Gerald F. Meyer Oral History Interview
March 5, 1996
Interviewer: Carl Baker

This is an interview of Gerry Meyer, former Administrative Officer in the Etiology Area of NCI, taken on March 5, 1996. The interviewer is Dr. Carl Baker, former Director of the National Cancer Institute.

Baker: Gerry, before we get to the questions that I sent you ahead of time, could you give us a little bit of your background on where you went to school and some of these interesting jobs you've had over the years as a background for this history session?

Meyer: Sure. My name is Gerald F. Meyer, M-E-Y-E-R. I'm 59 years old. I moved to the Washington Metropolitan Area in 1948, attended St. John's College High School and went to the University of Notre Dame. At Notre Dame I received a degree of Bachelor of Science in Commerce, which equates with Business Administration in many other schools, and had a minor in Chemistry, Philosophy, English and Theology. Everyone at Notre Dame at that time had to have a number of credit hours in Theology. When I graduated from Notre Dame in 1958, there was a mild recession in the country and anyone who still had their military obligation in front of them had a tough time getting a job. So I first went to work for Procter and Gamble as a salesman. I did not care much for it and left them shortly thereafter. I then was fortunate enough to get into the National Institutes of Health Administrative Training Program. I actually entered about midway through the very first class of trainees they had. That program was intended to try to develop some back—up for the older group of senior managers within the NIH.

Baker: I guess Bob Learmouth, who then was Executive Officer of Nd, played a key role in establishing that program?

Meyer: That's correct. Bob Learmouth played a critical role in the establishment of that program, and it brought into that program, apart from myself, many very fine young men and women who went on to senior positions in administration throughout the NIH in subsequent years. I went through a series of rotating assignments while I was at NIH that included time in the Personnel Office, time in the Division of Research Grants, time in the Cancer Chemotherapy Program, and a couple of others that I can't think of at the moment, and I was interrupted in that program for six months to serve on active duty in the U. S. Army as a member of the District of Columbia National Guard. When I returned from active duty I was actually in the second class of administrative trainees and completed my training and accepted a position with the National Cancer Institute in their Budget Office under Bob Learmouth and a man by the name of Fred Shaw. I worked in the Budget Office with Mr. Shaw and Mr. Learmouth and the others in the NCI for about three and a half years and was asked by Mr. Learmouth to become the Administrative Officer for a project involving the Government of Ghana. The President of Ghana was then a man by the name of Kwame Nkrumah. He had approached President Kennedy with a request for support for a hydroelectric dam that would actually inundate 5 percent of the entire country and for a medical school. The medical school was important because, as was the case with many developing countries, their better students were going abroad, studying medicine, and not returning. President Kennedy elected to say yes to the development of the medical school and defer a decision about the Volta Dam -- which the U.S. subsequently built.

Someone in the administration--and I don't know who--had the foresight to decide that the best way to develop a medical school was not to create a new organization to do that, but to go to a successful organization and ask them to take it on as an assignment. Consequently, the Administration approached the National Institutes of Health, and I was recruited as the first Administrative Officer, and went to Ghana in 1962 with my family. We returned two years later. The medical school's development was sort of problematical while we were there, but the facilities were built and actually today it stands as a very successful medical school whose students have credible performance in examinations before expatriate universities, including Harvard and the London School of Medicine.

Baker: I believe Nkrumah's son, who went to Oxford to learn medicine, is still an important person in chemotherapy.

Meyer: Is that correct? I don't even know that.

Baker: Yes.

Meyer: So I returned in 1964 to become Administrative Officer for that part of the Cancer Institute concerned with cause and prevention research.

Baker: Before we leave that, can you give us a little more detail about some of the African experiences? Bob Depue was over there a number of times, and he had some interesting experiences in a different area with Idi Amin and his group.

Meyer: He would have been in Uganda if he was with Idi Amin. Ghana was a country which publicly proclaimed alliance to the East, but whose people were very, very close to the West, and were the recipients of the first Peace Corps unit that was ever assigned overseas. It was a people who spoke English, had attained their independence (the first country in Africa to do so) peacefully. The British left them cash reserves and an infrastructure that consisted of roads, telephones, public services, a Government that was functional and a good Army and Police Department. It really worked quite well. A good school system also existed so that everyone could get an education at least up through the 6th Grade. And there were more schools under development. The experience that we had with the medical school was really quite positive with respect to the demands and difficult only because the Ghanaians had recruited an ex-South African, Joseph Gilman, who was a difficult personality, to run the Ghanaian side of this particular project. Although he was hard to work with, we recruited and took over some 26 Americans with 39 dependents and three dogs, one boat, about 25 cars and a lot of household effects, some of which were lost on the way over. We were provided excellent housing. There were department stores that were primarily British in origin, UTC and CFAO (which was French). UTC was the United Trading Company at that time. They were holdovers from the colonial period. Our staff consisted of biochemists, internists, clinicians, a morphological pathologist who was in charge of the unit, Dr. John Edgecomb, histopath technicians, an arbor-borne virologist and a parasitologist, and a radio-biochemist. The purpose of recruiting a certain research base was to facilitate Ghana's efforts to attract other ex-patriot staff to serve as faculty for the medical school. And that proved to be effective; we were joined by a hematologist from Hungary, by another scientist from Poland and, over time, by increasing numbers of other nationals who were to serve as the core of the faculty.

Baker: So the scientific thrust from the Cancer Institute standpoint was leukemias, lymphomas and the Burkitt disease?

Meyer: Well, yes, but the NCI was very egalitarian in a way about this. I mean, they took this as an assignment that was not limited to only cancer and, in fact, the first initial efforts we spent was to gain insight into the disease patterns, epidemiologically as well as morphologically, from doing post-mortem exams. We did 1,500 postmortem exams in the first two years.

Baker: Did you assist at those directly?

Meyer: Yes, I did. We were always short of staff and, in addition to making sure that the buildings were working and the people were paid and fixing the cars, I also learned to diener at autopsies and to help Dr. Edgecomb. I learned to fix and stain tissue, I learned to scrub at liver biopsies. I delivered two of the staff's babies, worked on a measles project that we had in a village up-country.

Baker: Sounds like good experience for you.

Meyer: It was. And that particular set of experiences served me very well throughout my entire career. I've always had a little additional understanding of science and medicine as a consequence of the patience of our staff in Ghana.

Baker: Do you recall any particular episodes on the personal side that created problems of living there? I know you collected some interesting artwork.

Meyer: Living in a developing country is always an exciting experience, and you have to learn to be very patient. You learn that you don't really need electricity and that's good because it goes out often. But you also learn that water is critical (to wash diapers) , to cook, etc. You learn that many of the other things that people take for granted are not terribly important. Music is very valuable and so you acquire a 250- volt, 50-cycle turntable so you can play your records and tapes. You learn that there are many Ghanaians whose knowledge of English was limited. We had a houseboy whose name was Salifu Busanga. And Salifu only knew two words, which were "Yes, please." So whenever you said something to him, he said, "Yes, please," to show that he was pleased you spoke to him. And that had its own experiences. We had a Ph.D. clinical pathologist, Dr. John Cooper, who after a torrential monsoon-like rain in which the ground was soaked and was soft came to visit us. Before turning into the earth driveway to our home, he pulled up and asked Salifu if it was safe to drive his car down this road given that it has just rained so hard and the earth may be soft? And Salifu said, "Yes, please." So John turned into the driveway and immediately sunk four feet into the mud. One learned to accept those things. You also learned to soak your vegetables in a disinfectant before you ate them. But there were wonderful hams from Poland, canned bacon from Czechoslovakia. The bread was excellent. The fruit was ripened on the tree and fell off on the ground.

Baker: So, all in all, you found this a pleasant experience?

Meyer: I thought it was terrific. It was an optimal time in my life. We had two little girls then, aged about 4 and two-and-a half or 3. They attended the Ghanaian pre-Kindergarten and did all the same things you do in the U.S. They went to school by bus. Their bus was a red wagon and it was powered by a houseboy who pulled it down the street. They didn't have these fancy little gizmos with 10 beans on a wire, but their first assignment the first day was to find 10 stones to put in a small cloth bag. And the most interesting thing was they both had long blonde hair and whenever we went anywhere in Ghana the Ghanaian children could not believe, or understand, or fathom, the hair that they had. They practically mobbed them to touch their hair. We had a

wonderful experience and we value it very highly. We feel very affectionately towards the Ghanaian people.

Baker: Very good. Then NCI brought you back and you were at NCI.

Meyer: I was in NCI, in that part of the Cancer Institute concerned with the cause and, ideally, the prevention of cancer--it was called Etiology at that time--initially with Dr. Paul Kotin, the former Paul Pierce Professor of Pathology from the University of Southern Cal who Dr. Endicott recruited to head Etiology and Hans Falk, who was his associate and a chemist. Subsequently, Dr. Kotin was replaced by Dr. Baker, who recruited Dr. Umberto Saffiotti from the Epply Institute for Cancer Research to replace Dr. Falk, and both Dr. Kotin and Dr. Falk went to North Carolina to establish the National Institute of Environmental Health Sciences. The interesting part about the NCI Etiology division was that they were committed to not only doing internal research with their own staff, but to extending that research effort through the use of the contract mechanism. While I was there we had approximately 300 contracts totaling about $30 million dollars, and we had a staff of close to 400 people in Chemical Carcinogenesis, Viral Carcinogenesis, and the Biometry/Epidemiology Staff.

The Biometry/Epidemiology staff were, in a way, especially noteworthy because they were kind of a seminal core of scientists who applied those disciplines to the study of cancer and to the study of chronic diseases, and maybe to their use in biomedical research in general. They and a man from the National Heart and Lung Institute by the name of Dr. Jerome Cornfield are still remembered with enormous regard throughout the world for their contributions.

Baker: Sam Greenhouse was another one who was not in the Cancer Institute but played a key role here and is still with us.

Meyer: In any event, my job in that particular organization was to provide for the administrative and contract support for those research programs and to learn. And I learned a lot from Dr. Kotin, Dr. Baker and all of the research staff there.

Baker: Well, let me say right here, for the record, how valuable your help was in running that part of the Institute.

Meyer: I was also there while we initiated the Special Virus Leukemia Program, bolstered by $10 million dollars of Federal funding, which was a large amount of money in those days, to try to see if the research in that area could be advanced significantly by a more targeted effort.

Baker: We'll come back to that when we get into the questions.

Meyer: In 1969, I was offered an opportunity to join the House Appropriations Committee staff in a position as Clerk to the Minority. The then ranking Republican member of the House of Representatives on the Appropriations Committee was Frank Bow of Ohio, and Mr.Bow controlled that particular appointment. It was essentially a Staff Assistant to him for all appropriations for all Federal agencies. He had considered a number of people, but also knew my father very well who was then Assistant Secretary of State for Administration. Mr. Bow was looking for a budget person, but the people being referred to him were mostly people with political credentials. He asked my father about people in the State Department Budget Office and my father gave him some resumes and asked him if he could also give him mine. Mr. Bow turned them over to the Appropriations Committee staff to interview and make a recommendation. I shook out a little better than the others in the screening process and was

hired. This was an unusual job in the sense that it gave one extraordinary insight into the legislative process and the appropriations process because each Appropriations Bill is, in fact, a law. It's simply a law that provides for funding. And, as the Staff assistant for Mr. Bow for the Full Committee, it meant that I attended any hearings that I wanted to, but all of the markups, all of the committee meetings, all of the floor debate and all of the Committees of Conference to resolve differences between the House and the Senate for all of the Appropriation Bills and Supplemental Appropriation Bills each year. One learned a lot. You sat on the floor of the House of Representatives when the bill was being debated, and wrote all the amendments for that side of the aisle. Although I was a Democrat when I was appointed to that committee, Mr. Bow later asked me if I would change my registration because he was concerned it would be embarrassing if the Republicans knew that their Clerk to the Minority was a registered Democrat, I did change my registration. The position provided some interesting experiences. I once left a dollar sign out of an amendment and the amendment was offered and enrolled. The Clerk called me up to the Speaker's Desk and said, "You know, this is imperfect," and my solution was, "Well, write in a dollar sign. He explained to me that that wasn't possible under the Rules of the House. If the amendment passed, and Mr. Bow wanted it to pass, then all of the members of the House would have to vote on the correction, which would mean that the opponents of the amendment would get a second chance to defeat it. So I went back, more than anxious, and prayed silently that Mr. Bow's amendment would be defeated. As a consequence of divine intervention, the amendment was defeated, and I was saved. The mark-ups for the Department of Defense were always fun because they carried in all kinds of interesting weapons. There also were a number of unusual perks in this particular job. My wife and I was guests of the Secretary of Commerce -- Maurice Stans of Watergate fame -- for dinner on board the Presidential Yacht. I was also a guest of Bryce Harlow's for cocktails and we were guests of David Kennedy, the Secretary of Treasury, also for dinner on board the Presidential Yacht. We attended a White House morning worship service with the President when the Vienna Boys' Choir provided the music. So there were some fun things to do.

Baker: One had to work a lot of extra hours.

Meyer: When Congress would get in a squabble over passing the appropriation bills at the 11th hour I would often not get home until midnight for days on end. But one of the things that I found frustrating is that I was working for an older member of Congress who was no longer especially energetic. I was full of beans at that point in my life and wanted to have a bigger impact. For me to have been content to make a career out of that I would have either had to be working for a much younger and aggressive Congressman, or I would have had to run for office myself. So, after about two years of that, I was approached by Charlie Miller to join Bruce Cardwell and Bill Forbush's Assistant Secretary Controller staff in the Office of the Secretary when Eliot Richardson was Secretary. I actually left the Appropriations Committee in 1971 to go to work for the Assistant Secretary Controller. I look back on the Appropriations Committee experiences I had and many of the assignments in it as one of the most difficult and frustrating positions I ever held, but in which I learned a great deal. I did meet a number of interesting people. Margaret Heckler was then a junior member of the House Republican side and not especially well regarded by the more senior members. They tended not even to bother to recognize her to speak or to vote at times. I also once voted by mistake. Gerry Ford was sitting behind me and they had a floor vote and everybody kept hollering, "Stand up, Gerry." And I couldn't figure out why, and so I stood up. Then everybody hollered, "Sit down, Gerry," because what they were trying to do was to get Gerry Ford to stand up, and he was busily engaged in conversation. And by the time I sat down I had already been counted. It wasn't a close vote so I guess it didn't make too much difference. Another time I wrote a series of amendments and motions to recommit for a young

Congressman whose name was George Bush. And Mr. Bush was always appreciative and gracious. And after I'd written them for him, he had a number of members come over and say, "George, we didn't know you were such a great parliamentarian." And he laughed and patted me on the back. There were a lot of fun experiences. Old Ben Reifel was an American Indian whose father had been a German farmer and his mother was a Sioux squaw. He was a wise Congressman who chaired the Interior Appropriations Committee and gave me an autographed prayer I still treasure. In any event, I joined the Controller's staff in the Budget Office in 1971 and began another aspect of my career. That job was again frustrating in some ways but also an extraordinary learning experience. This was partly because Eliot Richardson was such a truly remarkable human being. In this position I really had two assignments. One was to be the staff person for all of the health agencies on the Assistant Secretary Controller's staff, and the other was to be the Budget Officer for the Assistant Secretary for Health -- Monte Duval -- who had almost no staff of his own. He succeeded, I believe, Roger Egeberg, in a kind of interim capacity for a couple of years. He was a very thoughtful person, and a former Dean of the Medical School of Arizona.

Baker: Did you get involved in the debates between Kennedy and Nixon on health, and Congressman Rogers on what ended up as the National Cancer Act of 1971?

Meyer: No. That was pretty well at a level above me, and much more politically charged. I saw that as a staffer a bit on the Hill and then subsequently while I was working for the Assistant Secretary Controller.

Baker: You were in channels that didn't handle that side of it much?

Meyer: Well, it didn't get down to the staff level. That was all pretty well handled at the Secretary's level.

Baker: Well, it did at NIH.

Meyer: Yes, it did at NIH, but it didn't get down to the staff levels of the Controller's Office or in Congress. Certainly I was supportive of that when I worked for Mr. Bow. I believe in it and still do. But I didn't have much influence. One of the things that I did in the Controller's Office was to serve as a Departmental witness for many of the Appropriation Hearings, and I often served as a Departmental witness for the FDA, the Office of Indian Health, and for a number of other special hearings on alcoholism.

Baker: NIH too?

Meyer: Well, Charlie Miller or Bill Forbush tended to serve as the NIH witness most of the time. I served for some of the smaller institutes-Dental, etc. But the NIH hearings were so attention-getting by comparison, and they were always trying to restrain the amount of add-ons, that the Department wanted a more highly positioned figure to serve as a Departmental witness.

Baker: Yes. Charlie Miller was usually there when I testified as Director.

Meyer: I worked for them for about a year and then was approached by the Food and Drug Administration to join their staff. I initially declined the job because I wanted to return to NIH, and then thought about it further and decided that it represented another learning experience and the people there really did seem to want me. I was recruited by Charley Edwards, who was then Commissioner, and Mickey Moure, who was then his Chief Executive Officer, to become

Director of the Office of Legislative Affairs. I left the Office of the Secretary in February of '72. I served for two years in that position in FDA and then Dr. Edwards became Assistant Secretary for Health, and Mr. Moure went with him. They asked me to go, but I did not want to return to the Office of the Secretary, and they then asked me if I would take Mr. Moure's place as the FDA Associate Commissioner for Management and Operations. That was the senior administrative job for the FDA, and similar to the position of NIH Associate Director for Administration that Al Siepert and then Dick Seggle had held at NIH. I served in that position from June or July of '73 until 1978, when I left the government to accept a job as President of Microbiological Associates, -- a company that had originally been an NCI contractor and had tried to recruit me on a couple of other occasions. I also had worked for them part-time as a consultant with respect to delivering medical care in Qatar, Nigeria, Indonesia, other developing countries, and in Saudi Arabia. Their parent organization, the Whittaker Corporation, was providing health care through a large contract with the Kingdom of Saudi Arabia.

Baker: So you got a bit of travel in with that job, I guess?

Meyer: A little bit of travel in that job. But then Whittaker bought an aluminum company that had a coating that they used for food products. That meant I could no longer consult for them, so that ended my relationship with them at that point in time. But they continued to approach me on three different occasions about taking this position. As much as I liked my job at FDA, I also knew that I either had to take the job or spend the rest of my life wondering if I should have done so. Consequently, I elected to resign from the Government and become president of Microbiological Associates. I probably knew within 3 months that it was no longer a going concern in the way that it had been envisioned. It had grown up from a small company that produced chemically defined media, to three separate businesses, one of which was Bioproducts, and was located in Walkersville, Maryland. That part of the organization had good facilities, produced research mice, chemically- defined media, and some of the very earliest ELIZA enzyme immunoassay diagnostic kits. A second business was a fairly large-scale contract research organization in Bethesda, Maryland, that was in a transition period moving from being NIH- dependent to doing research and bioassays studies for oil companies on gasoline additives and other private sector organizations. They also purchased the IBT inhalation toxicology facilities in Decatur, Illinois while I was there to begin again to do contract inhalation toxicology testing. The facilities in Decatur, Illinois, were excellent. Getting there was quite a trip: three days in order to spend a day in Decatur, Illinois. I finally defeated that by flying to St. Louis in the evening and staying overnight in St. Louis and then flying into Decatur the next morning, working all day in Decatur, flying back to St. Louis and staying overnight in St. Louis again and then flying back to Washington the next day. That way I could narrow it down to two days instead of losing three. Those three businesses didn't have much in common with each other. Originally, the contract research business in Bethesda used a large amount of the production of the bioproducts business, but that had changed and the bioproducts business had developed a market of its own throughout the country and, in some cases, overseas.

In addition it was heavily burdened financially by a large overhead made up of left over real estate that was no longer suitable for doing contract research and a large top staff that didn't play much of any role in the conduct of any of the three businesses. So I told Whittaker, after being there four months, that I really thought the best thing to do was to bust the business up into three separate businesses which then could be managed by simply a scientist and an accountant and didn't need an umbrella infrastructure over the top. I could then do away with all of the property that was no longer marketable and the staff that really weren't playing a role anymore. And I told them, if they wanted me to, I would stay and do that; if they didn't, I would plan to look for

another job. I contacted the FDA and, at the time, I was going to apply for their Personnel job. I subsequently learned that the person they had selected to replace me had withdrawn at the last minute and took a job with the National Park Service. Therefore FDA offered me my old job as Associate Commissioner. So, some 7 months after leaving FDA, I returned to my same job and I had, in essence, a brief, but interesting and educational experience in the private sector.

I stayed in that job until July of 1985. In July of 1985, Commissioner Young asked me to go and work in FDA's Center for Drugs in order to try to help improve the flow of pharmaceutical applications through the FDA review process. I went there initially on a collateral assignment and worked for about a year when Harry Meyer left and went to the private sector and they appointed Paul Parkman as Acting while they recruited for a new Director. They asked me to serve as Dr. Parkman's deputy. This was an awkward situation because Dr. Parkman had someone in mind who was a physician and a scientist, but he was very gracious toward me and we worked well together for the following year. During that year they made considerable effort to recruit, but without being able to successfully find someone that Dr. Young felt had the right mix of biologics and drug experience to do both jobs. Consequently, they recruited Carl Peck to be director of the drugs part of FDA, and Paul Parkman was made director of the biologics part of FDA. Dr. Peck and I met during the process of his recruitment, and Dr. Peck told Dr. Young that he would accept the job and would like me to remain as his deputy. I did and became his good friend and colleague, which has continued to today. I stayed there until Dr. Peck left in October of '93 and remained as Acting Director until April of '94, when I retired. We divided up the workload so that I covered the management, ombudsman activities for the industries, and external relations aspects of the Center, and Dr. Peck covered the scientific issues. He was a scientist, a clinical pharmacologist, and a most unusual man. His undergraduate major was math and physics. He was accepted into medical school but received a Fulbright to go to Germany to study chemistry. He went to Germany and obtained a Master's degree in chemistry, returned and went to medical school. Following that did his residency and boards in internal medicine and then began to do research and postdoctoral studies in clinical pharmacology. He is today his own statistician and mathematician, as well as a physician. He taught for a year at Leyden, in Holland, on a sabbatical after he retired from FDA, and then returned to Georgetown University. He now directs the Center for Drug Development Science. His thesis is that there are much more efficient ways to develop drugs than are currently being employed throughout the world by pharmaceutical companies, and he has served as a leading innovator in helping firms in the U.S. and other countries design development plans to accomplish that. While at FDA, Dr. Peck tended to devote his time to resolving difficult scientific issues in d, i.e., rug applications and to recruiting and training the medical review staff. He did an exceptional job at recruiting some very outstanding senior people and some of the best and the brightest young people in the country. He made a major difference in the caliber of the staff that were in FDA's drug review program. I tended to spend about 50 percent of my time managing the place internally and the other 50 percent of my time working on resolving problems between the Agency and pharmaceutical firms with applications or with compliance problems so that they could continue on or whatever. I also did a great deal of what I would call "outreach," or public representation for the Center because Dr. Peck was somewhat less comfortable than I was in the public arena. We remain good friends today and continue to work together.

I left that job then in April of '94 and began to work part-time for the Digital Equipment Corporation in Cambridge, Massachusetts. They had a Pharmaceutical Business Group and I was a technical resource for them and for their regulated industry customers. And about a year later, or during the year I was with them, they folded all of their industry groups, including the Pharmaceutical Industry Group, as a part of a major reduction in their organization. They were in financial trouble and reduced their staff from 104,000 to about 65,000.At the end of the year we

agreed that there wasn't a role for me anymore and Bolt, Baranek, and Newman, or BBN Software Products Corporation, contacted me about working for them under similar circumstances. They were also located in Cambridge, Massachusetts, and were a software company that licensed two particular programs, CLINTRIAL, for the accumulation, organization and analysis of clinical data from clinical investigations, and CLINTRACE which does the same thing for adverse events resulting from actual clinical use of a marketed product. They hired me. We agreed on less hours, because I think that made sense. I worked part- time for them and part-time as a pharmaceutical consultant to a number of firms and organizations in this country and abroad. I enjoy what I do.

Baker: Well, that's a good account and I appreciate your covering this. You had such an interesting time and I'm glad to get that down on the record. And I guess we're about ready to turn to the questions, although I wanted to ask you one more thing. As you look back, I don't know how much knowledge you had of the planning process that we did before I went to Etiology, when we developed a convergence technique of research program planning. Do you remember?

Meyer: Oh, very well.

Baker: Have you got any comments on that effort and the results?

Meyer: Well, that's like your first question.

Baker: Well, that was more on the strict scientific side, but I'm interested in your views about this process of planning because, as you know, a lot of academic scientists are generally opposed to planning research programs in the biomedical field, and I must say that many of them were confusing project planning with program planning. We weren't trying to tell anybody how to do their experiments in their projects, but, as you know, for budget development you need some framework for priority decision-making, and that's really why I turned to systems planning and networking, i.e., networking in the old sense of systems networking.

Meyer: Well, I would have described that as a means by which you were framing questions that needed to be answered in some sequence in order to resolve a major issue that was pending biologically or medically. I really thought that was a remarkable contribution, and I still think it is today. I also believe that it has a great deal more application than you may be inclined to give it credit for.

Baker: The chemotherapy people used it well. With the virologists, we might as well not have done it. And then chemical carcinogenesis people were sort of in between.

Meyer: But you're talking about the so-called kind of pure academician who is seeking the pursuit of new knowledge. But I think if you were to go into the scientific parts of major pharmaceutical organizations throughout the world you would find something they call "project management" which is very closely patterned to the concept of managing research programs. They start initially with saying, "Where do we have strengths in this company?" And I think this is playing an exceptional role in the development of products. With the squeeze that pharmaceutical companies face today between long development and review time, with a patent life that is limited along with generic competition, it can become very hard to recover the investment one makes in the development of a product in the short time that one actually has left to market it.

I have seen firms withdraw from a program that they have invested $45 million dollars in, including building a $23 million dollar facility to produce it, because there wasn't enough time

left to market that product and recover their investment considering the amount of additional money they would have to put into the product to bring it to market and gain FDA approval. I think that's unfortunate. In a most recent experience I saw a product be withdrawn that was marketed in at least 20 other countries in the world for over 15 years. But I do see, as Dr. Peck does, a concentrated effort by the pharmaceutical industry to plan better. And they don't do their own clinical studies themselves, but look to the academic community. Some academic institutions have scientists who can see beyond only the pursuit of new knowledge. They know that if you can't bring science into the reality of use, then you've not finished the war. Whether it's Gayle Shapiro's studies of asthma drugs in Seattle or George Drusano's study of infectious diseases, these are men who not only understand the importance of basic research, but are also able to, interested in, and capable of, overseeing studies that answer more of the questions about how to do something about these conditions of ill health and disease.

Baker: Well, I think the Cancer Institute was different from the other Institutes in pursuing the applied end of things first mainly through the Chemotherapy Program, because to evaluate the basic research ultimately you've got to find out whether it does something in the clinic, and that's more of an applied end of the spectrum. And Endicott, of course, saw the necessity for that as well as the need to integrate the various program components. That's why he asked for contract authority.

Meyer: Well, you know, two of the questions that you asked me dealt with what I think were the key administrative or management decisions affecting the viruses and cancer field, and the main leaders who influenced the direction and course of events. I think those are the same people. And I don't know how you put them in order, and perhaps I'm leaving someone out, but I list them as: you and Lou Carrese, Endicott and Learmouth, and Rauscher and Stevenson, and I suppose one could add Moloney and Manaker to that list too. I don't have as much personal knowledge of their roles. But clearly this constellation of talent and interest made a difference. It made a big difference. Their major contribution, to me, was that research could be planned. It could be targeted and, if one were successful, one would cut years off the time to success.

Baker: I think the saving of time was certainly illustrated in the application of this planning in chemotherapy. I think we cut off about two years in the process of moving across to the practical utility. Well, this fourth question is different from the second one. Your answer applies to the second one. But the fourth one, I was thinking also of the senior scientific people, some of whom would be outside the NCI. For example, Sidney Farber would be clearly one person who was influential in the Chemotherapy area, but he was also helpful, indirectly, in the Viruses Cancer area. Wendell Stanley certainly influenced Viruses Cancer research and was a key witness in testifying before Congress for the expansion of Viruses and Cancer work. Chuck Evans was the chairman of one of the committees and extremely helpful. And Joe Melnick, another one, at Baylor, who helped move things along. Sabin was helpful on a number of occasions.

Meyer: I would include Maurice Green. But I tend to think of them as more supportive. I'm not downplaying their contributions, but I tend to think of their role as supportive. I don't see them as having provided the initiative. Mary Lasker played a role. I don't mean to detract from any of those people. They are all extraordinary people in their own right. But in terms of whether they took the initiative in the way in which events progressed, or were they critical catalysts in making sure that they could be accomplished? I don't know. I'd probably give Ken Endicott the greatest credit, in so many ways, because he had the vision to believe that things could be different and the willingness to find people who were interested in devoting their attention to that, like yourself and others -- and then give them enough time, money and support to pull it off.

Baker: Yes. On this decision to ask for a special appropriation of the $10 million in Viruses Cancer research, Ken should certainly get the credit for that. Shannon insisted on a lot of justifying information before he would okay Endicott's going to Congress and asking for a special appropriation. On putting together that information, Rauscher, Ray Bryan and I pulled that information together, with Zubrod sort of reviewing it. Shannon came back and wanted some additional information. I remember I was Acting Director that day he requested it and had to send over to Shannon the same day more back-up information on how we could justify asking for a special appropriation. So those were key steps in initiating the expanded Viruses Cancer Program, I believe.

Meyer: I think that's right.

Baker: Now, the first question, we're talking about people like Wendell Stanley and Sabin and Moloney and Rauscher and people like that. Ludwik Gross, Stewart and Eddy, and so forth. So, from your perspective, which is not exactly that of a scientist, but you were observing some of this, just in recalling, what names come to mind as the main scientific developments? That may be difficult for you to pinpoint.

Meyer: Well, the people that I came into contact with were Dr. Evans, Dr. Maurice Green, Dr. Melnick, and Dr. Huebner.

Baker: And Moloney and Rauscher?

Meyer: Yes. And Moloney and Rauscher internally. But I probably wouldn't be the best source for that kind of thing.

Baker: Well, I'm interested in a perspective from different points of view, so—

Meyer: I actually read that question a little differently. I read it as to the most important results and didn't narrow it only to science. And I viewed it as the Virus Cancer Program more than I viewed it the whole virus cancer field.

Baker: Fine.

Meyer: So, what I thought about that is that I thought we learned a number of things that I listed. One was that it taught us that you could propose and obtain a bolus of funding for a targeted program. I didn't think we knew that before.

Baker: Yes. It hadn't been done before, except maybe Chemotherapy

Meyer: Yes, but nothing in the amount of a solid chunk of funds like that.

Baker: Not an all of a sudden bolus, as you said.

Meyer: And subsequently that's why we weren't as frightened about asking for $100 million because we knew it could be done. I thought it taught us that you could plan research. I thought we learned that human leukemia was probably not closely related to leukemia in other species. Maybe we didn't learn it, but that's what I thought we learned.

Baker: Well, in a sense that we had over 200 viruses that produced cancers in animals and had a hell of a time finding any in man.

Meyer: But we looked at feline leukemia, bovine leukemia.

Baker: I think the reason for that is we had such special conditions to set up experiments that those conditions were really unrelated to the way viruses are behaving in an external environment, and that's why Huebner was trapping mice in barns and in Harlem, because he saw the need to pinpoint these animal findings in relation to man, and they turned out to be quite different.

Meyer: I thought it taught us that leukemia was probably not going to have a quick, simple solution. And we learned that. I mean, it wasn't what we had hoped for, but we did learn it.
I thought it taught us that maybe the role of viruses in cancer etiology was also not amenable to a quick, simple understanding. I think we didn't figure that out quite that quick.

Baker: Well, I was always happy to say that I didn't promise anything. All I said was, "Here are opportunities to expand the work," but I didn't make the mistake of promising, like some people did. You get expectations up too high when you promise.

Meyer: So, those were the things that I could put down, and they're somewhat off the mark from what you obviously intended with the question.

Baker: But that's an interesting answer and good information.Let me make another comment to get you to react to. Before Ludwik Gross showed that cell free extracts could produce leukemia and Stewart and Eddy did their *Polyoma* work, nobody believed that viruses had anything to do with cancer. You had Peyton Rous' findings from way back to 1915, but they weren't really accepted as being significant. And nobody believed Gross for a couple of years, and nobody believed Stewart and Eddy for a couple of years. But once those works were confirmed it changed the whole outlook from one where viruses had nothing to do with cancer to opening up the whole field of viruses-cancer work. Now, we had another change of perspective and paradigm, to use a modern word, when the oncogenes were discovered. This now shifted the conceptual emphasis from viruses to the genetic coding in our own chromosomes which matched some of the genetic coding in the cancer-causing viruses. So we switched now to looking at viruses not being, per Se, the main cause of cancers, but the genetic information in those cancer-causing viruses is very similar to the oncogene coding which is switched on or off, and it's the switching on of this oncogene information that leads to tumors. So we've got a lot more understanding of this general process, even though we don't know quite how to use that in a practical sense yet. But these are three distinct periods of the Viruses Cancer area where the main concepts have shifted. Does this fit your perspective?

Meyer: Yes, it does. But I probably was not close enough to that to appreciate it, nor probably trained adequately to understand it. I respect your summation of that very much. I never met Dr. Gross or Dr. Eddy. Dr. Stewart? Which Stewart was that?

Baker: Sarah Stewart.

Meyer: Sarah Stewart. Okay. I knew her.

Baker: She was interesting. As Ruth Kirschstein said yesterday, she was an intuitive scientist. Most people didn't believe her results at first because she did not quite follow the same procedures as most investigators. But very important.

Meyer: But, you know, very well respected.

Baker: Well, not at first, but later she had to be, because she changed the field. Okay. You've told me much of your participation in answer to the third question in your background. Any other comments you want to make about your participation, let's say, in the Viruses Cancer area, *per se?*

Meyer: No. I think I provided support to the professional staff in every way that I could and I certainly learned from them, but I can't say that I did more than that.

Baker: One of the problems I'm having is to remember who served on which committees, including even the chairman of a lot of committees. I'm going to have to try to look that up. But it's not easy to find information on this. Do you recall any of these people that come to mind? We mentioned Chuck Evans.

Meyer: No. I really don't. I used to have, and I don't know whether I finally threw them out, some SVLP books that were in binders.

Baker: Yes. I've got some. Incidentally, those are supposed to be put in the archives, unless they already have a copy of them.

Meyer: Oh, I'll be glad to give you everything I have. At the moment I have 52 boxes in the garage of my "treasures," if you would, that I came out with after 37 years in the Government. And I thought, well, I'll spend the first week or two going through that. That's proved more elusive than I thought, especially because I started working.

Baker: Yes. And it's very time consuming.

Meyer: But there is a certain amount of savoring that one experiences and it's clearly not efficient.

Baker: So with respect to the fifth question, you don't have any answer to be helpful at the moment?

Meyer: No, I don't.

Baker: I can understand that. I find it very hard to remember all this. Okay. The sixth question shifts direction to look at production of resources, such as tissue culture cell lines, virus preparations, antibody preparations, and special animals including primates. You remember we had an interesting time with primates when you were in Etiology and Joe Melnick played a key role in some of that.
Meyer: It's even more difficult now because you've got to talk to them and let them live normal lifespans and provide marriage homes for them, and it's hardly worth doing any primate work anymore. Plus the fact that if one of them gets an ingrown toenail one has 400 protestors on your doorstep.

Baker: Yes. I think this is very dangerous for the future of research, particularly health research.

Meyer: I just think this is craziness.

Baker: So, how significant do you think this side of it was?

Meyer: Very significant. It was critical. Before we had that program in place it was essentially primitive, difficult, sporadic. Researchers were very much hindered by a lack of that. And it was much improved. And I really think Bob Stevenson's accomplishments in this area were never as fully appreciated as they deserve to be. I've come to believe that the logistics behind being able to pull

anything off can be extraordinary, I mean just extraordinary, and the way you keep scientists efficient is not to have them screwing around with problems of personnel and logistics and that sort of thing, but keep them where it counts in designing the studies and in interpreting data. In fact, I even think that when I find somebody who just has to put on his white coat and go in and palpate tumors that he's probably wasting time. I mean, he may need that as a break or a diversion, but frankly he can hire somebody to do that. What one needs is good protocol design, interpreting data, and getting it into the literature. And I think that if one has to worry about where the hell he gets his next radical membrane, or where he gets his next cell typing, or where he gets his media, or whatever, then what you are doing is frivolously squandering a very critical resource.

Baker: You remember that the polio story had been drawing to a close from a research standpoint, and so we actively tried to recruit a number of those key virologists, like Melnick, into the cancer field. And we succeeded on that. But on the reagents, the virus preparation, I said, "You guys, you know, you're great at producing a new virus preparation and characterizing it and making sure the quality control is all right, but you produce such a small batch that you've used it all up when you send it around to each other to check on the validity of it. You need to make much larger batches, for example, by industry." "Oh well, industry couldn't do that job well enough." "Oh?" I said, "Well, I'll tell you what. We'll produce the quantities and you test it the same way you'd test your own and if it's no good obviously we're not going to require you to use it." And, "Well, we don't think they could make it good enough." You know? So, I knew we were over that hump when Moloney came in one day, all excited about a shipment of Moloney virus he'd gotten from *Pfizer*, and he says, "That's as good as anything we've ever produced, and we've got buckets of it." We demonstrated that this could be done. I don't know why academic people thought industry couldn't do it. They're a little different on that nowadays.

Meyer: I think they are. But I'll tell you, some of the people you bump into in the industry scientific community are pretty good.

Baker: Oh, if you look at the difference now, it's an entirely different world with industrial participation in scientific meetings. There used to be maybe one or two on a program from industry. Now there are nearly half of them.

Meyer: Well, and even those who are in academic circles, in the academic community, are heavily supported by industry. I don't think there is any leading academician whose research is sort of independently funded by our dollars. I don't think it happens. There aren't enough R2 grants at NIH to do that.

Baker: The availability of some of these resources in those days was limited. They weren't there until these programs produced them. But nowadays many of those things that were developed in the NCI Programs are now commercially available. But there are always additional ones that need to be developed, and I agree that Bob Stevenson should get the main credit for developing this area, but we don't want to forget Harvey Scudder, who was Executive Secretary of the V&R Study Section and then moved with Ralph Meader in the NCI Grants area, because he had the idea that the NCI ought to be able to produce quality materials for the use by scientists. And that was a radical idea in the grants channels in those days. And so he started this idea and then Stevenson really picked it up and developed it very well.

Meyer: Well, Bob made a landmark pivotal contribution here, and I guess I only know indirectly of Dr. Scudder's contribution. But I saw Bob's contribution every day. And Bob was a tough administrator. If you didn't do something the way Bob wanted it done, you had to scrape him off

the top of your head or he'd drag his golf shoes across your desk. He was a very tough taskmaster.

Baker: Well, I've publicly stated that he was one of my best program managers because he combined a good knowledge of science with good managerial capabilities.

Meyer: He had one other thing too: he didn't take something on that he couldn't do well. And I always admired him because I've always been willing to take assignments on, and more than I could do. As a result of that, I would kill myself trying to get them done, and sometimes had to compromise on quality. Bob had the discipline to say, "No, we can't do that well, so we're not going to do it."

Baker: Very good. The seventh question deals with the relative funding in grants and contracts and you probably don't have a good grasp of those differences.

Meyer: I really don't. That's a technical question.

Baker: But some people had the impression, you know, that contracts were gobbling up all the money for the R0l grants, and that's really what led to the demise of the Viruses Leukemia Program with the Zinder Committee. And Huebner: they thought Huebner had too much money and, worse than that, too much control. Let me say right now that the more I think about Huebner's role, when he had provided leadership among a lot of contractors, mostly on the West Coast, it reminded me of General Patton, of organizing these various "divisions," so to speak, under one major effective attack. And Huebner then got blamed for trying to have too much control. The critics seemed to be little concerned that the results were outstanding. But he did things that could not have been done if he hadn't had that kind of generalship. And also, like Patton, we had to be careful; he'd use up all the gasoline if you gave him everything he asked for, like Patton would. So you had to put some constraints, but you didn't want to hold him down any more than necessary. So he was an interesting fellow to work with.

Meyer: A wonderful character. I mean, he was a wonderful character. And I tell you, I loved him. He was a total pain in the rear a large percentage of time, but he was a wonderful character, and he was productive.

Baker: And it wasn't selfish.

Meyer: No. It was unselfish.

Baker: He was looking at the field and how you advance it.

Meyer: Anything that got in the way of his getting his work done would get mowed over. If his car wasn't working, he'd call Harry Schwartz at Microbiological Associates and say, "Get me a car." And there'd be a Microbiological company car parked in his parking space. And I would say, "Bob, what the hell are you doing with that?" And he would say, "Well, I needed a car quickly and they got me one that night." I said, "Bob, you'll be on the front page of the newspaper." He would say, "Who gives a shit." He was going to get his work done, and it was just remarkable. He reminded me of the lady researcher who got cancer and one day said, you know, she says, "You know, I've only got a few months left and I've got to get this done." I think it's a tragic loss that he has Alzheimer's disease and is probably out of it now.

Baker: We interviewed his widow--not widow--but his wife.

Meyer: Harriet?

Baker: Yes. Harriet. Yes. And then Janet Hartley we interviewed.

Meyer: It would have been nice to have been able to keep his health in line.

Baker: Well, I'll tell you an interesting thing. You may not remember or have heard about it. We were in O'Donnell's Restaurant at lunchtime one time and he was there and met me right at the entrance. He'd requested a whole bunch of money for some more reagents and I didn't approve of all the amount he asked for, and he was all hot and bothered about that. So, he was speaking rather loudly and punching me in the chest with his finger, complaining about this, then finally he said, "And I could be a better Director than you.And I smiled and said, "That may be, Bob, but I'm in the job and I've got to make the decisions and I'm going to make them." And he didn't hold any of that against me. As soon as he cooled down everything was back to normal. But a dynamic, interesting guy. And he, of course, was accused of stealing ideas, as Gallo has been accused of, and he didn't need to steal any ideas; he was usually way ahead of everybody and he could develop them so much faster than anybody else, they felt he was stealing stuff. But I looked into several of those cases and none of them was true.

Meyer: Well, he was a make-things-happen guy and he was fun, because it was fun to be around him. He was tough and a pain in the rear and you were constantly worrying about whether he was going to get you in trouble, but he was a great guy and we miss him. There's no question about it.

Baker: Very good. Number eight is an interesting question, "If you could have changed anything, what would you have done?"

Meyer: I'd have liked it to have been more successful.

Baker: Well, how would you have changed it to do that?

Meyer: I'd have liked us to have found a way to either prevent or treat leukemia. I think that would have been a wonderful thing.

Baker: I like to ask the question why aren't we further along than we are, with all the money spent and all the great thinkers and all involved, and the efforts? Did you ever think about that?

Meyer: No. But I remember your capacity to frame challenging questions, and I always remember the time that I was up to my eyeballs in trivia, by comparison, and you came in and said, "Did you ever wonder why the stomach doesn't digest itself?" And, you know, I nearly jumped out of the window of the building. Here I am trying to resolve whether the toilets worked, or something. But years later there was a liberal columnist who I don't agree with about 90 percent of the time in *The Post*, and whose name I can't even think of at the moment, who taught a course at Maryland, and his final exam was to ask a question. You had to ask a question and then answer it. He made a statement, "In this life the answers you give are not so important as the questions you ask." And I think your question probably fits in that category. I don't know why we don't have an answer, and it's an important question to ask. If you do have an answer, you ought to put it in the book.

Baker: Well, I have answer, and it's in one word, complexity. Higher organisms, including cancer, have so complicated a system with multiple interactions and feedback loops that it producs a complex system that can adapt to changes in the environment, which cancer cells do. That's why some

drugs work in the beginning but don't work later because the cancer cells have adapted and are able to withstand then the attack of the original drug and so the drug loses its effectiveness. And if you look at all of these reactions that are going on in us all the time, it's a very complex system that has fascinating properties if you look at organisms as complex systems. It's just so damned complicated.

Meyer: Well, the capacity of bacteria to develop resistance, I mean, it never ceases to amaze me in the antibiotic field.

Baker: Well, you see the same things happening in higher organisms too.

Meyer: And it's a fundamental issue and it's one of those that drives me nuts when FDA, whose Anti-infective Review Division is particularly slow and empiricist in their approach, and while they screw around, we're missing having additional tools to fight some pretty smart bugs.

Baker: So, I've gotten interested in reading a lot of stuff on complexity now and there have been some new books out on that subject now that are quite interesting. *Fractal Geometries and Chaos* are part of this new appreciation, I think, of complexity.

Meyer: It's a good answer. It's a better one than I could give you.

Baker: So, the ninth question deals with how much influence you think the Viruses Cancer Program had on the development of molecular biology and biotechnology, a loaded question perhaps.

Meyer: I don't know that I could assess that. I mean, clearly the people who were involved in that also made contributions in molecular biology and so did their colleagues, but I don't think I would know how to measure how much influence.

Baker: Well, in biotechnology, you should have a feel for that part of it, if not the molecular biology?

Meyer: Well, I don't know whether it was the Viruses Cancer field that laid that foundation. That's what I can't assess.

Baker: Well, not alone.

Meyer: As a player, absolutely. No question.

Baker: Certainly, as I mentioned earlier, the number of companies now that are producing resources that were developed under that program, where the program showed the way to do it and invested the developmental research funds to get the field started, there is certainly a correlation between the kinds of work in biotechnology that seem to me to be an outgrowth directly of particularly the NCI resources development area. But I don't want to put words in your mouth.

Meyer: Yes. I just didn't feel qualified to address that in an informed way.

Baker: Okay, the tenth question is an entirely different direction. This deals with how much the lay population understands science, how much it supports or is against it, and how things compare between 1950-70 compared to today.

Meyer: When I think about the tenth question, I have to parse it apart between the political climate and public knowledge and opinion. I view the political climate as a very mixed kind of thing. It leaps around and seizes on the diseases-of- the-month kind of thing, or the fad concern, or whatever, and funds it, and I don't think in necessarily a thoughtful way. But, if you didn't have it, I'm not

sure we'd receive any funding at all. And I view the current scaling back of Federal funding in so many areas, including biomedical research, with a lot of apprehension. Public knowledge and opinion I think is pathetically inadequate. If you go outside those of us whose lives are involved with biomedical research, they are, I think, very poor indicators of public opinion. If you go to Keokuk, Iowa and ask the guy on the street where he thinks medical research money should be spent, he'd probably think that it shouldn't be spent at all and we should be worrying about developing new ways of disposing of swine waste or something, I mean if he was a hog farmer. So I almost despair of how we develop a more informed public. I mean it's inadequate. And I think we are all victims of a media-led public. I think the media has extraordinary impact, and they tend to be much more interested in readers buying their advertising than really thoughtful reflection. So I think public knowledge and opinion is inadequate and unfortunately media-led and not self-generated. And I think it does impact on scientific progress. I mean, if the media thinks we ought to be spending more on the homeless, then that's what the public will react to and, if it's at the expense of cancer research, unless and until they get cancer, or someone they love does, then they're not big on cancer research. So I'm not very proud of our public and I think it's appalling.

Baker: Well, on knowledge of science I think it is appalling, but I must say that the press is doing a little better job on writing good scientific articles, for example the Monday morning *Washington Post*, on pages 2 and 3, are doing pretty well now.

Meyer: *The Washington Post* Science Section is well informed. That's right.

Baker: I don't know how many people read that page.

Meyer: Well, not outside of Washington.

Baker: Well, of course, they don't even take *The Washington Post* outside.

Meyer: That's right. And if you go to other papers and you go to other towns and other cities and you buy their local papers, I don't care whether it's *The San Francisco Chronicle* or the—

Baker: You can't find out what's going on in Washington even, much less science.

Meyer: I don't think they want to. I don't think they want to know. You really don't see much of that.

Baker: So, if you go back to education generally, we're very deficient in science education. I blame part of this on the departments of science in the schools, in colleges, because most of the science departments are only interested in teaching those who are going into science and have ignored those who are not going into science, and then they wonder why those people don't understand science. That's one reason I was teaching General Science to non-science majors, was to try to help with this problem but, of course, that's only a drop in the bucket. The real problems start back at the junior high level.

Meyer: We also don't teach public policy in a way that forces our younger people to think-- Whatever you want to call those courses, whether "Principles of Democracy," or "Civics," or whatever, or "Political Science," we don't focus public policy on the allocation of resources, we really don't in a thoughtful, reflective way.

Baker: Yes. That, to me, would be a hard course to teach, not the civics part, but how you develop public policy is a very complicated thing.

Meyer: I don't think it's a hard course to teach. I don't know which network it was that developed a questionnaire on how you should allocate the Federal budget, and it forced choices, and then it was taken out to a collection of people from the town, at the local general store or wherever, or a restaurant, and they spent two and a half hours with these people helping them arrive at having to develop a "balanced budget" and make the choices and do it in an informed way. And they had some people there to guide them in the sense of what does it mean when you cut this, and what does it mean when you cut that. The result of that could have been a whole course. The result of was that a bunch of people said, "You know, this is not as easy as we thought it should be."

Baker: It surely isn't. How do you decide on what questions to even put to such a group?

Meyer: Well, I think you let the way we allocate our resources drive those questions. If you want to do something different—

Baker: How do we allocate our resources?

Meyer: Oh, politically.

Baker: Yes. I know.

Meyer: Politically. One gets elected.

Baker: But even that's kind of hard to—

Meyer: Well, I think it's embarrassing.

Baker: I don't believe very many people have even thought through what is the prime purpose of politics. To me, it's to resolve our differences and priorities in a non-violent way.

Meyer: That's well stated.

Baker: But, given that, I think I favor multiple routes for programs and budgets originating at not too high levels in government rather than one collective system at a high level. Like Frank Press is advocating now, with the science cutbacks, that you ought to have a senior group of scientists that decide on the allocation of science moneys, and I don't think that's a good idea.

Meyer: Well, it would work against science. We know that.

Baker: I think it would in the end. Yes.

Meyer: Oh sure, because it will limit whatever your science budget is to a science budget which has no public appeal.

Baker: Yes. And I think it's better split up. Now, of course, we've been lucky at NIH, especially the Cancer Institute, in having an area that the public is frankly interested in--cancer. Most people would rather die of something else than cancer, and so we've fared well with the Congress most of the time because they were representing the public, I think, accurately that cancer is one thing feared most by people, so it warrants more money put into it than might be done if you did it on one science-based budget.

Meyer: Most people would rather die of cardiovascular disease than cancer.

Baker: Yes.

Meyer: And I don't know where AIDS fits in.

Baker: Of course emphysema is not a good way to go either, and cigarettes are just as bad for that as for lung cancer. Well, we won't get into that one. Well, question 11 is, "Have you got any other comments or anything else you'd like to say?"

Meyer: No. But I think what you and Dr. Stevenson are doing is a good thing to do and I thank you for that.

Baker: Well, I thank you for your time and willingness to give us your thoughts, and your career is a fascinating one so I spent more time on background than I've done with a lot of people, but I think it was well worth it. You've had an interesting time, and so have I.

Meyer: Yes. I feel very fortunate.

Baker: Yes. I also. Good to see you again too.

Meyer: All right.

Baker: Thanks a lot.

Meyer: Sure.

End of Interview