the Health Subcommittee, Senator KENNEDY, with whom I introduced S. 34, to establish a National Cancer Authority in order to conquer cancer at the earliest possible date, and which bill had the bipartisan support of more than half the Senate, and Senator DOMINICK. We can have great respect for the consensus achieved in reporting S. 1828 and can only hope that it will be a portent of our future efforts to deal with other aspects of the Nation's health crises.

We are all familiar with the tragic statistics of the toll cancer takes of our population every year—323,000 died from cancer in the United States; but one aspect of these figures bears reemphasis. Cancer strikes at the most valuable group in the population—our youth. It is the largest single killer of children between the ages of 1 and 15, and the emotional and economic toll which cancer takes of its victims and their families is staggering. We cannot accept this loss of potential talent and manpower.

It has been suggested that we cannot legislate scientific progress. This is true, but what we are doing in S. 1828 is to create the organizational and scientific capability needed to conquer cancer and insure that no research is curtailed because of organizational or fiscal constraints. And we are convinced that we are on the threshold of a breakthrough in cancer which can be accelerated by some years through a directly targeted national program like that in this bill. Advances made in basic cellular knowledge, cancer etiology, immunology and chemotherapy all suggest that we are on the verge of significant breakthroughs in the cure and prevention of cancer. A sustained and intensified effort now may be able to capitalize on these imminent breakthroughs. Indeed, news reports from Houston which tell us that researchers have isolated a human cancer virus only give added emphasis to our efforts to establish a national program to conquer this dread scourge.

Benno Schmidt, head of the National Panel of Consultants on the Conquest of Cancer, has pointed out:

Three things that do not exist today are necessary if we are to have an effective national program to conquer cancer. First, there must be an effective administration with clearly defined authority and responsibility. Second, there must be a comprehensive national plan for a coherent and systematic attack on the vastly complex problems of cancer. Third, there must be the necessary financial resources.

S. 1828 reflects these requirements. Primarily, a Conquest of Cancer Agency will be established as an independent agency within the National Institutes of Health. It will be headed by a Director, appointed by the President with the advice and consent of the Senate. Essentially, the Agency will carry out the research now conducted by the National

Cancer Institute and simultaneously expand and intensify these activities into a coordinated national program. In doing this, the new Agency will make grants and contracts; encourage private industrial research; strengthen existing cancer centers and establish new ones, emphasize a multidisciplinary approach to research and teaching; establish a cancer data bank; and support the production of needed specialized biological materials. Finally, the Agency will be authorized to support foreign cancer research; and to support manpower training programs to insure an adequate supply of expert manpower to continue the fight against cancer.

S. 1828 also establishes a 22-member National Cancer Advisory Board including the Director of the National Institutes of Health, which will advise the Director of the Conquest of Cancer Agency on the formulation of a comprehensive program, evaluate the Agency's annual budget, and maintain high standards of peer review. The Advisory Board will also report annually directly to the Congress.

There are two aspects of the bill which merit special attention, these are closely related to and concern the establishment of an independent agency within NIH, and the manner in which the new agency will be administered.

The Conquest of Cancer Agency is within NIH, but will report directly to the President and the Congress and thus have access to the highest levels of Government and at the same time not be placed in competition with the other highly commendable programs of the NIH. However, it should be borne in mind that although the Conquest of Cancer Agency is an independent agency within NIH, and an organizational creation designed to best facilitate the attack on cancer, it is in no way proposed that the Agency disrupt in any way ongoing relationships with the other institutes of health or fragment basic biomedical research or disrupt communications between specific research fields.

The Director of the Agency would have complete flexibility to reallocate resources to take full advantage of unanticipated research breakthroughs and would submit his budget directly to the President. It is intended that the cancer budget will be treated in the same manner as other Cabinet-level departmental budgets. The National Cancer Advisory Board will be the only review stage between the Conquest of Cancer Agency and the President. It is, however, expected that plans and budgets will be developed in close coordination with the National Institutes of Health; and the Director of the Cancer Conquest Agency will have an opportunity to review and comment on the plans and budget of the National Institutes of Health that are in any way related to cancer research, while the Director of the National Institutes of Health will have an opportunity to review and comment on the plans and budgets of the Cancer Conquest Agency.

It is intended that the Director of the Cancer Conquest Agency will make a copy of the Agency's annual budget and program plan available to the Director of the National Institutes of Health not

later than the time of its submission to the President. This will give the Director of the National Institutes of Health an opportunity to submit his comments to the President, without interfering with the Cancer Conquest Agency's budget independence. Such reviews and comments, particularly in development phases, will facilitate progress in both cancer research and in biomedical research generally.

In addition, the Director of NIH, as a member of the National Cancer Advisory Board—section 407G(a) of the bill—will have an input into the formulation of the Conquest of Cancer Agency budget.

By having the Agency submit a separate budget we hope to insure that the attack on cancer will not be downgraded in the budgetary shuffle, both within the Government as a whole or within the NIH. The Conquest of Cancer budget will be highly visible, and responsibility for its functions will not be hidden in layers of bureaucracy. Similarly, funds allocated for cancer must be used for cancer research and cannot be diverted to other programs.

If present trends continue, of the 204 million Americans alive today, 51 million will contract cancer at some time in their lives, and 34 million of them will die from it. And if present trends continue the success of the search for means of prevention and cure could be deferred for years before it could be realized by a program like that in this bill.

Mr. President, I believe that we have now confirmed that we should make the conquest of this dreaded mass killer—16 percent of all deaths in the United States are caused by cancer—our highest national health priority until we conquer it.

I urge my colleagues to support the passage of S. 1828.

I yield back the remainder of my time.

Mr. NELSON, Mr. President, for the purpose of brief response I yield myself 5 minutes.

The PRESIDING OFFICER. The Senator is recognized for 5 minutes.

Mr. NELSON, Mr. President, the Senator from New York very effectively states the position of the advocates of a separate, independent authority outside of NIH. That is the precise point of difference between the position of the supporters of this bill and myself.

So far as amassing resources are concerned, I think, as I said earlier, I do not believe there is anyone in this body who is not prepared to vote the appropriation of whatever amount of money can effectively be spent in the pursuit of a cure for cancer. Nobody disagrees with that at all.

We are not talking about the amount of resources we should bring to bear on this problem. We all agree on that. I would support much more money than is already provided here if it could be spent effectively; and I expect as we expand the effort we will be able to spend more money than is proposed for the next year and spend it effectively. Everybody will endorse that effort. So we do not have that difference at all about the objective, the necessity, or the importance of expanding our effort, or of the fact that more resources should be put

into the effort. We do not disagree about the fact we ought to put all of the energy we can into solving the very important problem that the country and all the world is concerned about.

The precise difference, and nobody has explained it on the floor, is how do we get a more effective thrust out of this effort, a more effective utilization of our resources, by taking an institution which is an integral part of the NIH—which has all kinds of relationships with a number of other institutes—and improve our effort and drive more effectively by moving this institute outside of NIH?

That is the question I have been asking of witnesses who have come before the committee and everyone else. I have yet to get what seemed to me to be a logical answer.

What is the gain in taking this institute out of NIH rather than having its board and its director prepare the budget, prepare its program, prepare its plan, bring it up to the director of NIH for his comments and evolution prior to referrals to the President.

Nobody has explained how an independent institute enhances or improves the program for the conquest of cancer. Therefore, I do not see the point in doing it.

As I said before, I think this is going to handicap our efforts. No convincing argument has been made, in my judgment, in behalf of an independent institute.

In committee hearings I asked the question and here this afternoon I ask in what way will an independent institute improve our program. No one has explained it yet. I think people have gotten emotional about it and have decided we can do something by putting the institute outside of NIH and that something is going to happen that will not happen if it is kept within the institute.

I yield the remainder of my time.

Mr. JAVITS, Mr. President, will the Senator yield to me for 2 minutes so that I may answer?

Mr. DOMINICK, I will yield to the Senator but first I would like to comment briefly.

I find the arguments of the Senator from Wisconsin very interesting. He and the Senator from California (Mr. CRANSTON) cosponsored S. 34. That bill would have taken the cancer authority totally out of NIH.

Now, as I understand his argument, he is saying that S. 1828 is the same as S. 34 and he is opposed to it. I find this to be somewhat interesting.

I was one of the first members in committee to bring up the problems that would arise if we were to take the Cancer Institute out of NIH; but I thought we should keep it in to preserve the relationship between cancer and other types of research. We have given the cancer program enormous prominence and it will have the ability to go forward on necessary research and treatment. This is a terrible disease. But S. 1828 provides that it will go forward within the NIH and not outside. This is of major importance in the bill.

I yield to the Senator from New York. Mr. JAVITS, Mr. President, the Sena-

tor from Colorado made the first point I was going to make, that we are not taking this out of NIH. So far as humanly possible we are keeping it in NIH and also making a massive specialized effort. That is the compromise and that is why the Senator from Colorado is with us and not against us.

The Senator asks what makes this better and why do we need it. We need it because the record of performance under the old scheme is inadequate. The panel found that to be so and they said on page 284, in the scientific section:

But it also becomes clear that there has not been an organized national cancer control effort, carefully planned and centrally administered. This has led to unnecessary expenditures and duplication of effort in some areas.

Then, on page 3 in the summary of findings they said:

A national program for the conquest of cancer is now essential if we are to exploit effectively the great opportunities which are presented as a result of recent advances in our knowledge. However, such a program will require three major ingredients that are not present today:

First, effective administration with clearly defined authority and responsibility;

Second, the development of a comprehensive national plan for a coherent and systematic attack on the vastly complex problems of cancer. Such a plan would include not only programmatic research where that is appropriate, but also major segments of much more loosely coordinated research where plans cannot be definitively laid out nor long-range objectives clearly specified; and

Third, the necessary financial resources.

Our performance up to now demands this new approach because it has been inadequate. To make it adequate this is what the panel recommends we do, and that is why we are doing it.

Mr. NELSON. Mr. President, I yield myself 2 minutes to respond to the Senator from Colorado (Mr. DOMINICK).

As I stated and as the Senator from California stated in separate and individual views, we joined as cosponsors of S. 34 because we believe in the objective, and we believe in it very strongly.

I expressed my reservations about an independent agency outside of NIH very early, as soon as I looked at the bill. I had reservations about that aspect. Then, after extensive hearings and exploration, it was clear that the reservations I had in my opinion on that one point, just that one point in the bill, were sound reservations, and I think they still are.

I yield 10 minutes to the Senator from California (Mr. CRANSTON).

S. 1828—ASSENTS AND DISSENTS; THE CONQUEST OF CANCER

Mr. CRANSTON. Mr. President, first I would like to congratulate the distinguished chairman of the Health Subcommittee, the Senator from Massachusetts (Mr. KENNEDY), for his persistence in seeking to focus public and governmental attention on the inadequacy of current programs to combat the consequences of cancer. His tenacity in pursuing the conclusions of the panel of experts in the cancer field, who were brought together by resolution of the Senate Labor and Public Welfare Committee—S. Res. 376 of April 27, 1970—and whose establishment I fully supported, has resulted in

the recommendation of S. 1828 by the Committee on Labor and Public Welfare with the full support of the administration. Senator Kennedy has most unselfishly deferred consideration of his bill, S. 34, in order to reach agreement with the administration.

In November 1970, the report of the panel of consultants concluded:

A national program for the conquest of cancer is now essential if we are to exploit effectively the great opportunities which are presented as a result of recent advances in our knowledge. However, such a program will require three major ingredients that are not present today.

First, effective administration with clearly defined authority and responsibility;

Second, the development of a comprehensive national plan for a coherent and systematic attack on the vastly complex problems of cancer. Such a plan would include not only programmatic research where that is appropriate, but also major segments of much more loosely coordinated research where plans cannot be definitively laid out nor long-range objectives clearly specified; and

Third, the necessary financial resources.

To implement these recommendations the panel recommended:

First. The establishment of a National Cancer Authority which would be given all the functions, personnel, facilities, appropriations, programs, and authorities of the National Cancer Institute. The Authority would be an independent agency, reporting directly to the President and presenting its budgets and programs to Congress.

Second. The development of a comprehensive national plan for the conquest of cancer to include expansion, intensification, and coordination of the cancer research program; accelerated exploitation of opportunities in areas of special promise; construction of additional and strengthening of existing cancer centers—which should serve as administrative coordinators of programs requiring regional coordination—manpower development; the generous use of grants as well as contracts and other methods of funding; optimum communication and centralized banks of information; and voluntary interaction and joint planning of the scientists who will be responsible for doing the work.

Third. Increased funding up to the amount of \$800 million to \$1 billion in fiscal year 1976.

The committee version of S. 1828 has responded to each of the three major recommendations of the panel of consultants as follows:

S. 1828 would establish a Conquest of Cancer Agency as an independent agency within the National Institutes of Health under a Director reporting directly to the President. The Agency's purpose would be to conduct an energetic national program for the conquest of cancer.

The Agency would submit its budget estimates directly to the President and be generally responsible to him. The new Agency also would present its budget estimate to the Congress and would receive directly from the Office of Management and Budget the funds appropriated for the Agency by Congress.

The bill would make the National Cancer Institute a part of the Conquest of

Cancer Agency. It would also establish a National Cancer Advisory Board to advise the Agency in the development and execution of its program. The Board would assume the functions now performed by the National Advisory Cancer Council, which it would supersede. The Director of the Agency is authorized in the bill to take necessary action, together with the Director of the National Institutes of Health, to maintain existing channels for the free communication of scientific knowledge between the Agency and the other health institutes, and for the coordination—through mutual program and budget review—of their respective activities.

I voted to support S. 1828 in committee—as I also cosponsored S. 34, the original bill before the committee—because of my full agreement with the intent of the bills and the conclusions of the cancer panel calling for a national mobilization to conquer cancer. The mechanisms established by S. 1828 are intended to increase the productivity and improve the administration of programs to combat cancer. However, I have several reservations concerning their effectiveness in actual implementation.

Elevation of the cancer program to a separate entity outside the authority of NIH will, I fear, set a virtually irresistible precedent for establishment of similar agencies to conquer other diseases which devastate our society. For example, according to U.S. Public Health Service 1969 estimates, heart diseases account for 38.4 percent of deaths; cancer, 16.9 percent; accidents, 5.9 percent; influenza and pneumonia, 3.7 percent; certain causes of infant mortality, 2.2 percent; diabetes mellitus, 2 percent; arteriosclerosis, 1.8 percent; bronchitis, emphysema, and asthma, 1.6 percent; cirrhosis of the liver, 1.6 percent; and all other causes, 15 percent.

Advocates of heart and cardiovascular disease research already have written the Secretary of Health, Education, and Welfare, seeking status for the National Heart and Lung Institute equal to that proposed for cancer research in S. 1828. This could well be the beginning of the dissolution of the NIH, probably the finest unified biomedical research institution in the world.

In addition to this compelling consideration is the failure of S. 1828 to provide adequately for the degree of management support which would be lost by removing the Cancer Conquest Agency and the National Cancer Institute from operational supervision within NIH. Cancer research depends heavily on extensive supporting resources of NIH, such as clinical facilities, animals, instrumentation, computer services, central research grant services and a variety of logistical services. In other words, the institutes share scientific and manpower resources. They deal with the same grantee institutions and the same contractors, and should be governed by common and consistent policies.

I trust that while it may prove difficult to work out common and consistent policies, administrative steps will be taken to insure that the supporting resources of NIH will be available to the cancer con-

quest agency. If I did not assume that this could be worked out, I would offer an amendment to the pending measure to cover this point. I assume that NIH will take this step because it makes sense to do so in terms of conquering cancer, and because failure to do so would contribute to the weakening of NIH itself.

I am concerned that, without the overall direction of the NIH director with respect to cancer research, this management support which is a major budget item will be duplicated in the new agency, diverting scarce funds from the direct task of conquering cancer into the more indirect administrative support programs.

Mr. President, the statutory interrelationships between the Cancer Conquest Agency and its counterpart medical research programs are limited in S. 1828 to the following provisions:

1. The director of the agency is given authority to coordinate cancer research with the other research programs of NIH.

2. The agency director is authorized to utilize the resources of other agencies.

3. The director of the cancer conquest agency is authorized to transfer funds to other Federal agencies, including the NIH, for cancer-related programs.

4. The agency's director is authorized to take action with the director of NIH to maintain between the agency and the institutes of health the communication channels which has existed previously between the National Cancer Institute and other institutes of health.

5. The director of NIH is made a member of the 22-member national cancer advisory board.

None of these authorities give the Director of NIH, nor are they intended to do so, any line responsibility over the cancer research program.

The committee report language stating the committee's intent that the Director of NIH may submit his comments to the President regarding the budget and program plan of the Cancer Conquest Agency is insufficient. What is needed is statutory authority making clear that the Director of NIH should have the formal responsibility of submitting the cancer program plan and budget to the President, along with his evaluation of the cancer program and budget and appropriate recommendations.

If each of these provisions were carried out to the maximum extent, it is possible we might have a program capable of contending with the responsibilities envisioned by the cancer panel. However, I feel the likely association between the Cancer Conquest Agency and the Institutes of Health will in practice be all too tenuous.

In effect what the bill establishes is a completely independent agency labeled as located within the National Institutes of Health but with no responsibilities given to the Director of NIH. The Cancer Conquest Agency head is given only discretionary authority to coordinate programs and to transfer funds to programs of individual institutes.

The basic flaw in practice and concept lies in the bypassing of the Director of NIH, who has under his jurisdiction the other nine Institutes, several of which are engaged in continuing cancer and

cancer-related research, and who is, therefore, in probably the best position in the Federal Government to have a complete grasp of all cancer-related activities and research. However, the Director of NIH's only formal, statutory connection with the Cancer Conquest Agency is as a member of the National Cancer Advisory Board where he will share in decisionmaking with 21 other members.

As Dr. Philip Lee, chancellor, University of California at San Francisco and former Assistant Secretary of HEW—Health and Scientific Affairs—stated in testimony before the Senate Labor and Public Welfare Committee—

To have the best chance of success, a battle against cancer must be able to draw not only on the cancer specialists and investigators in the National Cancer Institute, but on the other specialists in other Institutes of the N.I.H.—the experts on virus diseases, on genetics, on aging, on endocrinology, on molecular biology, on pharmacology and immunology. This will require the same kind of close collaboration among the various N.I.H. institutes that has been required many times in the past.

He went on to say—

There is a further problem with the proposed national cancer authority—competition for scarce resources. I believe a separate authority would immediately create competition for funds and scientific talent. This would not help the conquest of cancer and it might set back research in other crucially important areas.

Mr. President, beyond the competition created for funds and creative talent are the disagreements often encountered among members of the scientific community as to the best approach and method of attacking a research problem. This is especially true applied to cancer research. As the report of the cancer panel pointed out, the routes to the conquest of cancer are many. Decisions as to the routes to choose should be made in close association with decisions being made in related research programs to prevent duplication and wasted effort. These potentials for conflict can best be averted by providing the Director of NIH with the overall supervision of research programs and responsibility for their coordination. The Association of American Medical Colleges assembly in a resolution adopted recently fully supported this view, in the following language:

The present state of our understanding of cancer is a consequence of broad advances across the full scope of the biomedical sciences. In preparing for a greater effort, it is of the utmost importance to understand that despite the progress thus far made, the basic nature and origins of cancer are still not known. The kind of scientific formulation that permitted the development of nuclear energy and that underlies our space exploration does not exist for cancer. Further advance in fundamental biomedical sciences is essential to the solution of the unsolved problems that limit our ability to control cancer. Thus, the development of a special and extraordinary national program in cancer should be in the context of broad support of the related and underlying fields of scientific effort and in an organizational framework which assures sound direction and leadership in advancing this complex set of interrelationships.

The framework of the NIH, which had its

origins with the Act of 1930, enlarged by the National Cancer Act of 1937, and the successive statutes creating the several categorical institutes in the post-war period, has made it possible to bring into being the most productive scientific community centered upon health and disease that the world has ever known. It is precisely because this organization has assured a close integration between fundamental scientific endeavor and organized attack upon specific disease problems that this extraordinary blossoming of medical science, and thus our medical capability, has taken place. Therefore be it

Resolved that the Association of American Medical Colleges wholeheartedly endorses Federal support of a broad-based and intensive attack on the cancer problem called for by President Nixon in his State of the Union Message and of the magnitude envisaged in the report of the National Panel of Consultants on the Conquest of Cancer, and that this major expansion be undertaken as an integral part of the existing national framework for the advancement of biomedical knowledge for the nation's health as provided by the structure of the NIH and the National Cancer Institute.

As Dr. John Cooper, president of the AAMC, pointed out in testimony on June 10, "this same view has been endorsed by the leading academic societies in this country. As a result," he said—

It is not an exaggeration to describe this view as truly representative of the Nation's academic medical community which encompasses most of the scientific leadership upon which progress in cancer is critically dependent.

Mr. President, Senator NELSON, Senator SCHWEIKER, and I tried to avert the weaknesses of the bill before us by offering, as an amendment—No. 109—to S. 34, an alternative plan which would have maintained programs for cancer research in the National Institutes of Health but in a new national cancer authority within National Institutes of Health whose Administrator would also be Deputy Director of Cancer from the new National Institutes of Health. The National Institutes of Health in turn would have been separated from HEW and made an independent agency accountable directly to the President. I felt and still feel that such an organization arrangement would provide the necessary focus and priority emphasis deserved by cancer programs and at the same time would maintain the greatest degree of collaboration and coordination with other biomedical research efforts.

We believed that the serious and valid objections raised by the biomedical research community could be met through this approach, and that the conclusions and recommendations of the cancer panel could best be implemented through that mechanism.

Before closing, I want to pay special tribute to my colleague from Wisconsin (Mr. NELSON) with whom I joined in submitting individual views in the committee report—No. 92-247—on S. 1828. The serious questions Senator NELSON has raised about the approach in the bill and its predecessor (S. 34) in no way indicate he is any less committed to the conquest of cancer than the distinguished principal sponsors of the measure, Mr. DOMINICK and Mr. KENNEDY. Senator NELSON and I fully support the urgent need to prevail over cancer at the earliest possible date. I know he joins me

in hoping that our fears and reservations about the approach in S. 1828 will prove groundless and that the cancer conquest agency will live up to the promise of its name.

Mr. President, I have grave reservations that the solution reached in the committee bill, S. 1828, can be successfully implemented and it is for that reason that it is with some reluctance that I shall cast my vote for the bill.

However, we must conquer cancer. This measure—considered with care by so many public officials and private citizens, many of them professionals with vast experience and the very highest qualifications, others of them laymen like the indomitable Mary Lasker with the deepest dedication and concern and with truly remarkable experience in what it takes to launch a vital new undertaking with requisite public, private, professional, and lay support—constitutes what all of us must hope is a start toward the end of cancer.

I, therefore, urge support of this measure.

The PRESIDING OFFICER. Who yields time?

Mr. DOMINICK. Mr. President, how much time do the Senator from Massachusetts and I have remaining?

The PRESIDING OFFICER. Thirty-nine minutes.

Mr. DOMINICK. I say to the Senator from Massachusetts I have a request for about 20 minutes of time.

Mr. KENNEDY. I do not have any requests. I should like to take about 5 minutes at this point.

Mr. DOMINICK. Very well.

Mr. KENNEDY. Mr. President, I should like to address myself to some of the remarks made by the distinguished Senator from Wisconsin (Mr. NELSON) and the distinguished Senator from California (Mr. CRANSTON) in the separate views filed by those Senators in the committee report.

I want to express my appreciation to the Senator from California for his generous remarks at the outset of his comments. He has been an extremely active member of the Health Subcommittee, and probably next week will be importantly adding to the debate on the health manpower legislation. He has left a strong imprint on that legislation, as on many other bills, so I think all of us should seriously consider his comments and those of the Senator from Wisconsin (Mr. NELSON) with a great deal of care.

A rather interesting and perhaps ironic point has been raised by those gentlemen in terms of their concern about the dismemberment of the NIH by the fact that we are establishing an independent agency which would be within the NIH following the recommendations of the panel. Regarding the demise of the NIH, I repeat, it is interesting to hear the comments of those gentlemen, since only last spring they introduced Senate Resolution 126, which would do for heart disease exactly what they are apparently concerned about.

So I have some difficulty in following the line of their argument and listening to their rhetorical questions, asking as to how we are going to be able to better

meet the problems and challenges presented by cancer by setting up a special agency given the fact that the very same principle has been incorporated in the resolution sponsored by the distinguished Senator from Wisconsin and the distinguished Senator from California to which I have referred.

But that aside, three important provisions have been included in S. 1828 in terms of the role of the Director of the Conquest of Cancer Agency.

On page 14, under the administrative provisions, the Director is authorized, in carrying out his functions under this part, to—

Take necessary action together with the Director of the National Institutes of Health so that all channels for the dissemination and cross-fertilization of scientific knowledge and information existing prior to the effective date of this Act between the National Cancer Institute and the other Institutes of Health shall be maintained between the Agency and the Institutes of Health to insure free communication between cancer and the other scientific, medical, and biomedical disciplines.

Then on page 15, we have the following language:

The Director shall, by regulation, provide, for proper scientific review of all research grants and program over which he has authority (A) by utilizing, to the maximum extent possible, appropriate peer review groups within the National Institutes of Health, and (B) when appropriate, by establishing, with the approval of the National Cancer Advisory Board, other formal peer review groups as may be required.

This language was not all that the distinguished Senator from Wisconsin wanted, but once again, we are utilizing established peer review group procedures which have been utilized successfully in the past, and which those of us who supported S. 34 and support S. 1828 support vigorously.

Then on page 17 of the bill:

The Director shall submit to the Board for its evaluation, comments, and recommendations each year's program plan and budget prior to the formal submission of the budget request to the President.

The PRESIDING OFFICER. The Senator's 5 minutes have expired.

Mr. KENNEDY. I yield myself 4 additional minutes.

The Director of the National Institutes of Health is a full member of the advisory board. He will be aware of and a full participant in its deliberations. Obviously his role as a Director of the National Institutes of Health will be strong and his views will be listened to and respected by members of the advisory board.

Furthermore, Mr. President, in responding to questions by the Senator from New York (Mr. JAVITS) and the Senator from Colorado (Mr. DOMINICK), during our hearings on the bills, Secretary Richardson, who obviously has the broadest view and scope of this problem, responded to an inquiry by Senator DOMINICK as follows:

It is my understanding that under the proposal which we have before us in S. 1828, upon which conferences have been held to see how we can put together the proper bill, that the director will report to the President but will be working within the NIH on a

mutually agreeable basis so that the cross fertilization of ideas in the other institutes will still be available, is that correct?

Secretary RICHARDSON. Yes.

And also we have comments, in terms of whether this bill would really adversely affect the research in the biomedical sciences. Dr. Farber, who has been a distinguished researcher and co-chairman of the panel testified:

He said:

Just recently, within the last year, Senator Nelson is familiar with this, I am sure, the research worker Professor Demon, in a cancer institute in Wisconsin, made an observation, quickly made also by Dr. Bolter, which has completely shaken the dogma of DNA. The foundation of modern molecular biology when these men showed that there is an enzyme working on RNA, which permits RNA to work upon DNA, and protein synthesis in a manner which was never thought possible by other people in molecular biology or bio-medical science. This is a two-way street. It will be unthinkable for anyone in charge of a cancer enterprise to neglect biomedical research.

That thesis has been supported time and time again by the recommendations of the panel group as well as by the reports.

I think that the Senator from New York (Mr. JAVITS) has commented adequately on whether we are going to have a proliferation of separate agencies. I share the view that if this is going to be an effective way to meet the scourge of cancer, we should then keep an open mind with regard to the applicability of this unique model to other diseases. But we have not had an adequate record made in terms of other diseases at this point, as our report points out on page 25. And, therefore, we have not made recommendations with respect to other diseases. We will have to wait and determine the effectiveness of this program first.

Mr. President, I hope that S. 1828 will be passed by the Senate this afternoon.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield.

Mr. CRANSTON. I thank the Senator from Massachusetts again for his leadership in this effort and for his generous remarks in regard to this bill. I do not want to prolong the discussion of this measure.

I do want to say, in response to the Senator's comments about a resolution that I introduced with Senator Nelson, regarding looking into the matter of cardiovascular diseases, that that resolution in no way calls for the creation of an institute. It in no way prejudices what should be done about that and related diseases.

The PRESIDING OFFICER. The Senator's 4 minutes have expired.

Mr. CRANSTON. May I have 1 minute?

Mr. NELSON. I yield the Senator whatever time he needs.

Mr. CRANSTON. It simply urges that we take a long, hard look, through a panel, at what this disease is doing to the citizens of our country, and we seek recommendations as to what we should do about that disease. There has been enough adequate research on that disease to show that it is the No. 1 killer, that 38.4 percent of American deaths are caused by

that disease. Those are not only elderly people. Among the young people of our land, apparently about as many die of those diseases as from cancer.

I hope that as we now come to grips with the matter of cancer, the No. 2 killer, we will set in motion steps that will help us come to grips with the No. 1 killer, heart and cardiovascular diseases.

Mr. NELSON. Mr. President, I wish to comment on the same point. Senator HANSEN and I introduced a resolution to make a heart and lung study. It was copied after the Yarborough resolution. If that resolution were passed and the panel were created, whether the panel would come up then with the same kind of recommendation, I do not know. If it did, I would disagree with that aspect of the recommendation, as I disagree with that aspect of the recommendation of the cancer panel.

Mr. KENNEDY. Mr. President, will the Senator yield?

Mr. NELSON. I yield.

Mr. KENNEDY. It is my understanding that the heart people have already requested an independent agency patterned after the cancer agency. Is the Senator familiar with that request?

Mr. NELSON. Yes, they have. I think it is inevitable that they will request that if this bill is passed. I disagree with that.

I wish to emphasize once more that I think the panel did an excellent job of evaluating what the problem was. I think that the committee and Senator KENNEDY did an excellent job. I just disagree on the one point of an independent institute outside of NIH; that is all. But it is a very fundamental point which I think is a serious fault in this bill.

I am debating the question today not in the expectation that I will persuade anybody to change the bill, because I know I will not, on this side. But I am hopeful that the House will give it a deliberate, careful look and will remedy what I think is a serious defect in an otherwise very fine bill.

The PRESIDING OFFICER. Who yields time?

Mr. DOMINICK. Mr. President, I yield 10 minutes to the distinguished Senator from Maryland, a member of the Subcommittee on Health.

Mr. BEALL. I thank the distinguished Senator from Colorado.

Mr. President, as cosponsor, I rise in support of the pending measure, S. 1828, the Conquest of Cancer Act. This bill would establish a Conquest of Cancer Agency as an independent agency within the National Institutes of Health. It is hoped that this new agency will provide the administrative and organizational framework for a stepped-up and successful battle against cancer. President Nixon has already requested, and the Congress has approved, an additional \$100 million for the cancer program for this fiscal year. In addition, the President has pledged, if more money is needed, "to provide whatever funds can be effectively utilized."

As a member of the Health Subcommittee, I believe that the legislation reported to the Senate floor is a good bill and should receive the support of the

Senate. I, of course, am pleased to have had the pleasure of helping to shape this legislation in subcommittee.

As my mail indicates, legislation to accelerate the Nation's battle against cancer certainly has the support of fellow Marylanders and other citizens across the country.

CANCER—CITIZENS FIRST HEALTH CONCERN

Cancer is the No. 2 killer of our people and their No. 1 health concern. A 1966 poll revealed that 62 percent of the American people feared cancer more than any other disease.

Over 16 percent of the deaths in the Nation are caused by cancer. Cancer deaths last year claimed more lives than we have lost in 6 years in Vietnam, and were greater than the total number of Americans killed in action during World War II. Cancer deaths last year were 5½ times the number killed in automobile accidents.

The economic loss to the Nation from cancer deaths are truly astronomical. The panel of advisers on cancer research estimated that direct care and treatment costs plus the indirect costs represented by loss of earning power and productivity by victims of cancer was a staggering \$15 billion. Of that sum, \$3 to \$5 billion represented direct care and treatment costs.

Mr. President, cancer strikes all ages. About one-half of all cancer deaths occur before age 65. Cancer causes more deaths among children 15 and under than any other disease. Although these statistics convey the magnitude of the problem, they do not reveal the individual suffering and hardships that result both to the family and victims and friends. One can only understand this from personal experience or through an examination of individual cases. Earlier this year Carroll County in my State was stunned and saddened when cancer claimed the life of one of its most promising young men, Mike Causey, who was only 17 years of age.

Mike excelled both athletically and academically at Westminster High School. Mike was president of his class for 3 years, was voted by his senior class as the best leader, and was also very active in his church and his community. Mike's untimely death underscores the need for the national commitment and program for the conquest of cancer.

Mr. President, the incidence of cancer is increasing. The fact that our citizens are living longer and the incidence of cancer is higher among senior citizens is partially responsible. It is also due to a large increase of lung cancer, which many attribute to pollution, both air in certain areas, and the self-pollution caused by our citizens' insistence on smoking notwithstanding the warning that appears on every cigarette package. It has been estimated that if every American citizen would quit smoking, cancer deaths could be cut by 15 percent. I am pleased to say that I am one American who has been able to stop smoking. While accelerating the attack on cancer, we must continue to push the fight against pollution, both as individuals and as a nation.

This is necessary for if the present

incidence of cancer were to continue, 52 million Americans, one out of every four individuals in this country, will contact cancer some day. This would mean that cancer would strike two out of every three families and in the next 10 years 3½ million citizens will die from cancer.

EARLY DETECTION IMPORTANT

It is hoped that the results of this stepped up effort and a continuing improvement in the cure rate for cancer will enable us to prove these dreary projections untrue. It is important to emphasize to the American public that many forms of cancer today, detected early enough, can be cured. In 1930, we were able to cure only one out of five cancer victims; today, we can cure one out of three and it is estimated that with the better use of existing knowledge we could cure one out of two. The 1.5 million citizens who are alive and well today, 5 years after being treated for cancer, are a living testimony of early detection and treatment. In addition, another 700,000, treated within the past 5 years, are alive and well. One is generally considered cured 5 years after treatment if there has been no recurrence.

While the above are encouraging, we do not want to hold out to the American public that a cancer cure is imminent. First, cancer is exceedingly complex. It is not a single disease with a single cause that will likely be solved by a single cure such as the Salk vaccine did for polio. Cancer more properly should be thought of as many diseases resulting from many causes and for which we will need many cures. President Nixon, although strongly committed to the conquest of cancer, sounded a word of caution and urged the American public to be patient when he said "that biomedical research is a notoriously unpredictable enterprise. Instant breakthroughs are few and the path of progress is strewn with unexpected obstacles. As we undertake this crusade, we must put on the armor of patience, ready to persist in our efforts through a waiting period of unknown and possibly anguishing duration."

Also the cancer panel sounded a similar note when it stated:

While it is probably unrealistic at this time to talk about the total elimination of cancer within a short period of time or to expect a single vaccine or cure that will eradicate the disease completely, the progress that has been made in the past decade provides a strong basis for the belief that an accelerated and intensified assault on cancer at this time will produce extraordinary rewards.

TRIBUTE TO NIH

Mr. President, this afternoon much mention has been made about the National Institutes of Health and the proposed legislation. Representing the State of Maryland, I naturally am proud of the National Institutes of Health and its many dedicated employees. There is no question that the United States is No. 1 in medical research. NIH and its dedicated men and women are in no small part responsible for the preeminence of biomedical research in the United States. In fact, the bill that the Senate is considering today might be thought of as a tribute to the work they have done, for the National Cancer Institute at NIH has

helped to push basic research to the place where the Nation is now able to launch a massive attack against cancer.

The National Panel of Consultants on the Conquest of Cancer observed that—

Advancements in the fundamental understanding of cancer in the past decade have opened up far more promising areas for major advances in cancer prevention and treatment than have ever before existed.

Similarly, the Labor and Public Welfare Committee report acknowledged the "excellent work" done at and supported by NIH grants and contracts. And the President paid tribute to NIH in his cancer message when he said:

They have earned both the respect of the scientific community and the gratitude of thousands who live happier and healthier lives because of NIH successes.

Because I was aware of the NIH record, I shared the viewpoint of most members of the scientific community that it would be unwise to establish a new cancer authority outside NIH. I feared that such a move might be destructive of the excellent NIH structure. It might have prevented or hindered the important and necessary cross-fertilization between cancer research and other biomedical research. It should be pointed out that in the cancer area we still need basic scientific breakthroughs. Cancer research has profited from a close relationship with biomedical science in the past and the interdependence of the medical science is likely to be needed and to continue in the future. It is also true that other disciplines will most likely profit from a close contact with a great expanded cancer research effort.

But I think that today we have the best of both worlds, because today we have the availability of the tremendous research that has gone on at the National Institutes of Health as well as a national commitment to find the cure for this dread disease.

I want to congratulate Senators DOMINICK, KENNEDY, and JAVITS, and the administration for reaching the compromise which is before the Senate today, a compromise which will enable the Nation to get on with the business of searching for cures for cancer. I support the compromise. The compromise authorizes a new independent Conquest of Cancer Agency which will be located within NIH. The Conquest of Cancer Agency will be headed by a Director who will report to President Nixon. This compromise certainly represents an important improvement over the original measure. By keeping the new Conquest of Cancer Agency within NIH, cancer's link with the other biomedical researchers will be continued and the danger of the loss of association with the National Institutes of Health is largely eliminated.

In summary, defeating cancer or substantially reducing its incidence is as difficult and as complex an undertaking as this Nation has ever embarked. To be successful it will require talented men and women, extraordinary management, adequate resources, and probably some good luck. President Nixon has pledged he will make the added resources available as research unlocks promising leads necessitating additional sums of money.

The bill the Senate will pass today will enable the country to launch this conquest of cancer effort. It is an undertaking that will have the prayers and support of all of our citizens.

I personally feel confident that this accelerated attack will enable us to make great strides against this dreaded disease of mankind. As a member of the Health Subcommittee, I intend to follow and to do everything I can to make the conquest of cancer effort successful. I urge enactment of the measure.

FORT DETRICK

I invite attention to section 407D, on page 34 of the committee report. Section 407D reads:

In order to carry out the purpose of this part, the Director shall—

Subsection (3) then reads:

Expediently utilize existing research facilities and personnel for accelerated exploration of the opportunities for the conquest of cancer in areas of special promise;

I point out that recently we have gone out of the business of biological warfare in this country, and as a result many talented people and a great deal of unique facilities are available which can and should be utilized in the conquest of cancer effort.

I am, of course, speaking of Fort Detrick which is located within my State of Maryland. Fort Detrick is uniquely suited for biomedical research in cancer and related areas. It has \$250 million worth of facilities and equipment which are available now for use in the fight against cancer.

A number of our top medical science professionals have indicated the need for a research center with the same capabilities as Fort Detrick. They have said that if Fort Detrick were not available for use in virus research, it would have to be built. With these facilities available, Mr. President, the cancer fight can proceed swiftly ahead with no time lost for construction. I urge that the Detrick Laboratories be made part of the Federal Government's crusade to beat cancer.

Mr. President, I believe that one additional point needs to be made. Despite the expanded effort against cancer envisioned by S. 1828, I would hope that the countless communities across the country will not in any way diminish their individual crusades against cancer. These individuals and community efforts, which occur throughout my State and the country, are very important in the overall battle against this dread disease.

I ask unanimous consent that an article which appeared in the June 30 Frederick Post, describing one of the successful cancer crusades in my State, be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

WE WANT TO WIPE OUT CANCER IN YOUR LIFETIME

A successful Cancer Crusade is made up of a whole lot of dedicated people who for reasons of their own, some very dear to their hearts, are willing and desirous of working in this campaign—the largest of all public health drives.

Some of the people who made the Frede-

rick County Cancer Crusade another goal-busting success are pictured on this page . . . but these are only a handful of the more than 1,400 men, women and children who each did their part to help Frederick County exceed its \$25,000 goal by almost \$3,000.

This Cancer Crusade involved all walks of life—the rich and the poor, students and teachers, doctors, lawyers, businessmen, retired persons by the scores.

Cancer Society President Francis W. Bush Sr. and Crusade Chairman Sterling E. Bollinger jointly praised the fine team of 1,400 volunteers, and especially the divisional chairmen—including Crusade Vice Chairman Isaac L. Stevens.

The chairmen include: Joseph D. Baker, special gifts; Robert P. Marendt Jr., business and industry; Donald C. Linton, clubs and organizations; Edwin F. Nikirk Jr., memorials; Mrs. Dale Carter, city residential; Claude H. Barrick, county residential; Mrs. Samuel Thompson, office volunteers; Mrs. William Roessler, public education; Dr. Bjarne Pearson, professional education; Mrs. Nellie S. Simpson, service chairman; and Gene T. Mills, public information.

It would be difficult to point out individuals, but mention is due the two largest divisions in the crusade—The County Residential Division chairmanned again by Claude Barrick of S. W. Barrick & Son Inc., of Woodsboro, and the City Residential Division, again headed by Mrs. Dale (Doris) Carter, Frederick County Health Department. Their lists of volunteers follow:

CITY

Mrs. Carter-James Harrison, Miss Anne Stone, Mrs. James McSherry, Mrs. Alan H. Hargis, Mrs. Irene Spurrier, Mrs. Glenn Waltz, Isaac Stevens, Mrs. Ella C. Murphy, Murray F. Fox, Mrs. Charles L. Gorgas, Mrs. Arthur Kester, Mrs. C. B. Hobgood, Mrs. Charles Crawford, Mrs. Gordon Palmer.

Also, Mrs. Helen Mills, Mary Jane Cregger, the American Legion Auxiliary Unit No. 11 members, Mrs. Robert Flisber, Mrs. Edwin Nikirk, Mrs. T. V. Levinson, Miss Pauline Sheets, Mrs. William O. Wertenbaker, Jr., Mrs. Beulah Roop, Mrs. Ernest B. Harris, the Home League Ladies of the Salvation Army, Miss Deuse Pott.

Also, Mrs. Harry Main, Mrs. Alton Shaff, Mrs. Belle Keyser, Mrs. D. L. Wigginton, Mrs. Jack L. Roach, Mrs. Robert S. Turner, Mrs. Lloyd Stup, Mrs. Kea Hersperger, Mrs. Mary Holdcraft, Mrs. George Dorsey, James and Billy Graham, Mrs. Grace Chafin, Mrs. Ruth E. Stup, Mrs. John Hanson, Stanley Staley, Mrs. Elmer Wachter, Mrs. Joseph Price, Mrs. Harold Schaden, Mrs. Thomas Elcheiberger.

Also, Miss Dorothy Keys, Mrs. Leonard Dobucki, Mrs. William J. Mohan, Mrs. Charles Rumpf, Mrs. George F. Cresap, Mrs. Thomas Notally, Mrs. Edward Routzahn, Mrs. John Pontou, Mrs. Paul Gordon, Mrs. Adel Demiray, Mrs. Wilson Stup, Mrs. Dare Morton, Mrs. Ruth E. Brandenburg and son, Mrs. Owen Mercer, Miss Eleanor Brown, Mrs. Robert Stanton, Mrs. Alice Davis.

Also, Mrs. Claude B. Delauter, Mrs. George Ambush, Mrs. Raymond Scott, Mrs. William Kennedy, Mrs. George C. Meyer, Ronald Summers, Mrs. Kenneth Crampton, Mrs. William Barry, Mrs. Douglas Whittington, Mrs. M. L. McKenna, Mrs. William R. Cole, Mrs. Frank House, Mrs. J. Earl Gilbert.

COUNTY

Claude Barrick-Elmer Highhouse, Mrs. Leon Howard, Mrs. R. J. Opel, Mrs. John Carnochan, Jr., Mrs. Louis Faville, Mrs. Eugene Kefauver, Mrs. Albert Main, Mrs. Joseph Hering, Mrs. John C. Spahr, Mrs. Ellen Jacobs, Mrs. Austin Cooper, Mrs. Carroll Lee Zecker, Mrs. Verna Ward, Mrs. Louise E. Fraley, Mrs. C. Ray Green, Mrs. Clyde V. (Jessie) Knipple, Mrs. Dorsey Lovell, Mrs. James Fisher, Mrs. Keefer R. Crampton, Mrs. Fred Oyhus, Mrs. Glenn Bumbaugh.

Also, Charles C. T. Stull, Mrs. Frank Ster-

ling Warner, Mrs. Stafford Grabill, Mrs. Millard Eller, Mrs. William Buzzerd, Mrs. Paul Brunner, Mrs. Joseph Brown, Mrs. Brinton E. Sullivan, Mrs. Frank Gladhill, Mrs. Bertram Enfield, Mrs. Richard Jones, Mrs. Karl S. Manwiller, Jr., Mrs. Stanley Y. Bennett, Mrs. John Graham.

Also, Mrs. Sterling Bollinger, Mrs. Dale Ericson, Mrs. John Moser, Mrs. Charles Hoke, Mrs. Harvey Starkey, Mrs. Joseph Beeson, Mrs. Claude Barrick, Mrs. George F. Quinn, Mrs. Carl Harbaugh, Mrs. John D. Vachon.

During the crusade year, there were scores of organizations and other individuals who planned and carried out special fund-raising projects, or were cited for their efforts on behalf of the campaign.

One of the projects which for the third consecutive year drew praise from county and state cancer officials, as well as interested citizens, was the "Road Block" solicitation by students of the University of Maryland who chose to "demonstrate" in the Crusade rather than on campus.

John Wrightson was chairman of the project which involved members of Alpha Gamma Rho fraternity and Phi Beta Phi sorority. Members soliciting for the crusade at area shopping centers included:

Alpha Gamma Rho—Wrightson, Jason Myers, Tommy Bligeman, Bert Ford, Rob Powell, Greg Browning, Bob Fry, Rick Stuller and Larry Grossnickle; Beta Phi—Irene Zolnaski, Linda King, Barb Porterfield, Chris Baumann, Sharon McKim, Patty Griffin, Holly McCabe, Dale Ganley, Julie Johnson.

Every little bit helps—and so it was with projects for cancer such as the back-yard carnival conducted by the children at the home of the Willard Posts on Thomas Avenue . . . Net: \$3.50.

Frederick High Students, according to Thomas Van Pelt, held a welfare drive under Student Council and the share for the Cancer Crusade was \$55. Student Council officers involved were Perri Fellers, president, and Stephanie Brown, vice president, and Welfare Committee members Allen O'Hara, Eric Summers and Carol Main.

One of the biggest efforts in terms of people involved was the Rallye Day USA charity road rally sponsored by the Francis Scott Key Mustang Club, with H. Wayne Williams as chairman. The April 18 event netted \$108 for the Cancer Crusade.

The Traffic Department of C & P Telephone Company in Frederick sponsored a cancer drive in memory of LeRoy Koogle, a former plant employee and cancer victim. The program netted \$326 for the crusade. Principals in the project were Chairman Dorothy DeGrange and Mrs. Anna Bussard and Mrs. Oile Nikirk who sold the most tickets. John Copenhaver of Baltimore, Bill Fourman of Westminster and Pat Murphy of Middletown received the gifts.

Every crusade has its gems, and this was no exception, according to Mrs. Louise Creager, executive secretary of the Frederick Cancer Society.

One of the projects, Mrs. Creager explained, was the "Send a Mouse to College" campaign in which anyone could, by contributing 27 cents, pay for an experimental mouse to be used in cancer research.

The mouse "hunt" was conducted in April by Hood College students, with Grace E. Lippy as chairman. The project netted \$120.22 for the fight against cancer through research.

One of the envelopes containing 27 cents came from Martha Kazenmadel, all the way from Saddle River, N.J., and included the following notation:

"If possible, please use my 27 cents to purchase some equipment or something. Please do not buy a mouse and kill him."

What goes into a successful Cancer Crusade? A lot of dedicated people and a lot of work . . . and a purpose that's worth working for:

"We want to wipe out cancer in your lifetime."

The PRESIDING OFFICER (Mr. STEVENSON). Who yields time?

Mr. DOMINICK. I yield 5 minutes to the distinguished senior Senator from Maryland (Mr. MATHIAS).

The PRESIDING OFFICER. The Senator from Maryland is recognized for 5 minutes.

Mr. MATHIAS. I thank the Senator from Colorado for yielding me this time.

Mr. President, I support the bill with a great deal of sincerity. Like most Americans, we have all felt the scourge of cancer in our families. We all know the toll it takes in the lives of Americans and what it costs in human terms, human terms so deep and personal that we do not even like to consider what cancer means in the economy of America.

Few of us realized, until a very short time ago, for example, how cancer attacks our children or, for that matter, how impartial it is to the ages of the victims it strikes.

Mr. President, let me revert to the subject raised by the distinguished junior Senator from Maryland (Mr. BEALL), the question of facilities now available which can be of some help to children who are threatened by cancer today, and to older Americans who are threatened by cancer today—to whom time is a matter of great importance.

It is all very well to talk about programs which are ultimately going to be of help to the whole of the American people, but it is a different thing to talk about programs which can be put into effect today, where progress can be made today, and not just a question of the long-range prospect of help, or a blueprint being needed which will be effective for all Americans who will be born after the year 2000.

What is important to American lives in danger from cancer today is some help today.

What the junior Senator from Maryland has suggested, and what I should like to emphasize now, is that we have facilities in being, bought and paid for—insofar as anything that the Government has can be said to be bought and paid for—which have cost the American public about a quarter of a billion dollars, for studying the effects of the various strains of the virus of cancer on human beings. That is the point at which we begin to find the causes of cancer and, thereafter, the cure for cancer.

We have a team of people trained to operate this system, as the junior Senator from Maryland has pointed out. They are all waiting and ready to go to work. This is the team at Fort Detrick, trained in biological warfare but immediately adaptable to the peaceful cause of finding the cure for cancer.

If we can utilize the facilities at Fort Detrick, we will accelerate the impact of this legislation immediately, because a telephone call today can put Fort Detrick to work for peace. As a matter of fact, there would be no delay at all in utilizing this unique facility. It would not only save time but it would also save money, because if we do not use Fort Detrick, the expert judgment in this country is that we will have to go out and duplicate the facilities which already exist there.

Thus, in terms of time and money, the purposes of this legislation, which I believe will get the overwhelming support of the Senate, can be served by immediate utilization of Fort Detrick, whose experts are objective, have no partisan axe to grind, and are interested in nothing but performing their jobs efficiently.

Fort Detrick is a magnificently specialized laboratory which could be rapidly transformed into a bastion in the fight against cancer. So states Dr. James F. Holland, president of the American Association for Cancer Research, and a number of other scientific experts in this field who have testified that the Fort Detrick facility is available and ready to go to work at once.

One of the problems is, I fear, that the case of Fort Detrick is being considered as just another base closing, just another situation where a community which has benefited by the proximity of a large military installation regrets its closing. Well, of course, those elements do exist, but the fact is that this is not just a base-closing question but one of a pledge made to the American people by the President of the United States, a pledge which can be redeemed more quickly, more economically, more efficiently, and, I think, more successfully, by utilizing the facilities at Fort Detrick.

Therefore, I am very much pleased to associate myself with the remarks that have been made by the distinguished junior Senator from Maryland in urging passage of the bill and the utilization of Fort Detrick to accomplish the purposes of the bill.

Mr. DOMINICK. Mr. President, I want to thank the two distinguished Senators from Maryland for their support of this bill. I know how important the facilities at Fort Detrick could be in finding answers to the various kinds of cancer. I note that the bill gives the Director of the Cancer Conquest Agency specific authority to acquire any facilities he deems necessary to carry out the cancer program. Presumably, to make use of Fort Detrick, this would only involve a transfer from DOD to HEW.

Mr. President, at this point I yield 5 minutes to the distinguished Senator from Vermont (Mr. PROUTY).

The PRESIDING OFFICER (Mr. STEVENSON). The Senator from Vermont is recognized for 5 minutes.

Mr. PROUTY. Mr. President, as a cosponsor of S. 1828, the Conquest of Cancer Act, I urge Senators to support the bill as reported by the Committee on Labor and Public Welfare Committee.

While not the major cause of death in our Nation, cancer is the disease most dreaded by Americans. Of the 200 million Americans alive today, 50 million will develop cancer at present rates of incidence and some 34 million will die of this painful disease. Cancer must be conquered and we as a Nation must commit ourselves to this conquest. The measure before us embodies this commitment as expressed by President Nixon and a bipartisan array of sponsors and cosponsors of the two bills which resulted in the compromise in the amended version of S. 1828 now before us.

As a member of the Senate Health Subcommittee, I would like to share briefly with Senators the problems that developed in seeking a means to achieve a shared goal.

There were clear, well-intentioned differences of opinion as to whether our expanded efforts against cancer should be conducted by an agency independent of the present National Institutes of Health or within the NIH framework. After much thought I became convinced that maintaining the integrity of biomedical research was essential to achieve our goal because the problem of cancer straddles almost all the life sciences any one, or all, of which may contribute to the final conquest of cancer.

The bill before us reflects a compromise between those who deeply felt that a separate agency was needed in our fight against cancer and those of us who believed that the battle must be waged in the closest harmony with the NIH troops already on line.

I commend all who endeavored so long and hard to achieve this compromise. It is indeed in the finest tradition of the United States Senate.

I am convinced that as set up in this measure the Conquest of Cancer Agency, independent but within NIH, is the best vehicle for carrying out our firm commitment to apply whatever resources are necessary to conquer cancer as rapidly as possible.

Some Senators may express concern that the role of the Director of the National Institutes of Health as it pertains to the new Agency should have been more clearly defined in this bill. Perhaps this is so, but with Dr. Robert Marston as Director of the National Institutes of Health I have no doubt the activities of NIH and the Agency will be carefully coordinated and that there will be no let up in the research momentum he has so expertly developed in his 3 years as Director of NIH.

To a large extent the success of the Conquest of Cancer Agency, or any agency for that matter, depends on the quality of its leadership. The National Institutes of Health has been made excellent by great directors like Dr. Marston and I am confident that with his deep commitment to conquer cancer President Nixon will appoint a Director of the Conquest of Cancer Agency who will follow in this tradition of excellence and in the closest cooperation with Dr. Marston.

Mr. President, I believe this bill as reported is essential to reach a goal everyone seeks and hopes is reachable, the conquest of cancer. I urge Senators to enthusiastically support S. 1828.

Mr. President, I thank the Senator from Colorado for yielding.

Mr. DOMINICK. Mr. President, I thank the Senator from Vermont for his contribution.

Mr. President, as far as I know, we have now outlined the matter in detail. I do not have any additional requests for time. I do not know whether the Senator from Massachusetts has. Apparently he does not.

Mr. President, I ask unanimous consent to have printed at this point in the RECORD an extremely interesting article

entitled "Cancer Virus Isolation in Human Is Reported," written by Victor Cohn, and published in the Washington Post.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

CANCER VIRUS ISOLATION IN HUMAN IS REPORTED

(By Victor Cohn)

The first isolation of a human cancer virus—an elusive goal of science for more than half a century—was claimed by a Texas medical team yesterday.

Two Houston scientists said they extracted the virus from the cells of a 5-year-old boy who died of Burkitt's lymphoma, a lymph gland cancer.

The pair—Drs. Elizabeth Priori and Leon Dmochowski of the University of Texas' noted M.D. Anderson Hospital and Tumor Institute—then succeeded in growing the virus in human lymph cells in the laboratory.

If confirmed, their achievement could open the way to learning not only the way many cancers are caused, but possibly how to prevent them, maybe by vaccination.

There is already widespread excitement over the reported discovery at the National Cancer Institute in Bethesda, under whose contract the work was done.

The findings still must be checked by many scientists. It may take long study before anyone can positively say that the particles they are growing are human cancer viruses.

There is also a prior claimant for "first" isolation of a human cancer agent—the isolation of another type of virus linked with another variety of Burkitt's lymphoma by Drs. Michael Epstein and Y. M. Barr in Britain in the mid-1960's.

Their "EB" (for Epstein-Barr) virus is still called only a "cancer-associated, herpes-type virus" (because it resembles the viruses of herpes diseases). It has been implicated in other diseases too, and its true role is still unclear.

The Houston claim comes from a team led by a well-established authority, the 61-year-old, Polish-born Dmochowski, head of virology at M. D. Anderson. He believes he has strong evidence that "indeed a human virus has successfully been obtained for the first time."

His sphere-shaped virus is a so-called C-type, the same type that is the proven cause of cancer in rats, mice, cats, dogs, monkeys and other mammals.

"If this finding is true," said Dr. John B. Moloney of the National Cancer Institute, "this is a huge step forward. Here is something we have been looking for for a long time."

It could prove the most important discovery so far in the institute's \$40-million-a-year "special cancer virus program." This effort mainly financed the Texas work and many other recent advances, as part of an intense search for cancer viruses and a cancer cure.

An animal cancer—chicken leukemia or leukemia—was first shown to be caused by a virus in 1908. But it has been only in the last few decades that evidence has begun to accumulate that human cancer too may be associated with viruses.

The Texas evidence comes in a year in which, first, scientists reported still another type of cancer virus (B-type) in high number in the milk of women having a strong family incidence of breast cancer.

Next, in late June, doctors discovered an apparent epidemic of Hodgkins disease—another kind of lymphoma—in 12 members or close contacts of the 1954 graduating class of an Albany, N.Y., high school. This raised the possibility that Hodgkins disease is infectious and caused by a virus—or maybe caused by a virus triggered by some common factor in this group's environment.

In all, Dr. Frank Rauscher of the cancer institute noted recently, "the era of the '70s is the era of confrontation with the cancer mystery and will reveal more about the mechanism of cancer than any time since the inception of research."

Houston's Dmochowski (with C. E. Grey) first identified what he believed to be C-type viruses in the lymph nodes of a Hudson patient in 1957.

But identifying a virus—in electron microscope photos magnified perhaps 90,000 times—and snagging it are two different things. The latter was finally accomplished by Drs. Priori and Dmochowski and colleagues with the virus from the boy with Burkitt's lymphoma, a cancer that particularly affects the face and knee bones.

To "isolate" a virus a scientist must not only grow it in a lab dish full of cells. He must then show that he can infect other such cultures with an extract, then do so in culture after culture in what virologists call "serial passage." The Houston group has made 40 such passages.

They have sent cultures to others, and workers at both the cancer institute and New York's Memorial-Sloan-Kettering Cancer Center have determined that the particles are not contaminants, or animal cancer viruses that somewhat migrated into the laboratory.

What are the next steps in proving that "ESP-1"—the name of the new virus, for Elizabeth S. Priori—is really a human cancer virus?

If the victims were animals, scientists would try to infect other animals. In humans they must be more indirect: showing that the virus harms cells in the laboratory, for example; looking at other patients for the virus; looking at the general population to learn the virus distribution.

Evidence already indicates that the virus infects human embryo cells grown in the lab, said Dmochowski.

Mr. TAFT. Mr. President, the Conquest of Cancer Act, which I have cosponsored and is before us today, is the result of deep concern and a firm commitment by Americans to expedite the discovery of a cure for cancer. The consensus of all that the conquest of cancer is a top priority must be matched by the financial resources, human knowledge, and the administrative framework necessary to make this goal a reality.

I believe that this bill will provide that framework. The study and discussion of how we might be most successful in achieving the conquest of cancer has been consistently characterized by dedication, reason, and compromise. Recent advances in cancer research prompted the passage of S. 376 in March of 1970, which authorized an in-depth study of cancer research including recommendations to facilitate its conquest. In June of 1970, the eminent panel of consultants on the conquest of cancer began this study. With singleness of purpose, these thoughtful men and women reported their findings and recommendations. They told us that a national program for the conquest of cancer would be essential to build upon recent advances in this field of research. They recommended that the program must be administered with clearly defined responsibility and adequate financial resources.

In his state of the Union address, President Nixon made the discovery of a cure for cancer one of his six great goals for this Nation. He requested the appropriation of an additional \$100 million to begin

this campaign against cancer. Based on the recommendations of the panel of consultants, the distinguished Senator from Massachusetts (Mr. KENNEDY) and the distinguished Senator from New York (Mr. JAVITS) introduced S. 34, the Conquest of Cancer Act. After the exchange of ideas in hearings and numerous discussions, the distinguished Senator from Colorado (Mr. DOMINICK) and the distinguished Senator from Michigan (Mr. GRIFFIN) introduced S. 1828, an act to conquer cancer, on behalf of the administration. Further exchanges of ideas concerning the best method of achieving our common goal—the conquest of cancer—brought forth the compromise bill which we are now considering. I congratulate all who have joined in this effort.

S. 1828, in its present form, would establish a Conquest of Cancer Agency as an independent agency within NIH. While the new agency would be administratively independent, the continued coordination of cancer research with other biomedical research is insured in this bill.

It is my hope that the threads of dedication and reason which have run through each stage of this legislation will culminate today in the overwhelming approval of the Conquest of Cancer Act.

Mr. PERCY. Mr. President, I wish to offer strong support for S. 1828, the Conquest of Cancer Act.

Cancer strikes young and old, strong and weak, and black and white indiscriminately. In our lifetime, cancer will attack one in every four Americans. In the 1970's alone, 6.5 million Americans will develop cancer, 10 million will undergo medical treatment for cancer, and 3.5 million will die from cancer unless better methods of prevention and treatment are discovered.

This Conquest of Cancer Act is timely. It comes at a time when research successes in the past 10 years are raising hopes, when cancer research is in the best position to benefit from an infusion of resources. The cure rate is gradually improving, up from 20 percent in 1930 to 33 percent today, and headed for a potential 50 percent in the near future.

I am pleased to have been a cosponsor of S. 34 as I am a cosponsor of S. 1828. However, I hope this Conquest of Cancer Act signals the beginning of our national commitment to find relief, not only for cancer, but for all dread diseases. On August 3, 1970, I called for a crash program for the cure of dread diseases: cancer, heart and stroke. Today, I pledge again to do everything in my power to help eliminate those diseases by 1976 or earlier.

I would like to commend the administration, Senator KENNEDY, the full committee, and the subcommittee for a job well done in bringing forth this most important piece of legislation that will surely hasten the day when we will find a cure for cancer. I would be remiss also if I did not mention the important role played by an outstanding nationally syndicated newspaper columnist, Ann Landers, who urged her readers to support S. 34 and help wage war on cancer. I alone in just one Senate office received a total of 28,250 telegrams and letters attributable directly to this one column.

As has been aptly said before, "never underestimate the power of a woman."

Mr. TOWER. Mr. President, I rise to give my strong support to S. 1828, the Conquest of Cancer Act.

As a cosponsor of S. 1828, I am extremely pleased that the Committee on Labor and Public Welfare has reported this bill unanimously to the full Senate. It must be noted that the bill as reported differs to an extent from the bill Senator DOMINICK introduced on behalf of the President on May 11.

However, the measure we now consider represents the bipartisan commitment which is needed if we are to make the progress in the field of cancer research demanded by the American people. The Senate Labor and Public Welfare Committee should be commended for striking a compromise between the President's objectives as outlined in his special message of May 11 and the objectives contained in S. 34 introduced by Senators KENNEDY and JAVITS on January 26, 1971.

The pending bill will establish a conquest of cancer agency with independent budgetary authority. The Director of the agency will be responsible to the President. The autonomous nature of this agency is necessary to insure the national commitment to eradicate cancer that has now been endorsed by the executive and legislative branches of the Federal Government.

While I firmly believe that a national cancer commitment is in order, I also feel that such action should not be undertaken in an isolated manner. The United States is the recognized world leader in the field of biomedical research. Our effort in this field has been coordinated and directed by the National Institutes of Health. The scientific intricacies involved in cancer research necessitate the implementation of a program that will allow a free flow of ideas between the National Institutes of Health and the Cancer Conquest Agency.

I am convinced that this bill will allow for such a continuum which will promote an overall attack upon this dreaded disease. By making the Conquest of Cancer Agency an independent agency within the frame work of the National Institutes of Health, we will insure the existence of a mechanism to explore, in much greater depth, the questions relating to the many types of cancer. With this legislation, we will embark upon a national crusade directed by a dedicated nucleus of scientists and physicians.

Americans should be heartened by the action we take today. Yet, it would be a disservice to Americans directly concerned with this disease to categorically state that an end to their hardship is in sight. President Nixon warned against such misguided optimism in his special message of May 11:

I would not want to discuss the subject of cancer research, however, without offering a word of caution. Many of the experts that we consulted with told us that biomedical research is a notoriously unpredictable enterprise. Instant breakthroughs are few and the path of progress is strewn with unexpected obstacles. As we undertake this crusade, we must put on the armor of patience, ready to persist in our efforts through a waiting period

of unknown and possibly anguishing duration.

It must be made fully clear that this legislation represents only a commitment to achieve a long sought scientific objective. Legislation alone cannot cure anything. The Congress can only stimulate activity toward such an end. Yet, we are today making such a commitment, and my undying faith in the intelligence and creativity of the American people leads me to believe that we eventually shall see success in the fight against cancer.

I gave my full support to President Nixon's special request for an additional \$100 million for fiscal year 1971 funds for cancer research. I intend to give my full support to future appropriations increasing this Nation's commitment to find a cure for cancer.

I, therefore, urge my colleagues to support S. 1828 as the proper vehicle to encourage scientific breakthrough in our efforts to find a cure for cancer.

Mr. WILLIAMS. Mr. President, with the establishment of the National Cancer Institute in 1937 and the excellent work it has undertaken over the past 34 years, significant progress has been made in the Nation's efforts to fight this dread disease.

Much has been accomplished, yet much more remains to be done.

As far as the American people are concerned there is no question that cancer, like polio and cholera and smallpox before it, must be eradicated. The American people feel about cancer the way they felt about splitting the atom and the way they felt about the moonshot—that these are truly exceptional and unusual circumstances; that there is no reason why people must suffer with this disease; and that cancer can be conquered.

By a wide margin, members of the American public fear cancer more than any other disease. And with good reason. Of the 200 million Americans alive today, 50 million will develop cancer and 34 million will die of cancer if we do not find better means of prevention and treatment.

Cancer not only represents financial catastrophe for the family which it strikes but the greater tragedy is the eroding effect it has upon human dignity.

On March 25, 1970, Senate Resolution 370 was introduced by Senator Ralph Yarborough, my distinguished predecessor as chairman of the Committee on Labor and Public Welfare. Under its authority a special panel of consultants to the committee was created. That distinguished panel consisted of 26 persons—13 eminent scientists and 13 eminent laymen. On November 25, 1970, the panel presented its report to the committee. Its conclusions were unanimous:

A national program for the conquest of cancer is now essential if we are to exploit effectively the great opportunities which are presented as a result of recent advances in our knowledge. However, such a program will require three major ingredients that are not present today:

First, effective administration with clearly defined authority and responsibility;

Second, the development of a comprehensive national plan for a coherent and systematic attack on the vastly complex prob-

lems of cancer. Such a plan would include not only programmatic research where that is appropriate, but also major segments of much more loosely coordinated research where plans cannot be definitively laid out nor long-range objectives clearly specified; and

Third, the necessary financial resources.

At the present time there is no coordinated national program or program plan. The National Cancer Institute has done excellent work itself and has supported grants and contracts in the scientific community which have resulted in much outstanding work, but the overall research effort is fragmented and, for the most part, uncoordinated. The effort in cancer should now be expanded and intensified under an effective administration charged with developing and executing a comprehensive national plan for the conquest of cancer at the earliest possible time.

In response to the recommendations of the panel Senator Yarborough introduced a bill on December 4 of last year, the Conquest of Cancer Act. Although no action could be taken on this measure in the few remaining days of the last Congress my distinguished colleagues, Senators KENNEDY and JAVITS, introduced similar legislation—S. 34—on January 25, 1971. I was proud to be a co-sponsor of that bill, S. 34 proposed:

First, that the prevention, diagnosis, and cure of cancer be declared of the highest national priority;

Second, that an independent Cancer Authority be established to conduct and support research on cancer, and to collect and disseminate information on cancer to the public and scientific community;

Third, that a national plan be submitted to the Congress, through the President, for the conquest of cancer which would include measures to be taken in combating cancer; a timetable for the accomplishment of the measure; and cost estimates for major portions of the plan.

Fourth, that an 18 member National Cancer Advisory Board be approved by the President with the concurrence of the Senate to advise and assist the Administrator of the Cancer Authority.

On the same day that S. 34 was introduced in the Senate, the President made clear his view of the timeliness and urgency of a major effort to conquer cancer as rapidly as possible. In his state of the Union address to the Nation, the President called for a "total national commitment" to an intensive campaign to find a cure for cancer.

After 2 days of hearings in early March, some controversy had arisen concerning the efficacy of creating an independent cancer agency. Indeed, I found it remarkable that the reasoning and thoughtful opinion of so many men showed such great merit on both sides of the issue.

Everyone agreed that cancer is a major killer and a painful, horrifying disease. Everyone agreed that the past 10 years have seen significant breakthroughs in our efforts to treat cancer. And everyone agreed that the moment is ripe for a special effort on the part of the Federal Government to provide a massive infusion of money which might assure that the conquest of cancer can become a reality in our lifetime.

The crux of the disagreement centered upon the question of how best to fashion the mechanism to reach our common objective.

The panel and many other eminent scientists, doctors, lay professionals, and legislators saw the best approach as the creation of an independent National Cancer Authority.

The administration, and many eminent scientists, doctors, lay professionals, and legislators urged that the effort remain within the National Cancer Institute of Health.

Mr. President, we are all aware that when so many of the experts find themselves in such sharp disagreement on how best to implement a new and major Federal initiative, there must be clarifications made in legislative proposals to accommodate specific needs and to overcome justifiable concerns. Thus, subsequent to the March hearings on the cancer bill I introduced amendments designed to accomplish a great many objectives.

It is important, in my judgment, to insure the present lines of communication and cross-fertilization of scientific knowledge existing among and between the various Institutes of Health be maintained. I fully agree with those who urge that cancer research and other biomedical sciences must not and cannot be fragmented or isolated. And so I introduced an amendment to assure that the director of the cancer agency must be held accountable for continuing the free and open exchange of information and ideas.

To make certain that the work of the cancer agency and the whole of NIH are coordinated at the highest administrative and working levels I proposed to put the Director of NIH as an ex officio member of the national cancer advisory board. That board has been designed to have overall control of the direction and policy of the cancer agency.

Another concern then expressed related to the question whether the cancer agency would be empowered to lend financial support to research underway in the remaining institutes of health—research which demonstrated great promise in unlocking many of the remaining mysteries about cancer. There is no question in anyone's mind that large segments of basic biomedical research are relevant to cancer. Thus I felt it important to remove any doubt that funds may be transferred from the resources of the cancer agency to other NIH programs for the added support of promising cancer-related activities.

The concerns within the scientific community that peer review procedures must be clarified were accommodated in another of my amendments. The panel expressed its view that a national cancer program should include the voluntary, productive interaction and joint planning of the scientists responsible for the research projects. I feel that this is an important aspect of any professional endeavor since one's peers so often provide insights which too frequently escape the researcher in his zeal to pursue a novel theory. Thus, I propose an amendment directing that regulations be established governing appropriate peer review pro-

cedures for research grants and other programs of the cancer agency.

On May 11, 1971, Senators DOMINICK and GRIFFIN introduced S. 1828 on behalf of the administration. This bill in large part represented the view that the cancer agency cannot be made independent of the NIH. Among its key features:

First. The bill would establish a cancer cure program within the National Institutes of Health, which shall have as its objective the conquest of cancer at the earliest possible time.

Second. The program would be administered by a Director who will be appointed by the President with the advice and consent of the Senate, and will serve under the direction of the President.

Third. The Director would serve under the direction of the Secretary, HEW, with respect to such functions as the President may prescribe.

Fourth. The program would act in coordination with the other programs and activities of the National Institutes of Health.

Fifth. A Cancer Cure Advisory Committee would be established, consisting of the Secretary of HEW, the chairman and members of the National Advisory Cancer Council, and Director of the Office of Science and Technology—all of the preceding as ex officio members, and not to exceed 10 additional members to be appointed by the President.

After another day of hearings to consider this new proposal it became clear that a substantial increase in resources along with increased organizational efficiency will shorten the time necessary to bring a full understanding of cancer. To do this, it was the consensus of the committee that the legislation must assure that the cancer agency have the greatest amount of flexibility and independence. At the same time we thought it vital to preserve the traditional whole of biomedical research by keeping the cancer effort within the framework of the National Institutes of Health.

In sum and substance this is what S. 1828 seeks to accomplish. With its enactment we will witness a great national plan for a coherent and systematic attack on this dread disease. We will see independence in management, planning, budget presentation, and assessment of progress along with the commitment of national purpose which can only come directly from the President of the United States. We will, at the same time, assure that no violence is done to the relationship between cancer and other scientific efforts which might ultimately lead to fragmentation of the overall biomedical research effort.

I am, of course, pleased that the legislation has preserved the sense of the amendments which I proposed several months ago. We have, in the legislation, clear assurances of cross-fertilization between the agency and the other Institutes. The Director of NIH plays an important role in the cancer effort and his presence on the Board assures the greatest of cooperation among the various health research efforts. We have clarified the question of peer review with the assurance that the already ex-

cellent NIH system will be utilized but with the option for new procedures should the cancer effort so require. And the overall concept behind the legislation—*independence, flexibility, adequate funds, comprehensiveness, and coordination*—should give us the boost necessary to achieve the success we all so fervently seek.

Mr. President, as everyone in this chamber knows it has taken enormous energy and creativity to arrive at the legislative proposal before us today. There have been a great number of individuals who have played vital roles in helping the committee fashion a wise and workable program. Mr. Benno Schmidt, as Chairman of the Panel of Consultants, is to be highly commended for his utmost devotion to the task he set out to accomplish. And, of course, we owe a large debt of gratitude to the other members of the panel for their work. All of these men and women have had a historic impact for having helped us to realize that we can break through to find a cure for cancer.

Of equal importance, Mr. President, has been the great dedication of Senator KENNEDY—chairman of the Health Subcommittee—of Senator JAVITS—ranking minority of the full Labor Committee and of Senator DOMINICK—ranking minority member of the Health Subcommittee. If it had not been for their singleness of purpose and their conviction, that, regardless of any political consideration, this is something which must be done, it might not have been done and before us today. I am truly proud to serve with them on the Labor and Public Welfare Committee.

Mr. President, let us look to this legislation as a project which will demonstrate to ourselves and to the world that biomedical research can excel when it is reasonably free of bureaucratic and governmental restraint. Let it demonstrate that when this Nation sees particular suffering we can and we will establish a priority and reach the objective.

We in the Senate today have an opportunity seldom given in the lives of men—to turn on the power that will eventually save the lives of hundreds of thousands of men, women, and children in the United States. And we can pass on that knowledge all over the world and the name of America will be blessed.

Let the answers which are now within our reach soon be within our grasp.

Mr. BOGGS. Mr. President, as a cosponsor of S. 1828, the pending legislation to establish a cancer cure program, I wish to reaffirm my strong support for this measure and to urge my colleagues to pass on it without delay.

I am pleased that committee action on this legislation has been completed quickly and that a compromise was reached on alternative proposals. I believe this speedy action and the spirit of compromise have been prompted by the universal recognition that we must give new emphasis and financial support to efforts at conquering this disease in its many forms.

By creating within the National Institutes of Health a new cancer cure pro-

gram whose Administrator will report directly to the President, we insure that new research will be built on previous efforts, but that it will not be lost in the vast HEW complex.

Again, I urge my colleagues to seize this opportunity to give new impetus to our efforts to find a cancer cure by passing this legislation today.

Mr. PELL. Mr. President, I am most happy to rise in support of S. 1828, the Conquest of Cancer Act.

As a cosponsor of this needed legislation and as a member of the Senate Health Subcommittee, I would urge my colleagues to support the passage of this legislation.

It is my hope that the Conquest of Cancer Act will represent a step forward in the readjustment of our national priorities.

I think it is important to note at this point the low priority that cancer research has had in the past years in the Federal budget. For example, in 1971, while the Federal Government spent \$438 per capita for national defense and the war in Vietnam, it spent only \$1.01 per capita for cancer research.

It has often seemed to me that our concern for the well-being and security of our people would be better served if the ratio between spending for national security objectives and domestic health security objectives was something less than 438 to 1. It is my hope that the Conquest of Cancer Act will result in a readjustment of that spending ratio.

At this point, I ask unanimous consent to insert an analysis of per capita selected Federal outlays for fiscal years 1969 through 1972.

There being no objection, the analysis was ordered to be printed in the RECORD, as follows:

PER CAPITA SELECTED FEDERAL OUTLAYS, FISCAL YEARS 1969-72

| | Actual | | Estimate | |
|--|--------|--------|----------|--------|
| | 1969 | 1970 | 1971 | 1972 |
| Cancer research..... | \$0.85 | \$0.87 | \$1.01 | \$1.24 |
| Education..... | 45.67 | 52.40 | 61.06 | 64.90 |
| Health ¹ | 32.95 | 35.71 | 42.23 | 42.86 |
| International affairs and finance..... | 18.20 | 17.16 | 17.24 | 19.38 |
| National defense..... | 390.58 | 386.03 | 367.51 | 372.65 |
| Space research and technology..... | 20.42 | 18.00 | 16.19 | 15.15 |
| Special Southeast Asia defense operations..... | 138.52 | 111.54 | *60.58 | *41.35 |

¹ Includes Federal funds only, does not include trust funds.

² Based on estimates by Charles Schultz in "Setting National Priorities, the 1972 Budget," Brookings, 1971.

Source: Budget of the United States, fiscal years 1971 and 1972.

Mr. PELL. Mr. President, I am also proud to support the passage of the Conquest of Cancer Act for another reason. Included in this proposed legislation is an amendment I offered in the committee to establish an international cancer data bank. It is my hope that this international cancer data bank will enable American citizens to enjoy the benefits of foreign medical research and to allow foreign citizens, no matter in what country they live, to enjoy the benefits of American cancer research.

Mr. GAMBRELL. Mr. President, this

session of Congress should go down in history as one which, in a significant way, determined upon an adjustment of material goals and priorities, which directed our resources toward the pressing needs of the American people. This is as it should be. For too long we have neglected many of the problems which afflict us at home. The price of pre-eminence in international affairs has frequently been a failure to excel to the extent of our capacities in domestic affairs.

Today we will be considering the merits of S. 1828, known as the Conquest of Cancer Act, which, if enacted, will establish an independent Conquest of Cancer Agency within the National Institutes of Health, and a National Cancer Advisory Board to advise this Agency in the development and execution of its program. My decision to support this bill was an easy one to make, for here we have an opportunity in the reordering of our national priorities, to attack an affliction which directly and severely hampers our national well-being.

Mr. President, I believe that there could be found no better point of embarkation on a national effort to combat our domestic problems than to direct our available resources into such programs as are contemplated under the auspices of the Conquest of Cancer Act. There can be no more direct benefit to the people than money and human resources spent toward a concentrated effort to control a disease which will kill 335,000 Americans in 1971, which cost over a billion and half dollars for patient care in 1969, and which annually takes from our economy another \$15 billion in lost wages and other indirect costs. Over 8,000 of the people of my State will die this year of cancer and 12,000 will develop the disease.

In voting affirmatively on this bill, we will be saying to the American people, "Yes; we feel your most intimate concerns, and they are our concerns as well. We intend to do something about this, and about other urgent problems you face." A survey in 1966 showed that cancer was the No. 1 health concern of Americans, that 62 percent of us feared cancer more than any other single disease. And well we should, for at the current rates, of 200 million Americans living today, 52 million will develop cancer at some time, and 34 million will die as a result.

All this is not to say that a problem of such magnitude and scope has been completely ignored. Thirty years ago, American medical science could cure one cancer case in five; today, we cure one case in three. But the fact is that if we were better able to apply the knowledge we already have, we could be curing one case in two.

Researchers have made exciting progress in some areas. Last week, Drs. Elizabeth Priori and Leon Dmochowski of the University of Texas' H. D. Anderson Hospital made public their achievement of a major goal—the isolation of a human cancer virus. This is a feat which scientists have been trying to accomplish for over half a century and, if con-

firmed, may lead to further discoveries as to the causes, and possibly the cures, of different cancers.

It should be readily apparent to all of us, however, that this accomplishment alone is of no value, that many additional millions of dollars must be spent in research, before we are able to use this building block in the construction of the apparatuses that will bring about the conquest of cancer.

The time has come that piecemeal efforts cannot be allowed to suffice, that a few dollars from this fund, or that bequest, cannot bear the major burden of fighting cancer. We must attack it from a centralized vantage point, supporting our efforts with whatever funds and manpower may be required.

The proposed bill before us provides just such a coordinated attack. It gives the conquest of cancer agency sufficient autonomy to act quickly and effectively in promising areas, to allocate its funds for their most efficient use. Placing the agency within the National Institutes of Health enables the agency and the Institutes to mutually benefit from related projects and discoveries.

This bill also enables us to continue utilizing those funds and projects already underway, and to coordinate the entire program so that no avenue or possible source of benefit to the overall goals is left unexplored. For these reasons, I urge that we immediately approve S. 1828, to put our prestige and our promise behind an effort which can be justly commended only in the most admirable of terms.

Mr. President, I will also take this opportunity to urge the Congress to proceed rapidly to the consideration of other pressing problems in the area of national health. We will have made a very good beginning by passing the Conquest of Cancer Act, but medical science has no more than scratched the surface of a myriad of other problems equally devastating. We see at hand the opportunity to decisively attack a feared and dangerous killer, but perhaps run the risk of neglecting other health problems of equal urgency. We must go forward at once with our Conquest of Cancer, but at the same time, we must keep in the forefront of our minds that in 1969, cardiovascular—heart—diseases killed over a million Americans—three times as many as cancer; strokes took another 100,000, and influenza and pneumonia, 70,000 more. Such things as mental diseases, muscular dystrophy, birth defects, and arthritis afflict millions of Americans each year and are more than deserving of our attention and efforts.

In evaluating the importance which we place upon various claims to our national treasury, surely the claims for war against cancer and other diseases which every year take such a heavy toll of lives and directly affect every American family, must receive the highest priority.

In our 200 year history, we have never yet failed to find within ourselves the resources to overcome a deadly enemy of the American people. Let us today identify cancer as such an enemy, and set

about to conquer it as we have other enemies in the past.

Mr. KENNEDY. Mr. President, I ask unanimous consent to have printed in the Record a statement and insertion by the distinguished Senator from Washington (Mr. MAGNUSON).

The PRESIDING OFFICER. Without objection, it is so ordered.

STATEMENT AND INSERTION BY SENATOR
MAGNUSON

Mr. MAGNUSON. Mr. President, it is not without some very personal feelings and emotion that I wish to associate myself with those supporting S. 1828 and the Conquest of Cancer Act of 1971.

In 1937, when the Congress established the National Cancer Institute it was by a unanimous vote in both the House and Senate. For the first time, the Federal government helped to support biomedical research and cast some light into the darkness surrounding that dread disease, cancer. It is one of the pleasures of my legislative career to have sponsored that legislation, along with my senior colleague from the State of Washington, and my close friend, Senator Homer T. Bone.

At that time, as a House member, I extended my remarks, and although somewhat dated after 34 years, I would like to have them inserted at this point in the Record.

[August 2, 1937, Extension of Remarks]
CAUSE, TREATMENT, AND PREVENTION OF
CANCER

Mr. MAGNUSON. Mr. Speaker, leave was granted me to extend my remarks in the Record on S. 2067, introduced in the Senate by the senior Senator from the State of Washington, and H.R. 6100, introduced in the House of Representatives by myself, being bills authorizing the Surgeon General to study the cause, treatment, and prevention of cancer and to cooperate with the States in the eradication of that disease, and providing for an annual appropriation to be expended for these purposes under the Surgeon General's direction. This measure, with sundry amendments, has passed the Senate, and on July 23 passed the House of Representatives. I wish to submit the following supplemental observations to my own remarks in the debate before the House today.

The subject of cancer is one which transcends all question of politics, color, or creed. It may seem a shameless exhibition of insolent presumptuousness for a layman, such as myself, to attempt to speak on a subject about which scientists admittedly have so much to learn. You may describe my so speaking as extremely audacious, but, Mr. Speaker, no one can say that there is anything audacious about my insisting that it is high time that the Government of the United States of America did something about "that great darkness" called cancer.

Mr. Speaker, during the year 1936, 710 people in my home city of Seattle, Wash., died of cancer. During that same year over 60,000 people in 187 large American cities died of cancer. Mr. Speaker, the New York Times of December 15, 1936, reported that cancer's death toll mounted in the year 1935 to 153,000. Cancer is the modern menace of civilized nations. It kills more of our American citizens than all our wars combined. The menace is growing each year. The Members of the House who have aided me in the passage of this bill have joined forces in one of the most impressive movements of modern times.

Let word arise at any time of a new pest attacking the fruit industry, or let a scourge of insect life invade the cotton fields, and

legislatures of the State and Nation stand ready to smite the rocks of finance and pour forth rivers of revenue to repel the dangerous invaders. Let there be news of an unknown disease of cattle, and scientists march to the battlefield bulwarked with millions of good American dollars, to overcome the foe. In 1936 this Congress appropriated \$1,715,000 for the eradication of tuberculosis in cattle. In the same year over half a million dollars was granted by this Congress to remove ticks from cattle, while \$125,000 was employed in the destruction of the disease of hog cholera. For other diseases of animals not specified we appropriated \$335,000. These totals are impressive. These figures do not include the millions of dollars spent by States themselves for like purposes. I have no quarrel with the appropriation for these funds. I have no objection to the sound economic reasons back of these grants. But it is a sad commentary on our civilization when we realize that not more than \$700,000 a year is spent in the entire United States on cancer research. The pitiful truth is that our National Government spends only \$100,000 a year in such research work.

Since the introduction of this bill my office has been flooded with letters from medical men throughout the United States commending its purpose. Editorially, this measure has been the subject of laudatory comments throughout the length and breadth of our land. Sufferers from this scourge, and their loved ones as well, have written me with a prayer on their lips for its passage. Anyone who has ever witnessed the silent, helpless anguish of a cancer patient cannot but cry aloud, "Why have we been so tardy?"

Modern scientists know now that the Byzantine Empress Theodora, wife of Justinian the Lawgiver, succumbed to a breast cancer in the year 548 A.D. Down through the centuries since man wrote his records in books we find that phantom specter stalking across the pages of history, leaving behind his trail of misery and pain. Queen Anne, the daughter of Philip the Third of Spain; Mary Tudor, daughter of King Henry the Eighth, and first of his six wives, Catherine of Aragon; the Bonapartes; and the Hohenzollerns are further proof of the fact that cancer is no respecter of persons or personages. And yet, I repeat, with all the advances made by medical science, 153,000 people a year die in the United States alone from this disease, and we, in the past, have been interested enough to appropriate \$100,000 a year to find out what it is all about!

Another horror which riddles our land is the cancer quack who thrives on the ignorant and unfortunate who hope for surcease from their cancer-induced woes. This measure and the publicity being given its passage should go a long way toward convincing cancer sufferers of the necessity of early medical attention and diagnosis upon the first appearance of what might seem to be cancer symptoms. Those with lack of knowledge have been ready prey for the jackals who travel along the medical border line. "Benign and malignant tumors", are the distinguishing definitions used by scientists, but the quack is never benign, and his malignancy is exceeded only by his success in plying his frightful trade.

Knowledge is needed in this fight. We know that cancer always begins in a small localized area and is curable if treated before it has time to spread into inaccessible parts. Its very danger is its insidiousness. Its early symptoms are not frightening. Like a thief in the night it worms its way into the body. Pain does not accompany its early growth. Science knows a great deal about cancer. Science knows that it is not infectious. Science knows that certain kinds of irritation can cause cancer and that it is not a germ dis-

ease. Cancer has been described by some as "cell development gone wild."

In closing, I want to quote from a letter which I received from Dr. William J. Mayo, in which he says:

My brother, Dr. Charles H. Mayo, and I, and our associates in the clinic are very glad that you have introduced this bill, the purpose of which is of the greatest importance to the welfare of the people of this country and to the world. Too much cannot be said in favor of proper means and measures to learn the cause of cancer and to cure and prevent the disease.

Mr. Speaker, this amended bill provides for an annual expenditure of \$700,000 in this great work. I feel that we here this afternoon have made a real contribution to those noble scientists who have labored so long and hard in their endless search for truth. If no other major legislation comes out of this Congress, we can go home to our people and point with pride to the passage of this bill. The altars of experiment can now be warmed by the fuel which you gentlemen have today provided. I thank you.

Mr. MAGNUSON. In 34 years, our population has more than doubled. In 1935 the cancer death toll was estimated to be 153,000 and for 1969 it was estimated to be 323,000 in the United States. In 1936, the cancer death toll in my home city was estimated at 710 and in 1969 it was possibly 1,350 for Seattle and over 5,000 for the State of Washington.

Those statistics do not indicate a great deal of progress over the years, but figures are often deceptive, especially in areas like this where even today accurate statistics are difficult to secure. Back in 1937, of those known to be suffering from cancer, only about one in five had any chance for survival. Today, that figure is about one in every three, and if we could just get adequate care and early treatment to everyone who might have cancer it could possibly be one in every two.

Since that modest beginning in 1937, the National Cancer Institute has expended over \$2,281,000,000 in a continuing search for the causes of cancers, the development of treatments and cures. Much has been learned and a great deal accomplished. Many of those accomplishments are detailed in the Report of the National Program for the Conquest of Cancer, and most of them were supported in whole or in part through programs of the National Cancer Institute and the National Institutes of Health.

Perhaps because it was the first "Institute" created, certainly because it was held to be the first among equals, the Cancer Institute has always received the largest appropriation and the greatest public recognition. Since 1946, over \$960 million in cancer research grants have been awarded by NCI and that accounts for over 15% of the total NIH grant support for biomedical research. The altars of biomedical research have truly been fueled over the years by the funds provided through NCI and NIH.

Today the situation is far different from that in 1937. The Congress established the Cancer Institute in what was almost a scientific, biomedical research vacuum. This was certainly the case with the Federal government where support of biomedical research was almost nonexistent.

Appropriations for NCI have grown from \$400,000 in 1937 to over \$230 million for Fiscal 1971. The National Institutes of Health now encompasses eleven separate "Institutes" and divisions, and their appropriation for Fiscal 1971 exceeded \$1,166 billion, and the total NIH research grant support program exceeded \$666 million.

Today, the Cancer Institute is an integral part of NIH where collectively we conduct and support research into the whole spec-

trum of diseases that plague mankind. Heart, lung, arthritis, infectious diseases, neurological, kidney, eye—all of these individual, yet interrelated illnesses are studied and researched in the most professional manner possible by the most competent people available.

The National Institutes of Health is many things, but above all it symbolizes a set of processes for the governance of the orderly growth and development of biomedical science. It is trusted and respected by the only people here, or in the entire world, who can solve the problems facing mankind in biomedical science.

The NIH approach to the solution of those problems is truly comprehensive and coordinated, and most importantly it has been effective. Their approach has facilitated the interchange of information about all diseases of man that are as interrelated as the human body itself.

NIH may be less than perfect, their procedures and processes might be improved, but we should tread cautiously in changing what is and has been successful. I am delighted that S. 1828 recognizes the merits of retaining cancer research within the overall NIH structure. Although I would not claim to know what structure is best, I did fear that separation of those activities out of NIH might well prove to be counterproductive.

The major intent of this bill to increase the authority and visibility of the conduct of cancer research is something I support wholeheartedly so long as this is achieved without fragmenting biomedical research activities.

Any expansion of our cancer research programs must be organized in such a way that we will be assured of the closest possible links with all other basic biological research, and we must minimize any bureaucratic barriers between researchers and research organizations.

As the human body itself is indivisible, there is an indivisibility of biomedical research, the whole spectrum of health activities and the entire health community. Any tinkering or adjustments to a part has effects upon the whole and each of the constituent parts. We don't need any greater separation or isolation of efforts, we need more intimate interchange of ideas and inter-action among investigators in all scientific fields throughout the United States and the world.

On that basis, I am convinced that more adequate funding of all NIH activities will assure us of success in achieving the promise contained here in this measure—a promise that indeed all men of goodwill everywhere support and applaud.

Any change that Congress might legislate today for NIH or cancer or any of the other institutes must avoid what I believe to be certain pitfalls. Foremost is that of raising false hopes. Especially the false hope of immediate successes and a simple cure on an early tomorrow.

The horror of the cancer quack who thrives on the ignorant and unfortunate who hope for surcease from their cancer-induced woes continues to riddle our land. We must not become just as cruel by falsely raising the hopes of cancer victims in any way.

The problems of biomedical science, of cancer and other dread diseases can't be compared with our technological problems. To call upon qualified experts to build a better mousetrap, grant them the necessary funds and set a deadline for the delivery of a prototype is a reasonable undertaking.

In biomedical science, many of the key factors are unknown. If we've failed to achieve already what might have been achieved—in cancer or any dread disease—

the reason is the inadequacy of the scientific base. Our knowledge about cells and the basic building blocks of human life, and even all the real functions of various organs within the human body is still too meager. If there is a latchkey to that knowledge, it is people who are especially trained and competent in their fields of expertise who are given adequate support to probe the unknown. This takes both time and treasure, and regrettably time cannot be simply purchased.

NCI and NIH have helped through the years to produce greater numbers of men and women needed to engage in biomedical science, and they have helped to support the research activities of competent investigators. They have accomplished this without pre-empting the field. Other public and private resources contribute substantially to these endeavors and share in the successes that have been achieved.

The National Institutes of Health is very much the weathervane, and this is a fact many have failed to comprehend. When NIH and their programs, intra- and extramural are thriving, all of American biomedicine, by a multiplier effect, thrives too. But whenever NIH shivers from fiscal constraints, all of American biomedicine throughout the nation sneezes and soon suffers a bad cold!

Most of us in the Congress have tried to maintain funding levels for NIH, all of the institutes and all of their activities, at a pace that would allow for a well tempered and graduated acceleration of efforts across the board. When breakthroughs appeared imminent, we have not hesitated to grant additional funds. I would cite our action last year in providing an additional \$10 million for the special genetics task force. Those funds went to the Institute of General Medical Sciences, but almost every expert in cancer research acknowledges the intimate relationship of genetics to cancers, and the results of these grants will surely prove beneficial to cancer research efforts.

NIH has not allowed breakthroughs in one area to distract them from other opportunities for conquests in other fields of biomedicine as they might emerge. This has been vital to overall biomedical research and it has been vital to bringing about solutions to particular problems in cancer and other dread diseases.

Again, I would stress that this measure recognizes these interrelationships and has provided for the continuation of cancer research along with all the other research activities of NIH within the framework of the National Institutes of Health.

S. 1828 recognizes that promise and performance are equally dependent upon funding that is adequate and reliable. I applaud the Committee and the sponsors for what they have proposed in funding. The universal complaint of all who served on the National Panel that initially proposed this legislation was the lack of adequate funding and the competition created for whatever funds did exist.

Frankly, I would not deplore that competition and it is probably a very healthy factor in biomedicine as it is upon the playing fields or even here in the Congress. But too often the funding for these programs has not been adequate. This bill would provide a far more adequate fiscal base for cancer research and I hope it is enacted.

I would also hope that all concerned, present and future Presidents, Administrations and Congresses, will be equally responsive to these fiscal needs for cancer and all of NIH, and provide whatever means prove necessary during annual deliberations over appropriations. I know the record will show that I have not been parsimonious in the past with NIH, and so long as I have any influence upon

these decisions I will continue to do what I can to see that they are all adequately funded.

Mr. President, in conclusion let me recall again that it was almost 34 years ago that Congress enacted my bill creating the National Cancer Institute measure. On July 22, 1937, the United States Senate passed that bill by a unanimous vote. A bill that would dedicate our nation to the conquest of cancer merits similar support. May history be repeated here today in the Senate.

CONGRESS FACES MAJOR RESPONSIBILITY TO PASS,
CONQUEST OF CANCER BILL

Mr. RANDOLPH. Mr. President, I speak on a subject of major importance, both to America and to the world. That subject is the prevention, diagnosis, and cure of man's most terrible disease, cancer. Our concern is expressed in the Senate today in the form of a most urgently needed bill, S. 1828, the Conquest of Cancer Act.

This dreaded, implacable killer of men, women, and children took 323,000 American lives in 1969. This figure, staggering in itself, is even more horrifying when contrasted with other grim statistics. Deaths from cancer in just that 1 year were:

Greater than all U.S. battle deaths in the 4 years of World War II; four times the combined total of battle deaths in the 3-year Korean war and the 6 years of U.S. participation in Vietnam; and more than six times the number of deaths caused by automobile accidents in the same year.

One out of four Americans now alive, or 50 million people, will contract cancer during their lifetimes, and of those 50 million, 34 million will die unless a concerted, priority effort is made to wipe out the dread disease.

And yet cold, hard statistics, regardless of the horror they generate, cannot begin to plumb the depths of misery and heartache and despair of the millions of cancer victims and their families. Their silent desperation and their cries of suffering must be heard. And hearing, we must act.

The American people and their Congress, prodded by the magnitude of the cancer epidemic and also by recent encouraging developments in cancer research, have resolved to end this blight on humanity. A concurrent resolution passed both Senate and House in 1970 which expressed the unanimous sense of Congress that "the conquest of cancer is a national crusade," and that "Congress should appropriate the necessary funds so that the citizens of this land and all other lands may be delivered from the greatest medical scourge in history."

Pursuant to a Senate resolution last year, a committee of consultants was appointed to report to the Senate on, first the current scientific knowledge of the causes, treatment, cure and elimination of cancer; second, the prospects for success in conquering the disease; and third, measures necessary or desirable to facilitate success at the earliest possible time. The panel of consultants completed its work, and its report to Congress was published April 14, 1971. As a result of the

distinguished panel's recommendations, the able chairman (Mr. KENNEDY) of the Health Subcommittee of the Committee on Labor and Public Welfare and its able ranking minority member (Mr. DOMINICK) introduced at the beginning of this session of Congress S. 34, a bill to establish a National Cancer Authority, which I cosponsor.

After careful consideration, both in the Health Subcommittee and in the full Committee on Labor and Public Welfare, Senator DOMINICK's proposal, S. 1828, was amended and was reported to the Senate. This bill is the result of painstaking effort by many people. I offer special praise to the consultants, to the chairman of the Health Subcommittee, Senator KENNEDY, whose guidance and involvement in bringing forth this legislation earned him the appreciation and respect of his colleagues on the committee, notably, Senator DOMINICK.

S. 1828 is a good bill. It is a vitally important measure. It will establish a beacon of hope to many who now live only with despair. It is a written testimonial to the firm commitment of the President and the Congress to end the scourge of cancer. It was my responsibility to join in sponsorship of the agreed on version, S. 1828.

And yet the American people must be cautioned. The conquest of cancer is not simply a matter of applying money to existing technology, as it was in the case of the successful lunar landing mission. There are many forms of cancer and much about the disease is yet unknown. Breakthroughs in medical science are not alone achieved through additional funds, though more funds can always be used. Cancer research over the last decade has convinced people of medicine and citizens generally, that a new focus and a priority program can achieve exciting and revolutionary results on many fronts.

If lives can be saved, if pain and suffering can be eased, if progress can be made toward creating a better life for all mankind, how can such a program be rejected?

This Congress has an overriding obligation to do what it can to rid us of death-dealing cancer. Congress has already expressed its commitment. Let us now translate our words into affirmative action.

Mr. DOMINICK. Mr. President, I am willing to yield back the remainder of my time, if the Senator from Wisconsin is willing to do so.

Mr. NELSON. Mr. President, unless someone else desires time, I yield back the remainder of my time.

Mr. DOMINICK. Mr. President, I am willing to yield back the remainder of my time, if the Senator from Wisconsin is willing to do so.

Mr. NELSON. Mr. President, unless someone else desires time, I yield back the remainder of my time.

The PRESIDING OFFICER. All time having been yielded back, the bill is open to amendment. If there be no amendment to be proposed, the question is on agreeing to the committee amendment in the nature of a substitute.

The committee amendment was agreed to.

The PRESIDING OFFICER. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed for a third reading and was read the third time.

ORDER FOR ADJOURNMENT

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate adjourns today, it stand in adjournment until 12 o'clock noon tomorrow.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR ADJOURNMENT FROM
TOMORROW TO MONDAY, JULY
12, 1971

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate adjourns tomorrow, it stand in adjournment until 12 o'clock noon on Monday next.

The PRESIDING OFFICER. Without objection, it is so ordered.

CONQUEST OF CANCER ACT

The Senate continued with the consideration of the bill (S. 1828) to amend the Public Health Service Act so as to promote the public health by strengthening the national effort to conquer cancer.

The PRESIDING OFFICER. The bill having been read the third time, the question is, Shall the bill pass? On this question the yeas and nays have been ordered, and the clerk will call the roll. The legislative clerk called the roll.

Mr. BYRD of West Virginia. I announce that the Senator from Texas (Mr. BENTSEN), the Senator from Nevada (Mr. BIBLE), the Senator from North Dakota (Mr. BURDICK), the Senator from Idaho (Mr. CHURCH), the Senator from Mississippi (Mr. EASTLAND), the Senator from North Carolina (Mr. ERVIN), the Senator from Oklahoma (Mr. HARRIS), the Senator from Indiana (Mr. HARTKE), the Senator from South Carolina (Mr. HOLLINGS), the Senator from Iowa (Mr. HUGHES), the Senator from Hawaii (Mr. INOUE), the Senator from Washington (Mr. MAGNUSON), the Senator from New Mexico (Mr. MONTOYA), and the Senator from Utah (Mr. MOSS) are necessarily absent.

I further announce that, if present and voting, the Senator from North Dakota (Mr. BURDICK), the Senator from North Carolina (Mr. ERVIN), the Senator from Iowa (Mr. HUGHES), the Senator from Washington (Mr. MAGNUSON), the Senator from New Mexico (Mr. MONTOYA), the Senator from Mississippi (Mr. EASTLAND), the Senator from Oklahoma (Mr. HARRIS), and the Senator from Indiana (Mr. HARTKE) would each vote "yea."

Mr. GRIFFIN. I announce that the Senator from Oklahoma (Mr. BELLMON) and the Senator from Oregon (Mr. HATFIELD) are absent on official business.

The Senator from Kentucky (Mr. Cook), the Senator from New Hampshire (Mr. COTTON), and the Senator from Oregon (Mr. PACKWOOD) are necessarily absent.

The Senator from South Dakota (Mr. MUNDT) is absent because of illness.

If present and voting, the Senator from Kentucky (Mr. Cook), the Senator from Oregon (Mr. HATFIELD), the Senator from South Dakota (Mr. MUNDT), and the Senator from Oregon (Mr. PACKWOOD) would each vote "yea."

The result was announced—yeas 79, nays 1, as follows:

[No. 136 Leg.]

YEAS—79

| | | |
|--------------|---------------|-----------|
| Aiken | Gambrell | Pell |
| Allen | Goldwater | Percy |
| Allott | Gravel | Prouty |
| Anderson | Griffin | Proxmire |
| Baker | Gurney | Randolph |
| Bayh | Hansen | Ribicoff |
| Beall | Hart | Roth |
| Bennett | Hruska | Saxbe |
| Boggs | Humphrey | Schweiker |
| Brock | Jackson | Scott |
| Brooke | Javits | Smith |
| Buckley | Jordan, N.C. | Sparkman |
| Byrd, Va. | Jordan, Idaho | Spong |
| Byrd, W. Va. | Kennedy | Stennis |
| Cannon | Long | Stevens |
| Case | Mansfield | Stevenson |
| Chiles | Mathias | Symington |
| Cooper | McClellan | Taft |
| Cranston | McGee | Talmadge |
| Curtis | McGovern | Thurmond |
| Dole | McIntyre | Tower |
| Dominick | Metcalf | Tunney |
| Eagleton | Miller | Weicker |
| Ellender | Mondale | Williams |
| Fannin | Muskie | Young |
| Fong | Pastore | |
| Fulbright | Pearson | |

NAYS—1

Nelson

NOT VOTING—20

| | | |
|---------|----------|----------|
| Bellmon | Eastland | Inouye |
| Bentsen | Ervin | Magnuson |
| Bible | Harris | Montoya |
| Burdick | Hartke | Moss |
| Church | Hatfield | Mundt |
| Cook | Hollings | Packwood |
| Cotton | Hughes | |

So the bill (S. 1828) was passed.

The title was amended, so as to read: "A bill to amend the Public Health Service Act so as to establish a Conquest of Cancer Agency in order to conquer cancer at the earliest possible date."

Mr. JAVITS. Mr. President, I move to reconsider the vote by which the bill was passed.

Mr. KENNEDY. Mr. President, I move to lay that motion on the table.

The motion to lay on the table was agreed to.

ORDER FOR STAR PRINT OF SENATE DOCUMENT 92-25

Mr. MCGEE. Mr. President, I ask unanimous consent that, in order to make certain technical corrections, a star print be authorized for Senate Document 92-25 entitled "Study Mission to Central and East Africa, February 1971."

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER TO HOLD H.R. 8629 AND H.R. 8630, HEALTH MANPOWER PROPOSALS, AT DESK

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that H.R. 8629 and H.R. 8630, the so-called health manpower proposals, received today by the Senate from the House, be held at the desk pending the report of companion Senate bills anticipated in the next 2 or 3 days.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR TRANSACTION OF ROUTINE MORNING BUSINESS TOMORROW

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that on tomorrow, immediately following the recognition of the two leaders under the standing order, there be a period for the transaction of routine morning business, with statements therein limited to 3 minutes, for not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I suggest what I assume will be the final quorum call of the day. I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR JOINT COMMITTEE REFERRAL OF A NOMINATION

Mr. BYRD of West Virginia. Mr. President, as in executive session, I ask unanimous consent that the nomination of Joseph H. Blatchford, of California, to be Director of Action, be jointly referred to the Committee on Foreign Relations and the Committee on Labor and Public Welfare.

The PRESIDING OFFICER. Without objection, it is so ordered.

PROGRAM

Mr. BYRD of West Virginia. Mr. President, the program for tomorrow is as follows:

There is not really much to be said. There are only three measures on the legislative calendar, so the leadership does not anticipate any controversies tomorrow as to legislation.

It is hoped that committees will act as expeditiously as possible to report measures to the Senate for floor action. The majority leader, I am sure, would want to emphasize and underscore the urgency for committee action, so that the Senate can complete as much business as possible before the August 6 recess begins, that being a little less than a month away.

On tomorrow, the Senate will convene at 12 o'clock noon. Immediately following the recognition of the two leaders under the standing order, there will be a period for the transaction of routine morning business of not to exceed 30 minutes, with statements therein limited to 3 minutes.

No rollcall votes are anticipated tomorrow, and when the Senate completes its business tomorrow, it will stand in adjournment until 12 o'clock noon on Monday next.

ADJOURNMENT

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, in accordance with the previous order, that the Senate stand in adjournment until 12 noon tomorrow.

The motion was agreed to; and (at 5 o'clock and 44 minutes p.m.) the Senate adjourned until tomorrow, Thursday, July 8, 1971, at 12 noon.

NOMINATIONS

Executive nominations received by the Senate July 7, 1971:

IN THE ARMY

The U.S. Army Reserve officers named herein for promotion as Reserve commissioned officers of the Army, under provisions of title 10, United States Code, sections 593(a) and 3384:

To be brigadier general

Col. Willie E. Dixon, Jr., SSAN xxx-xx-x...

xxx-... Infantry.

Col. Carlos K. Hayden, SSAN xxx-xx-xxxx

Field Artillery.

Col. Marvin H. Knoll, SSAN xxx-xx-xxxx

Field Artillery.

Col. William B. Pendlebury, SSAN xxx-xx-x...

xxx-... Field Artillery.

Col. Aureliano Rivas-Flores, Jr., SSAN xxx-...

xxx-xx-x... Medical Corps.

Col. Lawrence B. Rohde, SSAN xxx-xx-x...

xxx-... Civil Affairs.

Col. Frederick A. Welsh, SSAN xxx-xx-xx...

xxx-... Infantry.

The Army National Guard of the United States officers named herein for appointment as Reserve commissioned officers of the Army, under provisions of title 10, United States Code, sections 593(a) and 3385:

To be major general

Brig. Gen. Vahan Vartanian, SSAN xxx-...

xxx-xx-x...

To be brigadier general

Col. Paul P. Foran, SSAN xxx-xx-xxxx

Infantry.

Col. James T. Keltner, SSAN xxx-xx-xxxx

Air Defense Artillery.

Col. Thomas J. Kennedy, SSAN xxx-xx-xx...

xxx-... Infantry.

The Army National Guard of the United States officers named herein for appointment as Reserve commissioned officers of the Army, under provisions of title 10, United States Code, sections 593(a) and 3385:

To be brigadier general

Col. Cunningham C. Bryant, SSAN

xxx-xx-x... Military Police Corps.

Col. Lauris D. Graves, SSAN xxx-xx-xxxx

Medical Corps.

Col. Leigh R. Wilson, SSAN xxx-xx-xxxx

Field Artillery.