

HOSPITAL
ADMINISTRATION
ORAL HISTORY
COLLECTION

Lewis E. Weeks Series

John S. Millis

JOHN S. MILLIS

In First Person: An Oral History

Lewis E. Weeks .
Editor

HOSPITAL ADMINISTRATION ORAL HISTORY COLLECTION
Lewis E. Weeks Series

Produced in Cooperation with

Library of the American Hospital Association
Asa S. Bacon Memorial

Sponsored by
American Hospital Association
and
Hospital Research and Educational Trust
Chicago, Illinois

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John S. Millis

CHRONOLOGY

1903 Born Palo Alto, CA November 22
1924 University of Chicago, B.S.
1924-1925 Howe School, Master
1927 University of Chicago, M.S.
1927-1941 Lawrence College, Instructor to Professor, Physics
1936-1941 Dean
1931 University of Chicago, Ph.D.
1941-1949 University of Vermont, President
1949-1967 Western Reserve University, President
1962-1966 American Medical Association, Citizen's Committee
on Graduate Medical Education, Chairman
1967-1969 Case-Western Reserve University, Chancellor
1969- Case-Western Reserve University, Chancellor Emeritus
1969-1975 National Fund for Medical Education, Member;
1971-1975, President; 1975-1978, Chairman
1969-1973 National Advisory Council on Dental Research, Member
1971- National Board of Medical Examiners, Chairman 1975-1983
1970-1972 American Dietetic Association Study Commission on
Dietetics, Chairman
1970-1974 Commission on Foreign Medical Graduates, Member
1972 President's Advisory Panel on Heart Disease, Chairman
1973-1975 American Association of Colleges of Pharmacy
Study Commission, Chairman
1973-1975 American Nurses Foundation, Trustee
1973-1977 Educational Commission for Foreign Medical Graduates, Member
1975- Case-Western Reserve University, Honorary Trustee

MEMBERSHIPS & AFFILIATIONS

Alpha Omega Alpha
American Academy of Family Medicine
American Academy of Orthopedic Surgeons
 Honorary Fellow
American College of Cardiology
 Honorary Fellow
American College of Dentistry
 Honorary Fellow
American Hospital Association
 Honorary Member
Cleveland Academy of Medicine
 Honorary Member
Cleveland Medical Library Association
 Honorary Fellow
Fifty Club, President 1963-1964
Institute of Medicine 1970-
Phi Kappa Sigma
Rotary Club
Science Information Council
 Consultant, 1958-1961
Sigma Xi
Society of Teachers of Family Medicine
 Honorary Member
Union Club

AWARDS and HONORS

University of Alabama, School of Dentistry

Lister Hill Award, 1971

American Medical Association

Distinguished Service Citation, 1970

Association for Hospital Medical Education

John C. Leonard Memorial Award, 1971

Brown University

L.L.D., 1943

Case Institute of Technology

L.L.D., 1964

University of Chicago

Rosenberger Award, 1968

Cleveland Medal for Public Service, 1961

Cleveland State University

L.L.D., 1968

College of Medicine & Dentistry of New Jersey

Sc.D., 1974

Federation of State Medical Boards,

Honorary Associate Member, 1977

University of Illinois

Sc.D., 1966

Kappa Phi Kappa

Frank H. Lahey Award, 1973

Lawrence College

L.L.D., 1954

University of Maine

L.L.D., 1949

Markle Scholars

John M. Russell Award

AWARDS and HONORS (con't)

Medical Mutual of Cleveland

Honorary Award, 1968

Middlebury College

L.L.D., 1942

National Conference of Christians and Jews

National Human Relations Award, 1961

Oberlin College

L.L.D., 1961

Omicron Delta Kappa

Phi Beta Kappa

Philadelphia College of Pharmacy and Science

Sc.D., 1976

Queens University

L.L.D., 1968

University of Toledo

Sc.D., 1955

Union College

Litt.D., 1963

University of Vermont

L.L.D., 1952

Norman Welch Memorial Award, 1972

College of Wooster

L.H.D., 1957

BOOKS

Laboratory Outline of Physics, 1932

A National Public Policy for Medical Education and its Financing, 1971

Pharmacists for the Future: Report of the Study Commission on Pharmacy, 1975

WEEKS:

Dr. Millis, as we said before we turned the recorder on, this is an autobiography, in a sense, of your professional life and your studies of education in the health field and hopefully of the persons you have worked with or been in contact with. I might start this out with an innocent question.

I noticed in the material I found on you that you were born in California and that you decided to attend the University of Chicago. I often wonder why people make choices.

MILLIS:

It's very easy. My father was a professor at Stanford when I was born -- therefore, Palo Alto. And he was a professor at the University of Chicago when I went to college. With faculty rates on tuition, it was obvious that I would go to the University of Chicago. Having finished my undergraduate work

there and decided that my choice for a career was in physics -- that department in Chicago was a very famous one, probably the best in the world. There were three Nobel Prize winners that I studied under as an undergraduate, Michelson and Robert A. Millikan and A. H. Compton.

When I got to the graduate level my thesis supervisor was Robert S. Mulliken who received the Nobel Prize in 1966, I think it was. Long after I was a student. But with a line up such as this as a department, of course, we were visited by people from around the world. I remember Mr. Einstein being there for a period. I took my course in uncertainty under Mr. Heisenberg. Niels Bohr was there for a quarter. So it was a very interesting place.

I look back on it now with shame and some amazement that at the age of the early twenties, I didn't understand what the privileges were that I had. I was probably fifty years old before I began to realize that I had an opportunity that I failed to capitalize on.

WEEKS:

Speaking of Niels Bohr, you may know a former neighbor of ours -- he has now passed away -- I have forgotten the first name but his last name was Dennison. He was at Michigan in physics. His first name was David.

MILLIS:

Yes.

WEEKS:

One of his fondest memories -- I remember talking to him -- was that he spent a year in Denmark with Bohr.

MILLIS:

He went right to the fountainhead then at that time.

WEEKS:

Before you got your doctorate you were at Howe School. Is this Howe Military?

MILLIS:

Yes. It is now called Howe Military -- then it was Howe School. It was the typical Episcopal school on the English pattern with forms rather than grades and so forth. The teachers wore academic gowns in the classroom. And of course there was the daily chapel. But it was a very enjoyable two years for me though I was a very poor football coach, which was one of my primary duties, but a very successful teacher -- I shouldn't say very -- a successful teacher -- of solid geometry, trigonometry and physics which is what my teaching assignment was. It helped in that it decided that I was not cut out to be a football coach. In my undergraduate days, I had been a great admirer of Amos Alonzo Stagg. I was in the Big Ten at the great time with Bob Zupke of Illinois, Fielding Yost at Michigan, Wilce at Ohio State, Spears at Minnesota and Williamson at Wisconsin. It was a great time for football if there ever was one.

Stagg was one of the greatest teachers I ever had. It sounds kind of funny with men such as Michelson and Compton and even Einstein to say that Stagg was one of the great teachers, but he was.

WEEKS:

He was a great personality.

MILLIS:

He was a great personality and a man who had remarkable standards of personal conduct and personal integrity. And he somehow conveyed it to his players in a way that I think very few coaches ever have.

WEEKS:

You were there before Hutchins?

MILLIS:

I was in graduate school at the time that Hutchins was inaugurated. I can recall his formal inauguration in the Rockefeller Chapel because at the time I was the president of the Graduate Student Association. It must have been 1929 or '30. I think probably January 1930. So I attended his inauguration. I knew him fairly well then. He and my father were rather close colleagues. So I saw him every now and then. The last time I saw him was here in Cleveland. He came for the funeral of a very close friend of mine, a trustee of the University, Maynard Murch. And the Robert Maynard Hutchins had the family name and they were cousins of -- or maybe Maynard Murch was his uncle -- I'm not quite sure. But that was the last time I saw Bob Hutchins.

WEEKS:

He died rather young, didn't he?

MILLIS:

Yes. He would be five years older than I -- eighty-five -- if he had survived. I've passed my eightieth. Because I think he was just thirty when he came to the University of Chicago and I probably was twenty-five.

WEEKS:

I remember that he was very young when he became -- what was the title? President or Chancellor?

MILLIS:

He came as president and then shortly after he got there he wanted a different arrangement and so he took the title of Chancellor. There was a president who held a position which is rather similar. It would be like the

provost of many universities -- the chief academic officer under the president.

WEEKS:

It was 1931 when you earned your doctorate then.

MILLIS:

That's right.

WEEKS:

And at Chicago. Here again I am going to ask you how did it happen that you went to Vermont? First you were at Lawrence, weren't you?

MILLIS:

Yes, I was at Lawrence between...well, actually I went there in 1927. I was there for two years and was then given a leave of absence to finish my Ph.D. Then I went back and I became Dean of the college in 1937. That was my first administrative responsibility. It was from that position as Dean of the college that I went to the University of Vermont.

A rather strange story. In 1939, I was given a Carnegie Young Administrators Grant which allowed me to travel around and see various institutions. At the time, of course, I was very interested in liberal education. So I went to St. John's College...remember the Hundred Great Books of that era? And I went to Swarthmore and to Haverford, to Oberlin, to Reed, to Pomona. I went and looked at the house system at Harvard and the college system at Yale which Harkness endowed. They were interesting educational experiments of trying to combine living and academic inspiration -- I guess is the best word.

In that experience I became rather well acquainted with Walter Jessup, the president of the Carnegie Foundation. He liked my report of my observations and so forth. One day in 1941 he called me and said that the trustees of the

University of Vermont were in a rather tight bind because of the sudden death of the former president and in somewhat of a financial mess and he had suggested my name to them and they wished me to meet them.

I said, "Well, I guess I'll come to New York."

I went to New York and walked into his office and there was a subcommittee of the Board of Trustees -- six gentlemen waiting for me. We conferred and that evening I got on the sleeper and went up to Vermont and I met with the whole Board of Trustees. They asked me to become president and I accepted and then called my wife and said, "We are moving to Vermont."

Like that.

WEEKS:

That was very fast, wasn't it?

MILLIS:

It was very, very fast. They needed someone and they needed someone in a great hurry. Henry Wriston, who was my lifetime mentor -- he was the president of Lawrence when I went there and then he moved to Brown -- had been influential in the appointment of quite a few university presidents -- Nate Pussey of Harvard, Doug Knight of Duke. You might have known Tom Hamilton who was at Michigan State for a while as vice-president and then as president of the University of Hawaii. Mr. Wriston was involved in this because he was the person I think got me the travelling fellowship in the first place. He was a trustee of the Carnegie Foundation. I had a rather long connection with the Foundation. I became a member of the Board of Trustees in the 1950s. The Carnegie Foundation for the Advancement of Teaching. I was Chairman of the Board in 1966.

This may be getting way out of the time frame.

WEEKS:

I don't know. It seems to me that all of these things you have done have been in preparation for your educational studies -- unconsciously.

MILLIS:

In a way, yes.

WEEKS:

Even your fellowship where you were able to visit the various excellent schools and observe their methods certainly must have been a great help to you.

MILLIS:

It was. At the time, of course, I was a student of liberal education. My observation was almost exclusively in that field. But it did increase my curiosity about the educational process and how institutions defined their goals and how they implemented programs to achieve these goals which carried over later into asking those same kinds of questions when I was concerned with medical education or nursing education or dental research or pharmacy education or what have you.

They were the same basic questions one asks but in a different context with different goals and different techniques indicated.

WEEKS:

You were there....

MILLIS:

At the University of Vermont, eight years from 1941 and left in 1949.

WEEKS:

You were there before Kerr White, I believe.

MILLIS:

Yes, that's right.

WEEKS:

He was there in the 1950s?

MILLIS:

In 1951 or '52, along in there.

WEEKS

Did you have a medical school then?

MILLIS:

Oh, yes.

WEEKS:

But you didn't have a school of public health.

MILLIS:

No.

WEEKS:

Because I think he went there to be a professor in community medicine.

MILLIS:

That's right. The professional schools in Vermont were, of course, agriculture, which would be mandated in a land grant institution, engineering, medicine. Medicine was the only graduate professional school although, of course, there were masters' degrees offered in engineering and some fields of agriculture such as agricultural economics, agricultural engineering, animal husbandry, agronomy.

WEEKS:

Here again I'll ask the question: How did you happen to move to Western Reserve?

MILLIS:

I was invited. Without appearing immodest, I guess my name was on several

institutional rosters that were looking for presidents. I had some invitations. I had some presidential invitations before I went to Vermont, as a matter of fact -- at liberal arts colleges. But I felt, and Mr. Wriston seconded the opinion, that I wasn't mature enough and ready for university presidency responsibilities.

But I found the invitation from Western Reserve extremely interesting. There were problems, substantial problems, to be addressed. But the thing that really appealed to me was the opportunity that I saw here for combining the resources of a number of institutions. I don't know any other city in the country, perhaps in the world, where you have a university -- in those days there was a university and a technical institute, Case, and rather a remarkable medical center or centers, a world renowned symphony orchestra, a world renowned art museum, a good natural history museum, a good institute of art and institute of music, all of which are located in the same area and which could be brought together with proper planning into a larger whole with so many different parts.

At Lawrence, we had a trustee who was very much interested in art who kindly gave us some money which permitted us to bring some good pictures two or three times a year and let the students see some famous art. We had an artist series and we imported singers and small ensembles and so forth. But here, all the students have to do is walk into Severance Hall and listen to the rehearsal of the Cleveland Symphony, or walk across the street and see one of the world's great art museums. An educational facility relatively few universities have.

It was the opportunity of wanting to see if this could be done. Well, it could be, it has been done and University Circle is a reality both as a

cultural and as an academic combination. It led to the federation of Western Reserve and Case into Case Western Reserve University. So what I saw as opportunity was real. It was possible in the twenty years that I was active to accomplish some if not all of the things that I had hoped to do when I came here.

WEEKS:

What is the ownership of the university?

MILLIS:

We are a private institution. Western Reserve College was founded in Hudson in 1826, a joint effort of the Presbyterian and Congregational Churches.

A rather interesting historical story there. At the time that the Western Reserve was opened up for settlement following the War of 1812, the decision of Connecticut was to open up the land for settlement. There were two mainstreams of migration. There were the Connecticut Nutmegers who were Congregationalists and there were the Scotch Presbyterians from over the hills in Pennsylvania. For a while there was a great enmity and competition between the Presbyterians and the Congregationalists.

Both denominations wanted to start educational institutions but neither one had the means to do it. Finally it was resolved by an agreement at the national level between the Congregational and Presbyterian Churches, that a parish congregation could call either a Presbyterianally ordained minister or a Congregationally ordained minister. When they got those two churches together, they pooled their educational interests and the college was founded in 1826 down in Hudson, Ohio, but then moved up here to Cleveland in 1880.

WEEKS:

What town did you say that was?

MILLIS:

Hudson -- which is a bit of transplanted New England -- a village square, a white spired church and so on.

At the time that Western Reserve College moved here, and became Western Reserve University, they already had founded a medical school in Cleveland. At the same time Case Institute of Technology was founded and so one piece of property was acquired and the two institutions were built on the same property. I guess it was foreordained that they would become one institution although it took a good many years.

WEEKS:

You stayed on as Chancellor....

MILLIS:

For two years. There were a great many legalities to attend to as you can imagine, new bylaws to be adopted by faculty and by trustees and so forth. So I did that kind of work although Bob Morse was the active president running the institution. But I was able to do that in about a year and a half and then I went to half time and took on the presidency of the National Fund for Medical Education. I began that in January or February of 1969.

WEEKS:

I have a note on that. How did this operate? Is this an extension of Flexner in a sense, the AMA citizen's committee?

MILLIS:

Yes and no. It was an extension of the Flexner story in that the AMA, I think just for the second time in its history, went outside of medicine to ask for a study of a medical problem. The Flexner Study, of course, was funded by the Carnegie Foundation for the Advancement of Teaching in response to

Mr. Pritchett's statement of the fundamental purpose of the Foundation. I don't know whether you know anything about Pritchett.

WEEKS:

No, I don't.

MILLIS:

Well, he was the first president of the Carnegie Foundation for the Advancement of Teaching which was Andrew Carnegie's first benefaction. The Foundation was set up for two purposes. One was, of course, faculty retirement pensions. As you know, the old Carnegie plan went broke and we now have TIAA and CREF in its place.

But the second part of that gift was for educational inquiry. Pritchett, who had been the president of MIT, became the first president of the Foundation. He proposed, and the trustees accepted, a principle as to what the Foundation should be doing in the educational inquiry field. His words ran something like this -- I can't quote him exactly and I don't know whether they were published either. I saw them in the old minutes in the archives of the Foundation. He said, "In a free society, those members of the society which in terms of their comparative numbers can have the greatest effect for good or evil on the quality of life of that society, are the learned professionals: the clergymen, the teachers, the physicians, the attorneys, the judges, the diplomats. As a consequence, the quality of the education of the learned professionals is of tremendous public interest and concern. Therefore, the foundation to this end should devote its resources toward the study of and recommendation for improvement of the education of the learned professionals."

The Foundation trustees accepted that as a basic principle and Pritchett

then began to look around and see where he wanted to start. He wanted to start first on the education of clergymen. He had a very soft answer to the effect that religion in this country was so divided along sectarian lines there was no way that you could really take a look at the education of clergymen.

He then went to the American Bar Association Committee on Legal Education and Admission to the Bar and proposed that he study legal education. He received a very curt turndown. Then somehow, and I have never been able to establish how this occurred, he became acquainted with two people: Nathan Caldwell who was the secretary of the Council on Medical Education of the AMA, and Dr. Welch who was the president-elect of the AMA in 1909, I think it was. Apparently they understood what Pritchett was talking about. So they agreed that they wanted a study of medical education to be financed by the Carnegie Foundation and done by persons selected by Pritchett and by AMA. They chose Flexner.

Flexner was a rather close friend of Pritchett, I would say, judging by the letters in the archives of the Foundation.

WEEKS:

He'd been quite innovative in his work hadn't he?

MILLIS:

Yes. He had. So, in a way, there is connection between what happened in 1910, '11 and '12 with the Flexner study and what happened in the 1960s with the Citizen's Commission on Graduate Medical Education in that the AMA had the courage to go outside its own ranks for a definitive study and do that "pro publico" with the report to go to society and not go only to the profession or to the leaders of the profession.

There are differences of course. The Flexner study was done by one man almost single handedly. The work of the Citizen's Commission was a collective effort of twelve men of some wisdom, and a strong devotion.

There is another thing I ought to say about that. The form the Commission took and its relationship to the AMA and to society was suggested to me by some observations I had made during a visit in England. I had been impressed a few years before in a trip to England about the success of the Royal Commissions as contrasted to our congressional, presidential, gubernatorial commissions in this country whose reports almost inevitably seem to gather dust. I was fortunate enough to make the acquaintance of Lord and Lady Simon in Manchester.

Lord Simon had chaired the Royal Commission on University Education after World War II. Lady Simon had chaired the Royal Commission on the Common School. They were two magnificent people well into their seventies. But I was so impressed with the fact that here was the means where you could marshal the good brains of the country to attack a particular problem, a problem of public interest and concern, nonpolitically, because a Royal Commission reported to the almost fiction called Crown, that's to society in general, but never to a political entity such as the Prime Minister or the Cabinet or Parliament. Therefore the findings are not subject to review and to editing before they are released to the public. This was the concept of the Citizen's Commission. We don't have "crown." Rather it was a citizen's commission with the provision that its report went to society in general. So that it was somewhat different in that the mechanism was different but the conditions as far as the AMA was concerned were the same. There was a genuine desire to get an impartial outside look at a particular problem -- it was

undergraduate medical education in the Flexner instance. It was graduate medical education in the instance of the Citizens' Commission.

WEEKS:

How were the commission members chosen?

MILLIS:

Well, there were suggestions from the officers and the Board of Trustees of the AMA. I had some suggestions and we mulled it over and I went to Walter Wiggins who was the Director of the Council on Medical Education of the AMA to call on candidates. It was a very easy and happy task. There were no refusals on that.

WEEKS:

I believe you have the reputation for being a good picker of commission members -- in the sense that the commission really does the work and comes up with some good recommendations, I mean positive recommendations.

MILLIS:

One must really work very hard on this. But you know, there is no preparation as good as that of being university president. Because your fundamental task, your most important task is to select your colleagues. If there is one thing that you should learn it's to be able to judge people and to estimate their capacity for working in tandem with others and so on.

WEEKS:

What did the commission look at? What were the mechanics of your study?

MILLIS:

We asked for the testimony of a wide variety of people. People who were considered leaders in internship and residency education, leaders of undergraduate medical education. We talked to a number of interns and

residents, as a matter of fact. We talked to people from the specialty boards and societies who had ideas about adequacy of graduate medical education in their particular specialties. We talked to a number of laymen principally men who were in very key positions as presidents of large and important hospitals, and so on.

This was largely facilitated by Mr. George Young who was a member of the commission and at the time was the president of St. Lukes-Presbyterian Hospital. We also had a number of people from medical sociology and medical economics who had ideas and were well informed about medicine as a social institution and its relationship to society. It was really a wide circle of people. All testimony was taken down by a court stenographer. I then read the transcript and wrote a precis'. Then at the next meeting of the commission, these were hashed over and we tried to get the gold out of this sort of thing and then built up the various sections of what eventually became a report.

Then on the other hand, I think one must say that perhaps the most important thing was the intellectual friction -- I don't mean that word in an ambiguous way at all -- perhaps the word should be stimulation, which came from the very open discussion in the commission itself.

Over the two or three years we were together, the Commission became a rather remarkable kind of thinking unit where we were so accustomed to each other that we were able to forget any kind of differences in background and to think together. It was group thought at its very best.

WEEKS:

In your investigative work, if I can use that term, there were two or three of you who were doing this and then would report to the commission?

MILLIS:

We had a small staff. We had access, of course, to the staff of the AMA and the Division of Medical Education. And on the staff of AMA, those dealing with the accreditation of residencies and internships. They dug up a lot of material for us. Then I had a colleague here, Dr. Pete Bauerfeind of the medical faculty, who gave about half time to working for the commission as my aide, so to speak. Thus, I had somebody here on the grounds as well as others working in Chicago.

WEEKS:

In your report, did you make recommendations for changes?

MILLIS:

Yes, I would say we certainly did. One, of course, was to make graduate medical education whole by abolishing the free-standing internship. That was the rule. No institution could be accredited for an internship alone. It had to have a full program of internship and residency. That is, you couldn't get by with just the freshman year alone. That certainly has had an effect. It has greatly enhanced the quality of graduate education, in my observation.

Certainly, the delineation of the concept of the primary physician, one could say, had a rather major effect upon medical education in terms of practice. In the appearance of the family physician and its acceptance by a rather substantial number of medical graduates and I believe it's probably an effective service to society. It certainly had an effect upon graduate education in internal medicine and pediatrics, probably in gynecology too. And it reversed somewhat the pell-mell rush to what I call superspecialization, or subspecialization.

Now, I think I'm right in saying that of the residents in internal

medicine a good half, if not more, are in general internal medicine without a subspecialty. I think it had a very good effect upon the quality, the availability and the satisfaction of medical care in this country.

WEEKS:

Could we say that Flexner was more concerned with curriculum and general course work or clinical work where you were concerned more with -- I can't use graduate here because all of this work is graduate work but you were more concerned with the internships and the residencies and the course of education after the M.D. degree.

MILLIS:

We were confined to that. It was our mission and our charge. I think I would sum it up this way. Flexner's purpose was to see or hope that the M.D. graduate at the point of graduation was an educated person and a professionally competent person. This is emphasis upon the basic sciences as evidence of what he was striving for -- the scientifically educated person as well as the medically, technically competent person. That's the concept as I understand it. I never talked to Flexner to find out, but this is my instinct.

I think our task conceptually was to see that graduate medical education was an educational experience and not a mere institutional apprenticeship. The mechanism for this was to make graduate medical education whole. To place the responsibility upon the institution in giving it rather than the department or the individual. And leave the mechanism and the nuts and bolts to those who were more competent than we were -- those people on the firing line of these groups -- directors of the residencies and internships of this country.

So we didn't spell out the curriculum the way Flexner did by any means.

He took it -- a concept he already had -- the mechanism, the four year medical school. He didn't have to bother with that, but the process, which was the combining of the basic science with the clinical science to make a whole person who has both educated, and technically competent, was his task. Our task, I think, was somewhat different. It was conceptual and dealt with process because we were concerned, as most medical professionals are, that the internship and residency smack too much of the old apprenticeship and did not continue the intellectual stimulation of the four years of undergraduate medicine.

WEEKS:

You published you reported to the "crown." How was this accepted.

MILLIS:

Well, much better than I would have expected. Certainly the Board of Trustees of the AMA was very well pleased with it. I think most people in undergraduate medical education were pleased with it. I think there might have been some of the professional boards or societies who were not terribly impressed with it. Then it wasn't really directed to them.

There were some hospital administrators who were somewhat unhappy because of the effect that it would have on the source of slave labor of the internship in some second or third rate institutions. I shouldn't say it was acclaimed universally.

On the other hand, I think that in the key areas to which it was directed, namely AMA itself and the AAMC, medical education as a total, received it on the whole very well.

WEEKS:

The AMA historically, I think, has always been in favor of raising standards and against health insurance.

So you did part of that work while you were still Chancellor here.

MILLIS:

That's right. President at Western Reserve. This was in 1964, '65 and '66.

WEEKS:

Yes. Then came the merger and then during....

MILLIS:

Please don't use the word merger -- federation. Corporations merge, universities federate.

WEEKS:

I'll remember that.

MILLIS:

Well, I mean to say that fundamentally a university is a federation, a federation of faculty, scholars and students. It's not a merger.

WEEKS:

I have another note here on the National Fund for Medical Education with which you were associated for about six years or so.

MILLIS:

More than that. I went to work there, as I say, in January or February of 1969 and I served first as vice-president for a short while and president and then chairman. I left the chairmanship in 1979. So I was there 10 years as an active officer and am still an honorary director and an active member of the education advisory committee in choosing applications for grants.

WEEKS:

What are the objectives of this organization?

MILLIS:

I think I would express it best by saying that its main objective is to attempt to bring medical education into closer harmony with societal expectations of medical service. There is a time lag after all. California now requires that physicians licensed in that state take supplementary examinations, supplementary to either the national boards of FLEX, in teenage pregnancy, human sexuality, child abuse, elder abuse, drug abuse, alcoholism. This is an expression of society's expectation of what medicine ought to be able to do even though it doesn't have sufficient knowledge yet to do it.

You look at the curriculum, there is no medical school in the country which was educating physicians in child abuse in 1980 or in 1975. There is a constant divergence between society's structured desire to medicalize all life and medical education's response to that. Sometimes it has appeared in separate generations. As in the case of the primary physician. Society was asking for the good old family practitioner in the 1960's, long before organized medicine realized that it was necessary to reverse, or at least to stem the tide, of super-specialization. That was perhaps why I believe that the strongest, greatest contribution of the Citizen's Commission was the concept of the primary physician.

That's beside the point. We were talking about the National Fund. The National Fund, therefore, uses its money as a carrot to get faculty members and departments to look at the real world of the practice and ask the question: How can we bring our educational efforts more in line with what is needed now? Therefore, we supported various ventures in trying to make

medical education more representative of our total society. This means bringing in women, minorities, American Indians, Spanish speaking, and so forth and so on. To give you one example, now that ethical questions have been raised in medicine, abortion is one -- the hotline -- intensive care, pediatrics and neonatalology is another, and so forth, we have spent the money in support of experimentation in how you bring in ethics and moral thinking and so on in the medical education.

With the change in our demography, with the appearance of the new discipline called geriatrics -- whatever that may be -- we have spent some funds in the effort to raise the question should geriatrics be a division of every medical school. Another thing we have spent some money on was the adaptation of computer-assisted learning and computer-assisted examinations as the computer became available. These are the things we have done. To give people a little money to think about something which is important in medical education and has great impacts on the profession and its status in society and its service to society.

WEEKS:

But you didn't support students, per se?

MILLIS:

We do have a fellowship program. We support about four fellows a year to a modest extent who are young physicians, usually just finishing their residency and who opt for an educational career and who need and want and wish a year, sometimes two years additional study and experience in education and education measurement, educational philosophy and so forth.

WEEKS:

Do you choose the subject of their study?

MILLIS:

No. We pick the individual. Sometimes the ideas are a bit crazy but we always pick people who seem to have creativity, drive and a good mind.

Then there is a second individual fellowship program for undergraduate medical students who wish to take a semester off or sometimes just a summer off and do something of interest in widening and deepening their own experience.

Then, lastly, there is a program -- the money for which was furnished by the Johnson Foundation but is administered by the National Fund -- which is directed toward the preparation of minority students for the study of medicine. There are some seven or eight programs around the country. Some of them are starting just the summer before medical school, some are starting down in the junior year of college, some go all the way back to high school. There is the question of how do you motivate kids of that age to aspire to the long grind of four years of college, four years of medical school and four years of residency.

These are the things that we've used our rather limited funds for, to try to get people to think and to act and do something. Most recently we have put more money, I think, into cost saving, cost containment. How do you modify the education of these undergraduate students with an eye to conservation of money particularly? Many times it comes up, you know, how do you keep people from ordering more tests than are actually needed, how do you control length of stay in the hospital, what is the appropriate frequency of doctors visits and so forth. There have been a number of those things we have spent money on.

That is what it is, an organization whose mission has changed. It was organized just at the end of World War II by a coalition of university

presidents, Conant of Harvard, Chase of New York University, the president of Hopkins, and some public figures -- Eisenhower was one, he was the president of Columbia at the time -- Herbert Hoover and some leaders of business and finance -- Sloan Colt, the president of U.S. Steel at the time. The purpose of that time was to get money for the medical schools which were having one hell of a time because they had lost their faculties during the war. They had financial problems bringing in the young people and so forth. So it was simply a program of raising money nationally from corporations and foundations. The money was divided evenly among the independent institutions, private medical schools, in the country on a per capita basis.

Then the public schools objected. They were interested in it.

There was a new vision that had to be found and it was about this point that I entered the picture. The total program of the fund on educational grants.

WEEKS:

This fund still continues today?

MILLIS:

Yes.

WEEKS:

And still tries to relate the profession to the world.

MILLIS:

...The professional education to the profession's supposed role, let's put it that way.

WEEKS:

I note here that you are on the National Advisory Council on Dental Research, too.

MILLIS:

I was for quite a period. I have forgotten how many terms I served. The Institute of Dental Research has a national advisory council. Then I served for several years as special consultant to the director of the institute on contract grants and so forth.

WEEKS:

Was this research basically in treatment?

MILLIS:

Dental research is performed at the National Institutes of Health. Next to the Cancer Institute, it is the youngest one of the set. I remember its twenty-fifth anniversary not so long ago. But it is concerned with a rather wide variety of questions. Some of them are really very basic, that is, getting back to the reality of the oral cavity is particularly interesting -- numerous questions -- why should some bacteria be destructive and some should be benign in terms of their function and so forth. Surgically concerned with malformations such as cleft palate, harelip and so on. A search for better ways for orthodontics -- straightening of children's teeth, periodontics and so forth. Basic studies in growth. Dental materials research -- looking for better and better materials for replacement of teeth and for filling of cavities. Field work on transplants -- why is it that you can transplant a heart, but you can't transplant a tooth? That's a very interesting question.

It was a very interesting experience because at the time dental education was undergoing a substantial change. Certainly dentistry raised its aspirations and its standards and attracted some really very well trained and educated basic scientists into faculties. Admission standards rose and I think the dental profession profited by it. Certainly the Institute of Dental

Research is a very powerful factor in keeping dentistry a true profession.

WEEKS:

Did I understand you to say this is a part of the National Institutes of Health?

MILLIS:

Yes. It is one of the National Institutes of Health. The National Advisory Council was made up of some dental educators and some dental investigators and some basic scientists -- quite a few basic scientists as a matter of fact. I remember the professor of physiology from Michigan and a professor of biochemistry from Penn, a professor of bacteriology from Harvard. That's a good group.

WEEKS:

Yes. Top grade people.

The next note I have is your serving on the National Board of Medical Examiners. Was this board formed to exchange ideas of medical examinations for licensure?

MILLIS:

Well, it goes back to the turn of the century. If you look at the history of medical licensure in this country in the first two centuries of our history, the eighteenth and nineteenth, there was a tremendous amount of experimentation. Some of the colonies and later states had no licensure requirements whatsoever. Anybody who wanted to hang out a shingle and say "I'm a doctor," could do so. Some placed the responsibility in the Supreme Court -- very interesting -- as an agency of the state. Others would depend upon the education -- anybody who had an M.D. diploma from a school that wasn't too bad was licensed to practice. Other states and colonies decided to let membership

in professional societies be the equivalent of licensure. If you meet the standards of your peers and get into the club so to speak, you were licensed.

If you look at the eighteenth century and the nineteenth century, society was experimenting with the question of how to ensure the public of the competence of the professional physician. Towards the end of the last century, consensus finally arose that, number one, you had to ensure that the person was educated and therefore you would require an M.D. degree from an accredited medical school; and, number two, that he was competent by passing the licensing examination.

Well, having made the decision, you had to then create or bring together some sort of agency which would represent the public authority, that is the state licensing boards, the educational arms, the medical schools, the government in various forms, and the profession. Therefore, the national board is made up of, for instance, the Surgeon General ex-officio, the chief medical officers of the Army and Navy and then there would be the Air Corps, a number of people elected by the federation of state medical boards. A number of people elected by or appointed by the AMA, American Hospital Association, the Society of Medical Specialties, the AAMC, and then some representatives of the public -- they were called members-at-large. I prefer to call them public members.

This strange multiheaded organization has had a rather remarkable career. It is a place, where, in other words, medical education must be made congruent to licensure. You couldn't, for instance, have a different definition of physician competence from the legal side that differed from the educational side. That is where the battle is fought and has been for more than sixty-odd years. It is a remarkable organization. It is the only one I know with both

public and private representation. It has got federal officers, it's got state officers, it's got voluntary people, it's got physicians, it's got people like myself -- public members. The organization then began to create all the examinations, the three examinations of the parts one and two and three of the so called national boards on the successful passage of which the board issues a certificate which is the basis for licensure in fifty-one of the fifty-four jurisdictions, I think, with the exception of Texas and California. And for the Federation of State Medical Boards it produces what is called FLEX -- the federal examination -- which is used by foreign medical graduates and people who do not want to or cannot pass the national board examination. It is a very remarkable organization.

I went on, I suppose, largely because I had been a very active member of the Commission on Foreign Medical Graduates and that was a very important problem and the national board made the examination which we call the ECFMG, an examination all foreign medical graduates have to pass before they can enter hospital training here. I was asked to become a member at large, a voting member of the national board. About two or three years later they asked me to be chairman. I said yes. That's the history of my association there.

A very important experience to me. I learned a great deal.

WEEKS:

Do they have ongoing functions?

MILLIS:

Yes.

WEEKS:

Do they work by committee structure?

MILLIS:

Well, they work by committee structure in a way. That is, the questions or the examinations are all put together by so-called test committees. Those are the most competent, I suppose, teachers in the country. But there is a large work in psychometrics. We have a very substantial psychometric division which is always seeking better ways to measure the various qualities which you need to measure. And better ways of scoring, things of that sort.

The board spends probably a million or a million and a half dollars a year in research, in testing, in psychometrics, in think sessions on the whole question of measurement of professional competence.

One place we've been doing research is trying to figure out how to use the computer as an examining device. That is, so many of the specialty organizations now require recertification, reexamination for continuing certification. As a matter of fact, the Academy of Family Physicians, Internal Medicine and Pediatrics requires a three year repeat. Because you can't bring a practicing physician to a central place to take an examination, you have to examine him where he practices, and this suggests using the computer. And we have something, I shouldn't say "we" since I'm no longer a member -- I'm an honorary member not an officer -- but the board is about ready to do some demonstration, clinical trials, I'll call it, on the use of the computer for the examining process.

WEEKS:

This is a problem it seems to me in continuing education for any of the professions -- how to do it, and how to be fair, and to take into consideration the various dates of education. A man who graduated twenty years ago is probably quite different from the man who graduated five years

ago. And yet he may have accumulated experience which is very valuable too, which the younger man doesn't have.

It would seem that you are probably on the right path.

Is there anything more we can say about this subject?

MILLIS:

I don't think so.

WEEKS:

The next notation I have -- I think this came a little before the National Board -- the American Dietetic Association Study Commission.

MILLIS:

Oh, yes. The American Dietetics Association came to me and asked me if I'd form and chair a committee to look at the education of dietitians. This I did without immediate results. It is interesting that -- it must be a good twenty years since that was done -- our recommendations met quite a bit of resistance initially. But the man who was the vice-chairman keeps writing to me and saying that more and more of that matter is appearing in the curriculum of schools, colleges, and the universities in their work in dietetics.

WEEKS:

What sort of recommendations did you make?

MILLIS:

Well, we said that the profession had to make up its mind whether a dietitian was in the business of running a restaurant kitchen or whether they were a health professional. One, they had to, of course, devote a great deal of time to education in management, merchandising, economics and so forth and so on. If their function was that of a health professional, they needed a hell of a lot more basic science and they needed to establish a real

connection with nursing and with medicine. They were very hesitant to choose. They would like to keep both, as a matter of fact.

WEEKS:

Did you recommend anything about whether it should be undergraduate or a master's degree program?

MILLIS:

Well, I think we recommended that in the case of hospital dietetics people should really be nutritionists. It was impossible for this to be done in undergraduate training. You see what was caught up in here was the fact that home economics is much older than dietetics. It was almost mandated by the Morrill Act in the 1860s. So you had confusion between the home economists, the restaurant managers, the medical dietitian and they were all together in this one organization which was the professional organization, like the AMA or the American Dental Association, but also was the accrediting institution and the licensing institution. It accredited educational programs in dietetics and also certified graduates of the institution as professionals. This was our strongest criticism, that in the public interest an organization which was exclusively made up of practitioners was not the appropriate one to exclusively accredit the educational programs and exclusively license graduates. I think this was the reason that our recommendations caused more animosity than acceptance.

WEEKS:

Did they come up with an acceptable plan for accreditation? Still doing their own? When you talked about the Morrill Act, it dawned on me why Michigan State has such a good home economics department.

MILLIS:

They had to justify themselves.

WEEKS:

Yes. Being a land-grant college, they must have started out early.

I've observed some of these graduate programs. Michigan has one.

MILLIS:

There is one here too.

WEEKS:

Where the master's degree candidates go out and serve an internship, may be a week or two here and week or two there, in hospitals. I hadn't thought of that being all grouped together, the various phases of food preparation.

MILLIS:

It would be as though you concentrated in one organization the practicing physician, the physician educator, the chiropractor, the osteopath, the nurse, the physical therapist, hospital directors, the drug salesman. You would have an organization that would have one hell of a time agreeing how they wanted to proceed. That has been the problem with the dietetics association.

WEEKS:

I can see where they are going to have trouble in agreeing here unless they decide to separate.

You mentioned a few minutes ago that you were doing some work on foreign medical graduates.

MILLIS:

Yes. The Educational Commission on Foreign Medical Graduates.

WEEKS:

This has come home. I have thought of it several times in this past week or two since Granada. I was wondering about those foreign medical schools -- if those graduates of those schools will be able to qualify in this country.

MILLIS:

Again, the National Board is mixed up in this because Congress, you know, said that in order to get a visa, medical students had to pass a visa examination and that the National Board of Medical Examiners was to prepare and administer the examination for it. It mandated the authority to a public organization, a voluntary organization, I should say. So the Board administers what is called the medical science test to all foreign medical graduates who want to come here -- and the undergraduates, the foreign medical students who want to come here in order to get their clinical experience. And they are largely all American citizens -- almost exclusively. The rest of them all have an M.D. degree from some foreign organization, institution. But the people we are talking about in Granada, the ones who have not been able to get into a state-side school, so to speak, and go on abroad, whether Guadalajara or Bologna in Italy, and now the offshore schools in the Caribbean. I must say they are having some difficulty with the examination on the first time around, at least. Then they come back for the second or third time. Sometimes they pass.

But the real problem is the lack of the ability to get residency spots. Back in the 1960s, there were about 65,000 slots in graduate medical education at which time we were graduating something around eleven or twelve thousand medical students a year. And they were in graduate medical training somewhere between three and four years. That would give you a total need of perhaps

45,000 maybe 50,000. Thus there were somewhere between fifteen and twenty thousand slots available, unoccupied.

Now you see our situation is we've had to reduce the number of training opportunities, largely because of financial duress -- many hospitals can't afford as many. And we have increased the enrollment of the medical school to the point where we are now graduating twice as many physicians, probably twenty-five thousand and graduate medical education exceeds four years on the average, 4.3 or something of that sort or 4.8. But the result is that right now in the last year there are just about enough graduate medical education slots to accommodate the graduates of the medical schools of the country -- not including those offshore ones, to say nothing of Guadalajara and Bologna and so forth. So that the real bottleneck is not going to be whether the students can pass that examination, although they will have to pass it in order to be eligible for the visa residency program, because there won't be any place to apply for.

WEEKS:

And the hospitals are likely to chose those with the American training.

MILLIS:

Of course they are. But what is ahead of us is going to be a very difficult problem because with the current drive focusing on the hospital for cost containment, one thing to save money on is graduate medical education. The process was started about four or five years ago to decrease the number of residency spots when what you want to do is accelerate but the hospital just can't finance it.

I was talking to Leighton Cluff -- do you know him, the Vice-President of the Johnson Foundation? I got to know him well. He was on the Study

Commission on Pharmacy. He was a professor of medicine at Hopkins, at Florida, then went to the Johnson Foundation. But he was asking me if I had any ideas about what was going to happen to the number of residencies as the financial stringency becomes greater and greater on the hospitals. I've got a date with him when I go to Princeton in a couple of weeks for a visit with my family there to sit down with him and talk a little bit about this problem. Because it very soon may come to the point where there are fewer residency spots than there are American graduates -- United States graduates from our schools. I mean what happens -- a boy gets an M.D. degree but he can't get his graduate training -- how is he going to get to practice? He must go abroad, I guess.

WEEKS:

Is it likely that the number of graduates will decline?

MILLIS:

I certainly hope so.

WEEKS:

At Michigan they have been talking about cutting class size.

MILLIS:

Certainly the schools just expanded too much. There are a lot more medical schools in this country than the needs require. There is going to be a surplus of physicians. There is already some evidence of that. I think soon American suburbs will be wall to wall with specialists. The competition will be pretty extreme. And part, of course, of the financial problem is, I think, too many doctors.

WEEKS:

This is something I would like to ask you about a little later when we get along a little farther.

I might tell you a little story. About four or five years ago the Kellogg Foundation had a meeting of the deans of the medical schools that were founded after 1960 and I was asked to sit in and help to prepare a report later. We had formal papers delivered for three days and then after each formal paper we would gather in small groups and discuss the subject or any subject that might come up -- usually it wandered into other things.

One of the facts that came out of it was the openly expressed question of what are we going to do when the ratio of physicians to population increases to the point where we have too many doctors. Are we going to have to live on less than a six digit income? Are we going to have to get another job to supplement our work? The financial side of this seemed to be a big worry rather than discuss the alternatives to a solo practice or so on. I think there has been a lot of concern about this increasing ratio.

MILLIS:

And that concern will grow by leaps and bounds as a matter of fact.

WEEKS:

There are a lot of things that maybe we can get into.

I do have an item down here on which you may want to comment just briefly or as long as you want to -- the President's Advisory Panel on Heart Disease. You served on that in 1972, I believe, as chairman.

MILLIS:

Yes. That was an interesting experience, an educational experience I'll call it. Because that was a commission just the opposite of the Citizens

Commission on Graduate Medical Education because it was not picked in the public interest -- not picked in terms of competence and open-mindedness but it was picked on a strictly interest representational basis which is the failure of any governmental commission. I mean there are an equal number of Democrats and Republicans and there are the proper number of women, Black and those of Spanish heritage or an equal number of internists and cardiologists and cardiac surgeons. You had some people who were interested in how best society could be served and you had a group who represented a particular turf and who defended that turf vigorously. It was a very interesting experience and contrast to the other commission which I chaired where I had a hand in picking people and where they were picked to address a particular problem and not represent anybody's vested interest.

But it was very interesting that in the process the group did come together and did quite well. I thought our report was really worth something but it really never came to the public attention because at the time we completed our work, the Assistant Secretary of HEW for health had left and gone back to New Mexico and the Secretary of HEW, who was Elliott Richardson, had suddenly been switched over to be Attorney General and there was nobody to hand the report to except Dr. Cooper who was the head of the National Heart Institute. There was really nobody to deliver the report to who could publicize it.

The net result was that Congress' action in modifying the Heart Institute and making it the Institute of Heart, Lung and Blood Disease has changed the category so it is more like the Cancer Institute which is exactly what the group recommended. But it was an interesting experience because of the fact that it was so different from my experience with the other commissions of

inquiry, so-to-speak, which were picked on a totally different basis.

WEEKS:

Was the purpose of the panel to recommend what the government's involvement should be?

MILLIS:

Yes. To try to pinpoint the areas in which we needed the most research -- clinical areas -- in which there should be national policy and so forth.

WEEKS:

You must have reported just before the big explosion, Watergate.

MILLIS:

Precisely. Which was an unfortunate time to be trying to make a point.

WEEKS:

The subject under which I first met you was when you were doing the American Association of Colleges of Pharmacy study. As we remarked just a little, I mentioned the fact that you had a reputation for picking commissioners on a commission and looking over the publication of your book and in looking over the list of commissioners it seemed to me that you picked all persons who were very knowledgable in the field. A moment ago we said something about picking a cross section of men and women, Blacks and Hispanics and so on, labor and so on -- sometimes it is impossible to find someone who is knowledgable in the field or even familiar with the field and so their service, it would seem to me, would be of limited value other than representative.

You chose your own commission on this pharmacy education study, didn't you?

MILLIS:

With suggestions from a great many sources -- the association and from

some other places. I wanted a physician, two physicians. One, of course, was well defined and that would be a clinical pharmacologist. But I wanted a person who was broadly recognized as a leader in medical education but at the same time had special interest and competence in drugs. That was Leighton Cluff who had been the chairman of the AMA Council on Drugs so he was particularly well-informed upon the problems of medication. So we had a couple of physicians. I got a couple of scientists, from the research and development field and in the commercial field -- drug manufacturing. Our nurse was Rozella Schlotfeldt and a social scientist, Bob Strauss, from Kentucky and another public member and vice chairman who was the president of the University of Washington, Charlie Odegaard, who was also the vice-chairman of the Citizens' Committee on Graduate Education.

He, interestingly enough, is a medieval historian. An unusual person to have on a medical commission or drugs committee but he was extremely, extremely valuable.

WEEKS:

Usually a man with a good mind has more than one interest anyway.

MILLIS:

Both medicine and pharmacy are very old professions and he knew more than anyone else in the roots of the professions. The factors that had influenced their development, education and training and so forth. Besides that, he was remarkably intelligent.

WEEKS:

You also used a lot of consultants, didn't you?

MILLIS:

Yes. We took a broad sample, so to speak. A large number of people --

people in the educational field, people in the practice field, people representing retail pharmacies as well as hospital pharmacies, and the people from the manufacturers, particularly people from the research component of the drug industry. We heard from a large number of physicians of various kinds, internists, pediatricians, surgeons, psychiatrists...you name it. We had them there.

The only field we really didn't cover was the chain drug store. We had great trouble getting anybody. We finally got a man from Walgreen's, the president of Walgreen's, and then he failed to show up. Had another engagement of some sort. But we heard about all of the different views of pharmacy as seen from different interests.

WEEKS:

The profession has changed a great deal in the past fifty years, which I am sure you discovered in your studies of it. I was thinking, my father was a pharmacist, it was compounding skill in those days. How to mix medicines and do things -- of course, there weren't nearly as many prescriptions per capita as there are now -- and there was a great mystery surrounding it. I can remember asking him one time why the prescription department was in the back of the store behind a fixture so that no one could see it.

He said, "This is part of the mystery of it."

MILLIS:

You know, when you stop to reflect on it, I'd say pharmacy has changed a hell of a lot but so has medicine. And in many ways in a very similar way. That is, in my youth, physicians made their own pills as a matter of fact and did their own bandages. They did a lot of things which now they depend upon external suppliers.

WEEKS:

Yes. Things have changed a great deal. Practice has changed in itself. The fact that we now go to a medical center or go to a professional office building, where in the old days the doctor had his little office somewhere....

MILLIS:

....frequently in his home.

WEEKS:

Yes. I can remember a friend of mine just a few years ago who came to a small town I lived in and he opened his office in an old home that he bought. Later he moved down to a commercial building but in the beginning when he needed some income and less expenses....

MILLIS:

My father-in-law was a physician in Baltimore for many years -- I suppose from 1890 to 1950 almost -- and he began by buying a house and the practice from the widow of a deceased physician. You bought the real estate and it was your office -- what instruments there were, what library there was and what stock of medicines and the patients, so to speak. It was quite a different thing then.

WEEKS:

I was interested in the recommendation you made on the observation you made about what pharmacy was or what pharmacy is. What word did you use along with information?

MILLIS:

Knowledge, I guess, is the key word we kept talking and writing about. When you conceive pharmacy much more as a knowledge system than a material system, recognizing that only a relatively small fraction of what we know gets

turned into a drug as a specific entity, physical entity, I should say. The full knowledge of pharmacy that cannot be incorporated into a product. As, for instance, in the communication field, practically all of our knowledge is in that telephone. And all I have to do is pick up the thing and dial. Now you don't even have to dial, you push a button. That phone recalls the number you want.

But pharmaceuticals are totally different. Perhaps 2% or 3% of the knowledge which we have here is incorporated in the thing we call a drug. But the important thing is information upon solubility, metabolism, pharmacokinetics, receptors, etc., etc., etc. This is the part that we found was most important. We have come to a point that though there are more drugs than there used to be, maybe three times, maybe even ten times, but the amount of knowledge which you find is increased by not ten times but perhaps 10,000 maybe to 100,000, maybe a million.

Maybe in the day when we were using herbs and natural products exclusively, then all of the knowledge about drugs was in the physical entity and now it isn't.

WEEKS:

I think another point too is that drugs today are much more likely to cause reactions. They are highly synthesized today.

MILLIS:

That's right. They have become more and more powerful. Then the chances of interaction is tremendous. And in a society which is accustomed to thinking in terms of multi-drugs -- the thing that always raises my hair -- comes out in the nursing homes. The average number of drugs being taken by the patients is nine or ten or eleven -- the sleeping pill and the

laxative and the digestive pill and the heart pill and the asthma pill and the diabetic, etc. The multi-pharmacy is just incredible.

When we happen to see that, as on TV program on public television, on the chemical people. It was expressing really the drug problem of the young but it started out by calling our attention to the fact that we are a chemically dependent society. They ran through all kinds of drug ads -- headache this headache that -- and cold this and cold that, insomnia and laxatives and suppositories and so on. And we are the most drug conscious people in the world. We amaze our friends, my wife and I, when neither one of us are pill takers. I say I haven't had anything in 19 years since I had an aspirin tablet when I had the flu and my wife says, "Well, I haven't had any pills since I had my third child -- that was 46 years ago."

WEEKS:

My wife and I eat out quite regularly -- we are alone now. We eat an early dinner and we find this is the senior citizens' hour. We sit in restaurants -- we have one favorite restaurant we go to very often -- we sit there and we can hear conversations. I am an inveterate eavesdropper. Amazingly, it seems that the topic is usually health -- how many pills we have taken or what the doctor said, or how many more tests we've got to take. I look at them -- most of them are overeating, overweight....

MILLIS:

Probably over-drinking too.

WEEKS:

I think, my goodness, what's it all coming to?

MILLIS:

Part of the thing that I think of a great deal and which I speak about is

medicalization of society and medicalization of life. It has become a tremendous public and personal interest. It's difficult to understand it.

Look at the statistics -- this is documented -- you'd be amazed at the number of prescriptions, the number of drugs and over-the-counter drugs and so forth. But somehow, you see, every time we fail to handle a problem like alcoholism, for instance, we try to handle it legally -- but now it's a medical problem. Every hospital has an alcoholism ward. But it's been with us I don't know how long. One of my earliest memories is riding a stage across San Francisco from the Southern Pacific station to the ferry in order to go to Oakland to catch a train to the east -- and my father pointing out to me a couple of Chinese sitting on a sidewalk there and telling me they were opium fiends. So it has been with us for a hell of a long time.

We used to try to handle it, of course, by strictly legal means -- what you might call ostracism, so to speak, of the drug fiend. Now it has become a medical problem. And the doctors are supposed to solve it but God knows how.

WEEKS:

In any of your commissions have you had a discussion or investigation of so-called health education plans?

MILLIS:

We talked about it a good deal in both the dietetics and the pharmacy studies. Strictly on the basis that so little of what is known about diet and health and well-being gets accurately to the eventual recipient, that is. It is quite clear that some kind of better communication, education, is necessary. We spent some time thinking about the school dietitian and his or her opportunity to do more than just give a good diet in the school lunch and so forth. But made no recommendation, it seems to me.

In pharmacy, our communication is bad enough between basic scientific pharmacologists and the practicing physician or the practicing pharmacist. But is absolutely, completely lacking in terms of general communication to the body politic. But efforts so far have been with package insert and things of this sort that may be the best way but people don't necessarily read package inserts. I don't myself all of the time.

WEEKS:

Smoking is one thing that we have that terrible warning on every package of cigarettes and people who smoke must see it every time that they have a package in their hand and yet it doesn't seem to make any difference. Maybe it is that whole feeling that "it can't happen to me" theory.

MILLIS:

That and also excessive expectations of the power of medicine to save them in the last gasp. I think that probably must be in the mind of the alcoholic. "I've got a problem affecting my health, I don't sleep well, I'm working poorly, I don't feel well and so on, but there is a thing called a doctor and a hospital and when I really get pretty bad -- they'll take care of me and do something about it." And this is also the attitude of most overweight people. You sit and talk with a person who is very obese and say you are injuring your health and you are more susceptible to strokes, to cancer, to heart attacks, to diabetes, etc., and the response is, "When I am really sick, I've got an awfully good doctor that I love dearly, and he'll solve my problems."

The average person puts more faith in the power of medicine than I can understand. As much as I admire and as highly as I estimate the power of medicine, it's not infinitely powerful, it is not all-powerful. It can do no

more than knowledge permits it to do. And Lord knows, we know only a small fraction of what life is, what the body is, what the biological process is. I only wish I could live long enough to see the full fruit of the molecular biology revolution.

One of the fascinating things that I keep thinking about now is that when I was a graduate student in physics in the late 1920s, that field was just as yeasty as could be, I mean, there was excitement, there was a feeling that something big was right ahead and so forth, that we would make a great leap forward as we did in the discoveries in quantum mechanics and so forth, splitting of the atoms. And the same kind of excitement exists in molecular biology today. This anticipation of the great advance and the development of a universal theory, grand theory and concept. That is the reason I spend a great deal of time reading molecular biology and learning something about it.

If I can establish my facts well enough, this might make a very interesting essay -- fifty years apart, a good fifty years -- the similarity between what happened in nuclear physics and what's happening in molecular biology. How parallel they are and how different they are. From the human point of view, the excitement of those who are in the field.

WEEKS:

One question I forgot to ask you when we were talking about your pharmacy study. As I remember it, you saw the pharmacists as a source of information for the physician, for the patient. Was there any reaction from the AMA as to the pharmacist's role in educating or informing the patient?

MILLIS:

There wasn't an opinion of any organized medical body, the AMA or the internists or anything of that sort. However, in taking the individual

testimony, we found a very wide spectrum of physician's opinions on this. One man who said, "The last thing I need is some pharmacist telling me what drugs to prescribe" and so forth and at the other end, a physician who said, "I could never practice without a pharmacist looking over my shoulder at each and every one of my prescriptions."

So there was no commonality of opinion that I could find at all among physicians as to the value and importance of the pharmacist in terms of drug information.

WEEKS:

I have looked at some of the continuing education literature that has been published by Burroughs, Wellcome and Eli Lilly and so forth, and in some of them I find -- these are usually written by a professor of pharmacy somewhere in one of our American universities -- that some of them are suggesting that the pharmacist's role is to keep a record of all of the prescriptions, to keep a sort of prescription history, a profile, of these prescriptions that are brought in and then it is his duty to keep this profile in mind when a patient brings in a new prescription. He can then look back and say, "This is counter to what you have been taking, or you are also taking this first prescription and it might not be wise -- maybe I had better call your physician." Well, he could call the physician without telling the patient, of course.

It seems they are saying that the role of the pharmacist is to instruct the patient. It seems to me that some physicians might resent it.

MILLIS:

I'm sure of that. As the physician resents the argument from a patient. "I don't want to take this particular drug, wouldn't something else be just as good?"

I'm sure there is no unanimity from the medical profession on the role of the pharmacist. But some, I think, depend a great deal on the assistance of the pharmacist and some don't.

WEEKS:

I suppose a whole lot would depend on how well acquainted they were with each other.

MILLIS:

I notice over here in the university hospital that the relationship between the pharmacy staff of the hospital and the medical staff of the hospital is really good. The pharmacist sees a blood-level reading and so forth out of the laboratory and comes back and says, "Look, this drug is not as strong as you want it to be at this particular time or it is too strong and let's look at the dosage." And their studies of pharmacokinetics are beyond the competence of most any physician outside of the clinical pharmacologist. Most physicians I know are really quite thankful to have this kind of help, just as thankful as they are to have the help of a pathologist in determining the nature of a tumor or something else, or a blood test particular count or phosphatase reading or some of the others.

WEEKS:

This is going to be an interesting development as to what the role of the pharmacist really is to become because it really is quite different from what it was a few years ago.

I have another note on...were there two commissions on foreign medical graduates? Was there one called the Foreign Medical Graduate Educational Commission?

MILLIS:

Yes. There was the CFMG which was responsible for devising and administering that test applied to all foreign medical graduates. Then the second commission appointed by the interested parties, the AMA, etc., called the Educational Commission on Foreign Medical Graduates which was to concern itself with the real education of these foreign medical graduates once they got admitted to the country and then got into a hospital.

One was the screen looking at the foreign medical schools and then examining these people and considering how in the world do you overcome their lack of English. What do you do about the adaptations into the hospital which is quite different in the United States than it might be in Zanzibar or whatever?

They finally came together. I was on the second one as a member of the educational committee, not of the foreign medical graduate group. Then they came together and there was only one organization.

When I became chairman of the National Board, I had a conflict of interest and I had to drop out of the ECFMG. You see there is a formal contract between the ECFMG and the National Board -- I couldn't be on both sides. Though I had once been an arbitrator. Perhaps the reason I finally came onto of the National Board was the fact that there was an argument about the cost, the fees which had been charged. I chaired a small ad hoc group of representatives from the two organizations to try to work out a reasonable compromise. Shortly thereafter, they asked me to be a member of the Board and I accepted.

WEEKS:

I was wondering if in a summary way we could take a look at medical

education. I have a note here of what it was like before Flexner. You were mentioning before that if a man hung out a shingle and said that he was a doctor, he could be a doctor. What about the schools themselves? There were some proprietary schools?

MILLIS:

The vast majority of schools were proprietary schools. The actual university schools you could almost number on the fingers of two hands prior to 1910.

I suppose that one might say that pre-Flexner the preparation of the physician was very typically an apprenticeship. It was institutionalized to some degree in terms of lectures and colloquia and so forth, but the real guts of it was the apprenticeship of being an assistant to a practicing physician. They were therefore trained and they were not educated in the real sense.

I think after the Flexner report, we moved in the direction of making it a truly graduate educational learning experience, though it never went the whole distance. That is, the Flexner reform affected the pre-clinical sciences but it did not affect the clinical sciences very much -- clerkships -- that very name is symbolic of the fact that they were clerks and were not students. So there was a half shift there.

Now, I think the third phase which may or may not count is that the latter two years of undergraduate education and the three or four years of graduate education is becoming more and more educational and less and less sheer training. It is pretty hard to get medical educators to think that there is a difference between education and training. The image I use in trying to explain my thinking is that in an apprenticeship the responsibility of a master is to bring the apprentice to his level. The responsibility of the

true teacher is to bring the student to his shoulders so he may stand thereon and go beyond. The difference between training and education is the capacity to go beyond.

This analogy has been rather useful now-a-days for me in talking to medical educators at both the undergraduate and graduate level. It is the sense of having capacity beyond that which I have as a teacher or as the residency director because in the future it is going to be more difficult to practice one's profession. You are going to need more knowledge, there's going to be more external interference as such from government and so on. Therefore, the student has to be more competent -- and competent in different ways for the future.

That's where we have really made progress. Because if you go back in the Middle Ages when you had nothing but the apprenticeship system as our educational system, there was really no great progress -- each generation had its great painters, its great silver craftsmen, great stonemasons, great architects -- but nobody went beyond that point of achievement of his predecessors. They were heir to the master but they were not to exceed the master.

But once we moved into a concept of higher education which is -- I call it education as contrasted to training -- where you in a sense have as your objective the inculcation of the capacity to exceed ones own capacity. Who was it said -- a Nobel Prize winner -- a reporter talking to him said, "Don't you take great pride in having won a Nobel Prize?"

The man said, "Well, yes, you do but I take much greater pride in that two of my students won the Nobel Prize."

WEEKS:

After Flexner, we had more basic science, we had more clinical training or learning, entrance requirements became...

MILLIS:

...much more selective, yes.

WEEKS:

Faculty changed too, didn't it? From the neighborhood lecturer who came in?

MILLIS:

Yes. From the part-time faculty member to the full-time faculty member whose mission was exclusively that of a teacher and scholar, investigative researcher. Which, of course, had a tremendous effect too because of the fact that you began then in a sense to organize discovery by research programs, and so therefore this elevated the whole educational process as well as the competency of the profession by discovering new knowledge.

WEEKS:

Would you say it is a fair statement to say that the medical schools became more university centered -- university medical centers connected with medical schools, rather than the proprietary schools?

MILLIS:

Certainly this is true that the propriety schools disappeared and all schools became either university schools or the replica of university schools. We had a few freestanding schools like Hahnemann and Jefferson Medical College in Philadelphia. But otherwise most of them are university schools.

Again, we have a spectrum. At one end you have nominal connection with an educational institution like Albany Medical College and Union College in Schenectady or the divided situation like Cornell. You have the medical school in New York City and the university is in the western part of the state. At the other end you have the tight integration that you see, for instance, in an institution like this or the University of Chicago or the University of Michigan or the University of Wisconsin. But it has had an effect almost universally. And that effect is that the selection of students and the surveillance of the quality of the educational process has become the university's role rather than the professional or vocational school role. The accreditation process has become much more rigorous because of the fact that it has become a university accreditation process. That has certainly helped medical education by insisting on better raw material, better facilities, better programs, better trained and educated faculty, in the intellectual atmosphere generated by research. All of this has had a tremendous effect upon the quality of medical education. In the sense of an educated profession. Now, whether it has resulted in a more vocationally skillful profession, I don't know, but I strongly suspect so. At least in what doctors can do these days with their advanced technology.

WEEKS:

Now may I ask you if I am seeing the trend properly? One of the things that I learned at this meeting of deans of medical schools founded since 1960 to which I referred a few minutes ago was that in the conversations that I listened to there was some question about whether there wasn't too much stress put on the basic sciences. That maybe we should back off a little, particularly the physical sciences. I also saw, which we all see now, is that

there was more of a trend toward family practice or general medicine rather than highly splintered specialization. As an aside on that, I am wondering if some of that change toward general medicine hasn't been because of the government attitudes about wanting to support primary care rather than the highly specialized schools.

The University of Michigan, as an example, used to think only in terms of specialization. Now they have opened a few satellite places where they practice family medicine. Their students are getting -- I don't know whether it is education or training -- but they are getting some experiences in the family practice settings at least.

MILLIS:

My comment on the overcrowded curriculum and too much emphasis upon science is that I think it very difficult to accept this as true. I do accept, however, that it is very inefficiently packaged and presented. There is a tremendous amount of duplication as between, let us say, physiology and biochemistry and biochemistry and pharmacology, between anatomy and pathology and physiology, which is due to the fact that we have departments of all kinds in universities. Departments have always been able to successfully create an impenetrable membrane around themselves, a private turf, so to speak. The result is that the communication across departmental lines is very difficult. And it is very difficult for the university administrator to get two or three departments together to examine what they are doing and see what duplication there is and what wasted resources from it. And this is perfectly true.

Now that was the thing that we tried to correct here in the so-called Western Reserve curriculum of the 1950s -- was to abandon the block, this is

called biochemistry in a block, and this is physiology, and this is a block called anatomy and so forth -- and to present the relevant biochemistry or physiology or pharmacology or anatomy in terms of its application to a specific bodily system, circulatory, neurological, digestive, musculoskeletal and so forth. Now what we were able to do was to condense the scientific material which used to take two years, full years, to a year and a half. And there was still duplication there. There is duplication in the schools that you are talking about.

Because they took the classical model and said we've got to have a department of this and that and the other thing that everybody has. And then we have to fight for our share of the curriculum and be sure we get just as many hours of the students time as the neighbor over here and the neighbor over there -- and probably more, at least we should be entitled to more. The result is that we have overpacked the curriculum, it is not the fact that we emphasize science too much, it's because of the fact that we have to give it very inefficiently.

But, then, that is true of so much of the university.

WEEKS:

I can understand that. I think that's a very good answer to it because in hospital administration, I sat on curriculum committees when we just couldn't seem to cover everything we wanted by taking this out of this department and this out of this department. I think you are right. It has to be structured and tailored properly.

MILLIS:

You see, if you think about the contrast between what has happened in the college of the arts and sciences -- I'm speaking about the sciences now -- the

knowledge in the field of physics in the fifty years since I took a Ph.D. has increased probably a thousand fold. And yet, because of the fact that great generalizations have come out of that, it is possible for a student to become better educated than I did in the same time it took me to get a Ph.D. degree.

But this is not true in medicine you see. As the physicist got great generalizations — and they were applicable to all of the classical divisions of physics. It happened in chemistry, didn't it? You again have tremendous generalizations.

But, you see, in biology we are just coming to generalizations. This is molecular biology. Out of molecular biology will come generalizations which will make possible great reductions in the time needed for mastery of the field.

You go across the street right now to the departments of physiology, biochemistry, biophysics, genetics and you couldn't tell where you were by listening to what people are talking about. They are all molecular biologists. Some of these days maybe ten, fifteen, twenty years, medical educators will realize this because of the fact that out of molecular biology will come broad generalizations which gives the facts which we have to now give by this much of physiology, this much from biochemistry, this much from pharmacology, this much from anatomy and so on. Then you will get a better pre-clinical education than now.

But there are other ways of doing it. The way we did here. That was a system program. You see, there are all kinds of problems to think about in medical education now. But the thing about medical education which has been so fascinating to me and which in a sense kept my attention and gave me tremendous satisfaction is that here is a field where people listen to you.

If you went over and talked to faculty of a law school and you weren't a lawyer or a judge, they would throw you the hell out of there. But here, you see, in medicine they would ask you to come in and say your say. This is true also of pharmacy.

I have been going to the University of Minnesota as chairman of a national advisory committee to the Kellogg financed program for clinical scientists. It was a delightful experience because here were pharmacists and doctors who said we are interested, we happen to be associated in this particular program but how and for what purpose we are not sure. They asked for outside advice so I and Leighton Cluff and Jerry Hulperin, who was the deputy director of the Food and Drug Administration and Haff who is the vice president of Parke Davis, have been helping them for three or four years in thinking about what it is they are trying to do. They have turned out a remarkable group of people. I have rarely seen anything happen as satisfying as that.

They had to get collaboration of other parts of the university -- economists, psychologists, anthropologists, sociologists, physicians, surgeons, pharmacologists, biochemists, synthetic chemists...and, by golly, they got it. It was a remarkable experience.

WEEKS:

I mentioned the fact that I had been in a meeting of deans of schools started since 1960 and I found that these schools were characterized as being schools that used community hospitals for their clinical work rather than being dependent on university medical centers. I noticed that they were using as instructors in this clinical work -- they were using community physicians, about which I wondered. Well, I suppose they must have had some way of screening them as to ability but this almost sounded like the lecturers they

used to have back in the pre-Flexner days -- a practicing physician who would come in. As we all know, all good professional people are not always good teachers or don't have the ability to teach even if they know a subject well themselves.

I was wondering if you had had any experience with this type of school.

MILLIS:

No, I haven't, not at firsthand, except I have paid a little attention and have been several times to Hershey Medical School which has to use community hospitals. I suppose the thing that I have always questioned about here is that at the level when one is giving a doctor's degree, your teachers have to be scholars. That is, the student at that point has come to the point where he is almost ready for self-directed learning. A lot of them do this well.

In other words, my vision of education -- education equals being taught plus self-directed learning. The dynamic process is that as the learner matures, the importance of being taught decreases and the importance of learning increases. So when one gets to the point of intellectual independence, further education is simply self-directed learning.

The self-directed learning will come under the inspiration, direction and aegis of another self-directed learner. That is another definition of a scholar. Therefore, the concept of the teacher/scholar, the combination of teaching and research is absolutely imperative for any quality at the graduate level. And medicine is at that graduate level.

And the great difference, it seems to me, between the experience of the medical student in the community hospital where obviously the busy practitioner can be practitioner and teacher at the most. He can't be practitioner, teacher and investigator. In the big medical center here, with

greater leisure to the professional staff, they can be clinician, teacher and scholar -- all three. And that, to my mind, would be the difference in the learning environment. And, in other words, gives you the role model for the self-directed learner rather than the role model of the apprentice following the master.

Now please don't think this is a universal generalization. I think it is true. On the other hand, there are many exceptions to it. Because I know many part-time physician teachers who are so enthused about their profession, so intellectually alive, who read so much and learn so much that they are magnificent teachers. Just as I have seen on the other side some magnificent scholars as viewed from the research productivity point of view who were the dullest teachers I have ever seen.

The difference between Einstein and Michelson -- take my experience. Einstein, the great intelligence of the twentieth century was a poor teacher. On the other hand, Michelson -- even at the age of seventy-seven which was the last time I worked with him -- was so enthusiastic, learning so much more, his mind was running over into philosophy and astronomy and mathematics and biology. And yet no one would say that Michelson was an original thinker as Einstein was. Sure, he measured the velocity of light and did a magnificent job and was the first American Nobel Laureate as a matter of fact -- did his work with Professor Morley in the next building. I can take you right over to the stone where he and Morley set up their interferometer which proved we didn't have an ether. Morley was a professor of chemistry here in Western Reserve College and Michelson was a professor of physics at Case. That was the first step federation.

To me, and I suppose this is prejudice for I am an educator. I have the

idea that education is a tremendously important thing and that it is not to be confused with training or pedagogy so much as with the direction and stimulation and enthusiasm of mature people to self-directed learning. And so I would judge medical education on this basis. That is why I see in so many places a much better education in the first two years than in the last two years. Why, I have seen in graduate medical education scut work on the one hand against the most mature kind of learning.

I knew a surgeon for instance in his fourth year of residency who was doing very original work -- some of these guys really are on fire, some aren't.

WEEKS:

Yes. Then you begin to see that those four years are not training, they are education.

Well we can't go without asking you about the women's role in medicine now. I noticed that the percentage of women students is increasing rapidly. In some of the newer schools I notice that there's more than fifty percent.

MILLIS:

There is very close to fifty percent in this school. One of the oldest schools in the country.

WEEKS:

What do you see in that, if anything? At first, I would say that women are naturally keepers of health -- in their role of mothers and so on -- a woman naturally has more to do with illness and caring for the ill. But do you think they are going to offer the same problems that say nurses offer -- they'll practice for a while and then stop to raise a family and then come back.

MILLIS:

Inevitably I think some of them will want to, ought to combine a family and a profession. And I think many of them are doing it with remarkable success -- the ones that I know.

There is a natural outcome of the destruction of, shall I call it, the social myth that women are less able to study the sciences than men. Just to give you a historical footnote. When Western Reserve College moved up to Cleveland from Hudson it was a men's college and somebody had the idea that we ought to be educating women in addition. So there was a great debate in the faculty about admitting women. Prominent and eminent scholars -- Morley of the Michelson/Morley experiment -- is quoted in the faculty minutes as saying that women who studied chemistry suffered brain fever.

So, the president who wanted to admit women, having been defeated by the faculty, did an awful smart thing. He bought a farm house across the street here where the medical library now stands and started the Cleveland College for Women. He decreed that the faculty would teach the same courses to the men on this side of the street in the morning and the same courses across the street to the girls in the afternoon at no increase in pay, which I think is one of the most worthy justices I have ever heard.

This says something about beliefs -- such idle beliefs as late as 1890 or thereabouts.

It wasn't so long ago, and it persisted for a long time, girls didn't study mathematics, they didn't study physics, chemistry or biology or so forth and you therefore could not look forward to a career in medicine or engineering or chemical research. Now when we got over this idea and realized that there were no sexual differences in the capacity to learn given material,

but only difference in will, then all of a sudden we now have them in medicine, engineering, biology, and astronomy. I have one granddaughter who is a chemical engineer. I have another who is a lawyer -- she is on the faculty of the University of California at Berkeley. Just happened to graduate the last of May as a matter of fact -- and is now on the faculty. She's pretty mature and a very brilliant girl and she handled law all right. And I've got another that's a banker and another granddaughter who is a young manager of a tremendous ski development in Vermont. She hires and fires a staff of about seventy-five people.

This has happened. It's a societal development. You see it in medicine and it is just as good in medicine as it is in law, as it is in engineering. And the women make very excellent doctors. And they are much more interested in what is called "people medicine" than in laboratory medicine. After all the pathologist, the anesthesiologist, the radiologist and so forth deal with people at arms length -- sometimes not even that close. The girls are finding much more satisfaction I think in pediatrics, in ob/gyn and family medicine, internal medicine. A good many of them are going into surgery each year.

During my last visit to the hospital I was in radiology and I saw only one feminine resident. I must have seen nine or ten male residents in radiology, nuclear medicine and so forth. Those are what are called non-people professions so to speak. But the girls are taking over internal medicine, pediatrics, family medicine -- not taking over but certainly going in in large numbers.

WEEKS:

I'm concerned about the role of the nurse. I noticed you did some work with the National League for Nursing. I talked with Faye Abdellah about the

role of the nurse. The first thing that came to my mind was one time I read about nurses using the word diagnosis which was almost like a red flag in front of a physician. But the nurses, I think, want to believe they are something more than the doctor's aide or doctor's girl Friday. What do you see ahead for the nurse? There are so many things. One that there are at least three degrees of nursing, I mean the baccalaureate--the two year and the three year nurses. So there are three, plus the LPNs.

MILLIS:

In this particular institution there is a doctor of nursing, the ND.

Well, what do I see ahead for nursing is chaos compounded. That is until the profession and its sister professions, including medicine, can agree upon what nursing is, you are going to have continuous chaos and contention. Just think of the problem we would have if we had physicians who were educated at the bedside so to speak for two years at the hospital as the hospital RN is or one who is educated as a scut for six months in a hospital as the LPN is. People then who have had two years of college and three years of nursing school at the university level and those who have had four or five years or here -- six years to the N.D. Obviously you couldn't possibly define what a doctor is under that situation. You see we have not defined what a nurse is. Too damn many people try to define it. The doctors try to define it. The hospital administrator tries to define it. The government is trying to define it. The nurses are trying to define it. The educators are trying to define it.

That must have been the situation in medicine pre-Flexner. Because at the time of the Flexner report you had some God awful proprietary school which had its students go to lectures, who may have witnessed an operation in a hospital

amphitheatre. On the one hand there were people who went through the four years at Johns Hopkins with an admission requirement of a baccalaureate degree before that. In other words that represented a lack of a coherent definition of what a physician is in order to define what his education must be.

But this is also true of nursing in a sense. People just won't agree on what the nurse is. And it is not only the nurses. They have to get the physician, the hospital administrator, society and the people who pay the bills to agree what the nurse is supposed to be. In the meantime, you have all kinds of educational attempts and you'll have all kinds of nurses.

I often wonder how these people survive under this eternal argument.

When I was working with the National League for Nursing I saw some of the antagonism, some arguments and so forth. Then I went over and worked for the ANA as a trustee of the Foundation. Boy, did we get our ears pinned back. We wanted to use the resources of the foundation to encourage real nursing scholars to do some honest research. The ANA didn't like that at all. They wanted to do studies about how bad off the nurses were economically and how they were put upon by physicians and all kinds of things. They got to the point where they just finally fired all the trustees.

But you see after you have talked to Faye Abdellah and the Dean at the University of Washington and the Dean at the University of California and a couple of others, that you really don't have enough powerful leadership. I have never seen quite as sharp differences between ANA on one hand and the AMA on the other hand.

Now the AMA has a few people who are mere politicians but always at the AMA there seems to be a statesman or two or three or four who have the courage to bring out some problems and seek answers to them. But in the ANA they are

too much concerned about the question of strikes and unionization and contracts and so forth.

Do they ever ask the questions, "What are we?" And if we are this, how are we going to train the next generation, educate the next generation? So I guess what I'm saying is I'm not very happy about nursing in general. On the other hand, I am very happy about nursing in the particular. In a large number there are extremely competent people in nursing.

WEEKS:

But to bring the standards up to baccalaureate requirements is going to be a terrific job because it would seem that there are so many careers open to women now with baccalaureate training in whatever field that is where the hours are better and there is no weekend work and no night work and things of this sort.

MILLIS:

But you know I don't get quite as discouraged as that. My grandfather had a very interesting expression. I don't think I understood until probably I was seventy years old -- I understood it; I really didn't appreciate how fundamentally true it is. He said you can divide the human race into two categories on the simple criterion of how they relate the two words, work and live. The vast majority of people will say "I work for a living" and a small minority will say "I live to work."

Now, when I went into the teaching profession, it was made up almost entirely of those who lived to work because they loved to teach. And my acquaintance among the physicians of my age who were my classmates in college, my fraternity mates and so forth, those people were going into medicine because they lived to work. But something has happened now, you know.

Somehow that proportion of people who say I work for a living has grown while the proportion of those who say I live to work has fallen. Everything now is judged in terms of how much living I get for a certain amount of work -- the less working the more living, the better off I am.

Nursing is suffering from this. It used to be a vehicle, just as teaching was, a vehicle of social mobility and to a degree, economic mobility. But it has now become simply an alternative way of earning a living which has a certain amount of unattractiveness such as night hours and weekend hours and a certain amount of stress and so forth. It requires a substantial degree of education and preparation. I doubt that nursing is ever going to sort itself out until it is populated more and more by people who live to work.

WEEKS:

I wonder how successful some of these proprietary hospital corporations are which I understand have nursing schools in the Philippines or some place of that sort and then bring those young women in here. I wonder how successful they are with their students. How well they work out.

MILLIS:

I really don't know. I haven't had an opportunity to observe that. You find most of those people on the West Coast, I understand. At least I have not run across any in this particular part of the country here in Cleveland.

WEEKS:

I think I should mention that one thing we haven't talked about is how doctors practice. We know that solo practice is becoming less common and there are more various kinds of group practices. Have you any opinion as to the future of HMOs, as an example?

MILLIS:

Well, I think that group practice is on a very sensible, logical basis. It's just one way a doctor can follow his profession and have any kind of leisure -- for several purposes, the family purpose -- but also for continuing education and continued learning and some relaxation. I think that the patients on the whole are quite well served by such group practices. I mean they select a physician and most of the time they see him only. On rare occasions they have to see the partner or somebody else on duty.

The HMO on the whole is a very satisfactory way for a great number of our people. I was really impressed when I studied the Kaiser system -- how well they dealt with people and with what was apparent satisfaction of the patients that I happened to observe. But one thing I noticed...maybe there is a generation gap here. I don't think you would ever find me in an HMO because I was born and raised in a time when you had "my doctor" and you went to my doctor and he could for a long time suffice for almost all of my needs.

Think of all the changes we have had in urbanization, tremendous mobility, etc. What is it, on the average an American moves once ever six months or something like that. It is actually incredible.

We don't have "my doctor," we don't have "my minister," and we don't have "my dentist," " my banker," "my grocer."

WEEKS:

Personality has gone out of it somewhere.

MILLIS:

That's right. An HMO to a person who doesn't have a grocer, a butcher, a dentist, a lawyer, a minister---this lack of being identified with my doctor -- doesn't make any difference. And it is equally effective medicine I am sure.

WEEKS:

In that vein, Dick Stull who is now gone...he was the head of the American College of Hospital Administrators and in the early days was instrumental in helping set up medical schools in California. He talked about the time during the war when people came to California to work in the various war industries...this was the time when Kaiser-Permanente was able to expand and take in all of these people because, as you say, their doctor, if they had one was back East somewhere. All of these people had to make new contacts and it was perfectly a natural thing for them to go into an HMO.

MILLIS:

After all, you have to say that the twentieth century has seen the institutionalization of lots of things. Just think about the food business. We identify with the chain stores. We can go to this store or that store and get exactly the same goods and at the same price and so forth. And we have institutionalized medicine in a sense -- become more hospital centered. It is perfectly natural that most people would accept institutionalized medicine. That is the clinic in contrast to the individual physician. I don't know that it results in any less service or less satisfaction. My wife thinks it is just awful. She thinks it is the end of medicine. Of course she is a doctor's daughter and a doctor of a very, very old school.

We had a very great shock. A man who was a professor of medicine, a professor of cardiology, here at the university medical school. He had been our personal physician ever since we came here in 1949. He was also a neighbor, a friend. He and his wife were our frequent tennis opponents and so on. When he hit seventy-one or seventy-two, he said he was going to withdraw from seeing patients, he'd be a consultant on cardiology but not a primary

physician. So he gave me a panel of people to look over and pick out. I picked out a very highly recommended man, general internist.

The first thing he said to me when I went for my annual physical and checkup was: "You know I was in high school with your youngest daughter."

WEEKS:

I am not familiar with one of your books, National Public Policy for Medical Education and its Financing.

MILLIS:

It was simply my desire to get down in black and white some observations. It was in a sense commissioned by the National Fund for Medical Education in the sense that they asked me to do this and published it.

WEEKS:

I have appreciated your taking this time. I have enjoyed the interview very much.

Interview in Cleveland,

November 3, 1983

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