DR. DeBAKEY: ... didn't know either, but I said from the standpoint of the patient isn't it academic. You know, what difference does it make. All she wants is relief and since you can relieve the patient of both lesions with one operation, I don't quite see what the problem is. Well, that kind of shook them up, because at that hospital and because of the way things were structured there... And it shows again the tradition, how important tradition is in some places, all gall bladder operations are done by the abdominal surgeons. And all hiatal hernias are done by the thoracic surgeon, because they use what they call a thoracic approach to it. Well, I'm the type of surgeon that bridged both areas. You see, it
DR. DeBAKEY: doesn't matter to me whether I go into the abdomen or thorax. And I'm identified both in thoracic surgery and in abdominal surgery and I simply said, you know, you can use one incision and correct them both. And they weren't quite sure how you took a gall bladder out through a thoracic incision, especially on the left side. And I said, "Well, you don't." I said, "You use a mid-line incision and you can correct the hiatal hernia that way and remove the gall bladder." Well, as I say, that kind of shook them all up. So the resident, a fellow by the name of Billy Peak, who later went to Duke, and I think is still at Duke, said, (he was the chief resident) he said, "Well, Dr. DeBakey will you do that operation for us?" And I said, "Sure." I said, "I'll do more than that." I said, "You can do the operation. It's simple. I'll help you do it." And we did. We scheduled the operation and he did it. And I helped him and showed him the steps and he did a beautiful job.
SCHANCHE: And she did have both?

DR. DeBAKEY: Yeah, sure. Sure. And I was a little radical for them. Of course, Dr. Churchill had always recognized me as being a little radical, perhaps, or a little ahead of the sort of conservative person.

I was always ready to take on something new and do something different. And Dr. Churchill enjoyed that. He was a progressive and liberal minded person. But a lot of the people there were very traditionally minded.

SCHANCHE: Did it by the numbers?

DR. DeBAKEY: Well, no I don't mean this critically, because they were fine, fine people there. They've got a wonderful group of doctors at the Massachusetts General Hospital. And I don't think there's any better group of doctors in the world--very high quality people, very able people. But the surgeons tend to be, and they were very good, you know, exceptional quality too, but they tend to be a little conservative. They
DR. DeBAKEY: tend to wait for somebody else to prove something
new. They don't want to make the mistake of
doing something new that's erroneous, and have to
back down on it. It's interesting because in many
ways the Massachusetts General Hospital has been
in the forefront of medicine in this country. It's
one of the great institutions that has contributed--
made major contributions. Anesthesia is a good
example. This really began at the Massachusetts
General Hospital. So it's one of the great institutions
of the world and it's a great honor to be there as
a visiting professor. And I cherish that honor very
much and I enjoyed it very much. And I still feel
quite close to the Massachusetts General Hospital as
a consequence of this relationship.

SCHANCHE: Was this sort of the highest recognition you had achieved
at that time?

DR. DeBAKEY: I would say.. I would rank it that way--yes. I
would rank it that way. I was tremendously honored
DR. DeBAKEY: by doing this actually.

SCHANChe: What does a visiting professor actually do, Mike?

DR. DeBAKEY: Oh, he makes rounds with the residents. He gives lectures. He has conferences. He acts as a professor.

SCHANChe: Mike, do they have a set series of lectures?

DR. DeBAKEY: He's a professor pro-tem. Yeah. Sure. Yeah. He's a professor pro-tem. And it was there during that time that I ran into Dr. Crawford and arranged for him.

SCHANChe: Was he a resident there?

DR. DeBAKEY: He was a resident there, yeah. And I arranged.

SCHANChe: So you pirated one for.

DR. DeBAKEY: That's right. Exactly. But, with the full support of Dr. Churchill. I talked to Dr. Churchill about it. And I brought him down here as a fellow first and then when he finished his residency brought him down here as a staff person. Yeah.
There was one thing I noted in that same report on page 42 in the list of the faculty members' affiliations. Cooley is listed as...

DR. DeBAKEY: 42?

SCHANCHE: public relations committee of the local medical society. Yeah.

DR. DeBAKEY: 41, 42.

SCHANCHE: He's on the public relations and legal committees, I guess, of the local society. I wondered if that indicated any particular interest?

DR. DeBAKEY: No. No, these are.. these committees.. You know, you often just put people on in order to have somebody to put on. They don't often mean very much. Like "operating room committee". Well, the operating room committee didn't do a damn thing. You know, I ran the operating rooms.

SCHANCHE: I just thought public relations might be particularly...

DR. DeBAKEY: No.

SCHANCHE: ..meaningful in his case.
DR. DeBAKEY: No, I don't think so. No.

SCHANČE: You're also doing in the research list—penetrating wounds of the heart, which, I guess, was an Army project, wasn't it?

DR. DeBAKEY: Well, no I'm not sure. Let's see. Yes, it probably was. Yeah, I'm sure it was.

SCHANČE: Was this pioneering work at the time also?

DR. DeBAKEY: Uh..

SCHANČE: I know there had been some repair of wounds to the heart before too.

DR. DeBAKEY: That's right. Yeah. You see what we were doing there was trying to determine certain factors and the fellow who did that was Brockman. He was a fellow and a resident. And I put him in charge of doing it. And I asked Dr. Cooley at the time to monitor it, so to speak. It was a project that I had outlined really and then. You see, I would do that with a number of people. Eric Hardy, for example, "Evaluation of Trypsin." Well, Trypsin had become available and they had called me about it and asked
DR. DeBAKEY: me if we'd be willing to assess it. So, I set
up a project. Ask this boy Hardy, who was a
fellow from England. He's now a kind of professor
of surgery in England to do this. Dr. Morris was
a resident. And I assigned them to do the job.
This is the way you get work done.
You can see the various research activities we..
Some of these things came from our.. from problems
we encountered in the clinical problems. You see,
for example, on page 63, eighteen, research project
eighteen is "Effective Thoracic Aortic Occlusion on
Central Nervous System: Damage and Evaluation", you
see. That's because in clinical, in the clinical experi-
ence with thoracic aneurysms, we found that some
patients, occasional patients, would have paralysis
afterwards.

SCHANChe: This is from the corruption of the artery?

DR. DeBAKEY: Yeah, closing the thoracic aorta. That's right.
You see.
SCHANCHE: How was that overcome?

DR. DeBAKEY: Well, it hasn't been thoroughly overcome yet, not completely.

SCHANCHE: It varies very widely with individuals.

DR. DeBAKEY: Yeah, that's right. That's right. You can't always be sure.

Now this is the one I was talking about. See here, it says on page 68 on the publications it says:

"Presidential Address: The Problem of Carcinoma of the Lung," Southwestern Surgical Congress, Dallas, Oct.-Nov. That was the year that I wrote the paper in which I made my sort exit with carcinoma of the lung by pointing it out as a health problem and an epidemic-like type of problem that required public health measures.

SCHANCHE: That was your last hurrah on the subject.

DR. DeBAKEY: Yeah, that's right. As you see from that point on my work was entirely cardiovascular.
SCHANCHE: But you didn't write much on lung cancer after you and Ochsner had written those initial papers, did you?

DR. DeBAKEY: No. There wasn't much to write. There wasn't much, except to repeat what had been written, even today.

SCHANCHE: Look in the report for 1955 and on page 42 your notable activities you got the Matas Award and you also went to the Middle East.

DR. DeBAKEY: That's right. That was the time that I went. You see a result of an invitation from the State Department, I was a representative of the Middle East Assembly, traveled.

SCHANCHE: And Aleppo was the name of the city you were trying to think of.

DR. DeBAKEY: Aleppo, that's right. Exactly. And you see, I went to the University of Beirut, the American University, this Damascus, the university there and Aleppo, Bagdad.
SCHANCHE: This was your first major trip abroad, wasn't it?

DR. DeBAKEY: Of that type.

SCHANCHE: The first one mentioned in the..

DR. DeBAKEY: Of that type, yes. That's right.

SCHANCHE: Why did the State Department invite you other than your 'eminence as a surgeon? Because of your Lebanese background?

DR. DeBAKEY: Uh..

SCHANCHE: Do you think that was a factor at least?

DR. DeBAKEY: I really.. I'm trying to recall. I'm not sure. I think, if I remember correctly, I think it was because.. I'm trying to remember whether if again it wasn't through some people in the State Department who I knew well who had transferred from my Army relationships. But I'm not sure about that.

SCHANCHE: This was a period when our relations in the Middle East were deteriorating, particularly in Lebanon. A few years later, of course, Eisenhower sent the Marines.
DR. DeBAKEY: Yeah.
You might also make a note of this. On page 42
under the "March of Medicine." Do you remember
the "March of Medicine" television program? Well,
in December of '54.

SCHANCHE: I think that was a CBS show, wasn't it?

DR. DeBAKEY: I've forgotten now. I think it was. I think. As a
matter of fact, I think that's when I first met
Cronkite.

SCHANCHE: Was it?

DR. DeBAKEY: I think so. I think he's the one that did this. But
that was the first nationwide television program
showing a major operation.

SCHANCHE: What was the operation?

DR. DeBAKEY: Here it is. It's on page 42.
Nationwide television audience. The "March of
Medicine" presented for the first time in medical
history an operation for resection of an aneurysm
of the thoracic aorta with a replacement by a homograft.
DR. DeBAKEY: And we performed it here.

SCHANKE: What was the background on that show? How did it get in the works? Whose idea was it?

DR. DeBAKEY: Well, you see, actually it was through the American Medical Association. It kind of got all the local people all upset. But there wasn't a damn thing they could do about it because it was sponsored and endorsed by the American Medical Association.

SCHANKE: Did CBS call the AMA or vice versa?

DR. DeBAKEY: Well, you see it was a part of a program that was the... The American Medical Association was meeting in Miami. And they had their clinical meeting--what they call their clinical meeting. This is the meeting that comes between the two... the annual meeting, you see. And it was an effort on the part of the American Medical Association to sort of pay tribute to investigators whose research has contributed to the advancement of medicine.
SCHANCHE: The AMA related to that show, as I recall, kind of like the FBI does to the "F.B.I. Story," didn't they? I mean they were sort of the continuing source of material for the program.

DR. DeBAKEY: Oh, yes. Yeah, sure.

SCHANCHE: They didn't actually sponsor it, but they were the source of it.

DR. DeBAKEY: No, no. They initiated it. I mean... See, they went... I don't know whether it was initiated by the AMA or by the television people CBS, I'm not sure. But in any case, the AMA told them where to go and what to do. And that's why, I think, they came here.

SCHANCHE: Did this throw some peers into a tizzy?

DR. DeBAKEY: Oh, yes. Oh, and how. It sure did.

SCHANCHE: What happened?

DR. DeBAKEY: Well, first there was great excitement. Secondly, the hospital was all excited about it, you know. Thirdly, the local medical society, the big-wigs were pretty much upset about it and tried to see what they could
DR. DeBAKEY: do about it. But they found out that the AMA there and even they inquired and... I remember, I called up, I've forgotten who the man...what the man's name is now, but I have it some place. He was then in charge of public relations--at the AMA. I called up and I said, "Look, these people are after me. What are you going to...? I want to be sure that they understand. I told them this that you're the fellows that initiated this. I'm not doing anything unethical. With the full cooperation of the AMA." And he said, "Tell them to go to hell." I said, "You tell them that." I said, "I don't want to tell them that. I'm having enough trouble with them now." Now here's another important thing on page 42, you'll see where it says the Hektoen Gold Medal. Now this is the highest award that the AMA gives for scientific achievements in medicine at the meeting where the scientific exhibits are presented. So it's always been the top award--it's a gold medal. It's a top award.
And we won it that year on the basis of our work on aneurysms.

You had a display?

Had a display, that's right.

What is this, a photographic display?

Yeah, it's a photographic display.

Was your operating room already rigged for cameras?

No.

You had not shot movies of operations?

Oh, yes. Oh, yes. Our own movies. Oh, yes. Sure. We had movies then.

But the television people could come in and do it because you already had the facilities to do it.

Oh, yes. Sure. Yeah. That was really a great honor and sort of the first of a series of honors I have since received, you see. This first recognition. And, of course, the Distinguished Service Medal that the AMA gave me came along later. That was perhaps the next high...well, the next, in a sense, ....
SCHANCHE: What was the effect of national television exposure? Did it do anything good for the school or the Medical Center?

DR. DeBAKEY: Yes, I don't think there's any question about it. It did a great deal for the school. Look, let's go back now to the time the school got here. Here's a second or third rate school. And if you rated medical schools in this country, Baylor would have rated and it was in Dallas somewhere in the lower third of the schools of this country. Now it came...moved to Houston during the war and I didn't even know that it had moved. You know? You don't keep track of what's going on with the poor schools, do you? Why do you clutter your mind with that? I didn't. So, I didn't even realize it had moved to Houston. Vaguely somewhere I had heard that it had moved, but I had forgotten it. And when I got this letter from Dr. Moursund, I noticed it came from Houston. And I had to sort of take a double take on it.
DR. DeBAKEY: to realize that it had moved during the war. But
I had no more interest in Baylor than the man in
the moon. I wouldn't have been interested. You
know, you're not interested in schools you look down
on. Well, now here it moved in '44 or '43 or some-
thing like that, I've forgotten, during the war. I
got here in '49 and it was still a third rate school.
There was no question about that.

SCHANChE: It had sunk a little bit by then.

DR. DeBAKEY: Yeah. And in four or five years, it had already
achieved some prominence. People knew where
Baylor was in this country. Medical people knew
where Baylor was. They knew where I was and they
knew I was at Baylor. You see? Here this man from
Baylor had won the Gold Medal. This man from Baylor
was visiting professor at M.G.H. You see? This
man from Baylor had, was put on television nationwide.
So people had to take notice of the fact that I was from
Baylor.
SCHANCHE: Did these have a perceptable influence on things like the quality of students you attracted?

DR. DeBAKEY: Oh, no question about it. Of course it did. We began to get inquiries by students about Baylor.

SCHANCHE: Both med students and residents.

DR. DeBAKEY: Medical students and residents. Especially residents. Who wanted to come here and work. But you see it also had a kind of .. It put a pressure upon the rest of the school -- on the rest of the faculty to measure up. And it ultimately from my standpoint created resentment on the part of those who couldn't measure up because I was doing this to them. You know, without their.. You know, I wasn't deliberately saying, "You measure up." But other people were saying this. And the pressure was on them to measure up and those that couldn't, resented it. And therefore, I was very unpopular with them. And I was unpopular with a lot of the people in the community because they
DR. DeBAKEY: weren't measuring up and never had, never could.
And besides I was stirring up things for them. They
no longer.. They couldn't hold status quo. It was
changing. Here I was insisting that surgery be done
by well-qualified surgeons. You know, in all the
hospitals. And certainly in the hospitals we were in.
So they resented this. And I was very unpopular and
I suppose I'm still unpopular with a certain element,
but not with the good people. They like this. So the
good surgeons too liked this.

SCHANCHE: So all of these things become a part of the pattern
of progress.

DR. DeBAKEY: Yes, exactly. Exactly. But you have to be willing
to tolerate the pressure of resentment, the pressure
of unpopularity, the willingness to tolerate a certain
amount of this and go on with your own business. Now
you can do this so long as you have some measure
of success in what you do. You see. It can be
very frustrating, you see, but you still can do it. And people say, "How did you stand all of this? How could you have tolerated all of this?"

Well, I guess, the only reason I could is because I was successful, I had some measure of success in my surgical work. And it was being recognized as successful. And that is in a sense--that encourages you to go on. To put up with a certain amount of the hostility and the antagonism that's created by this.

Yeah. Puppies barking at your heels.

Yeah, exactly.

Back to your Middle East trip, were you well enough known in international medicine at that point so that you got instant recognition among the..?

Well, it was amazing how well they knew about our work in cardiovascular. Yes. Yes. They'd read about it and they knew about it and they were quite excited about it, you see. It was fresh, new.
Tape # 14

DR. DeBAKEY: So that I was well received even then.

SCHANCHE: But you said the other night they were fairly low quality doctors.

DR. DeBAKEY: Oh, yes. Well, I mean, not low quality, but I mean that they. The quality of work is relatively low and poor in comparison to ours because of a number of factors. Economics is one. Secondly, the facilities and resources available to them were so inadequate.

SCHANCHE: And you said the chief quality was political.

Disdain for the peasantry feeling.

DR. DeBAKEY: Yeah. That's right.

SCHANCHE: I have a note here on 47-48 and I can't remember what it was for.

DR. DeBAKEY: You mean 47-48 pages?


DR. DeBAKEY: Growth of contributions and research projects.

Oh yes, on page 47-48. Well, that may have been..
SCHANCHE: You see at that stage it looks as if the number of your research projects has gotten to the point where it's doubling every year.

DR. DeBAKEY: Yeah, because we now, you see, are getting money. You see, now, we've already started getting money from the National Institutes of Health. And that began to grow up rapidly. You see Army Contract--Department of the Army Contracts, Houston Heart Association, Department of the Army Contract,..

By now you'll see there is a National Institutes of Health contract. And from that point on..

SCHANCHE: Does this reflect a certain amount of lobbying on your part for research money?

DR. DeBAKEY: Not at that point. No.

SCHANCHE: Later, of course, part of it did.

DR. DeBAKEY: Yeah. But you don't. Let me at least distinguish between lobbying for research to get monies from Congress for the whole program and lobbying so to speak for my research. I can lobby for my research
DR. DeBAKEY: projects, but I can only do it by getting the approval of my peers on their scientific merit. I'll lobby Congress to get more money for the total research program for the country. But I go and compete for my money from the N.I.H. In other words, I've got to get approval from my scientific peers.

SCHANCHE: The ideas for the research you do—when you're doing this much research—by '58-'59 there's a vast expansion in the number of N.I.H. grants and things.

DR. DeBAKEY: Yeah, that's right.

SCHANCHE: And in the number of research projects you're doing. Where do the ideas come from? Are you generating a lot of them yourself or?

DR. DeBAKEY: Oh, yes, I initiated a lot of them myself, but after a while you have a sort of critical mass of people that you've collected around you—of very able people and they're working and the work itself stimulates new ideas. Now, of course, there are a lot of ideas that are mine in those days—the great majority of them.
DR. DeBAKEY: were my ideas. And still a lot of the work that
goes on are my ideas, but the people that are
working themselves, as they work develop new
ideas. This is the great thing about doing research.
It feeds upon itself.

SCHANCHE: How do you go about getting an N.I.H. research
contract?

DR. DeBAKEY: What you do is you develop a protocol. You make
a brief, so to speak, of what you want to do, why
you want to do it, what is its possible significance,
and what it costs. And you submit that as a proposal.
And then that goes to a series of committees who
study it and review it and..

SCHANCHE: This has to be broken down in some detail, like how
much it would cost in some salaries, how much it
would cost in equipment and so forth.

DR. DeBAKEY: Yeah. Exactly. Exactly. Yeah, I can show you
some of them that we're submitting. And then you
may then have. It may be approved if it's not too
large a sum. It'll be approved or disapproved by
the committees by their meetings. They have regular
meetings where they review these. Or, you see,
it goes through a double review, all of it. Or, if
they decide that it's a sufficient amount of money
to justify it, they'll send a reviewing. another committee
committee to come down on, and do what they call
a project-site visit. And spend a day, or two days,
or three days reviewing everything.

Is that second committee a standing N.I.H. group
or group of people who work for N.I.H. or is it
to a peer committee?

Peer committees. Two peer committees. Yeah.
No, the staff doesn't have anything to do with determining
whether or not it's approved or disapproved. They
just do the paper work. It's a good set up. It's a
good arrangement. Good arrangement.

Do you want to stop now with that big yawn?
Well, no I think we'd better stop because I've had a
headache all day and I've been taking aspirin and codine
and I kind of feel like I'd better.
Now, we had..

Start out with the report from 1957.

Well, the only thing... I thought there was one thing in this fifty...

Well, we want to go back to the Matas Award which you'll note is on page 42 of '55.

Yeah, you see, Dr... This award... It had a...

is given by a committee in honor of Dr. Matas.

And certainly at that time was considered one of the highest awards because of the kind of people it had been given to. And this was really the sixth time that the award had been given. It was established in 1933 in honor of Dr. Matas. And it was given and I have a picture in his home--it was given by him to me personally.

I read the proclamation I gathered he wrote and signed. It was hanging in your other office.

Yeah. That's right. He... You see, going back now to the time I first met him, I think I told you the story
DR. DeBAKEY: about that.
SCHANCHE: You told me about being. .when you were a student.
DR. DeBAKEY: When I was a medical student. That's right. Well, from that point on he took a kind of special interest in me. And then when I went abroad with Leriche, he helped me get the job there. So when I came back I saw him pretty regularly. And I still used to go to his home and get books and visit with him. I remember he used to always bring out a little bottle of sherry. He loved a little sherry and we'd sip a little sherry. And his home was just filled with books. His home had become a library really. And the living room--there was a little parlor area and the dining room and so on--just stacks of books. And they had jacked up the house two or three times for the foundation, you see. And he was a great bibliophile and a great scholar. And I used to enjoy going by there to talk to him.

SCHANCHE: Did his scholarship range beyond medicine?
DR. DeBAKEY: Oh, yes. You know he was a great friend of LeCardio Herne. They got to be very close friends when LeCardio Herne was in New Orleans.

SCHANKE: Before he went to Japan.

DR. DeBAKEY: Before he went to Japan. And remained friends after that. And I think he has some very nice letters which were given... which she's given to the library.

Oh, yes. He knew a great deal about history in general. He was a great scholar. He was a wide-ranging scholar.

SCHANKE: Where was he trained?

DR. DeBAKEY: Well, he was trained... You see, he had his early medical experience in... not early--because his early training was here, I think. Actually, he was born in Brownsville, Texas. His father had a job there at the time. His father was an ophthalmologist, I think. And then was in public health, I think. I've forgotten the story about that, but I have it someplace. Then he
DR. DeBAKEY: went back to Spain. His family was from around Barcelona. They were Catalans. He was very proud of the fact that they were Catalans. The Catalans people in Spain are proud of their heritage. And I visited on one occasion when I went to Barcelona, I went and visited his home. And his sister had died during the war, I think. Yeah. And I made a kind of a pilgrimage to his home, when I was there. Well, then he came back. Ultimately was made professor of surgery at Tulane. Actually this was a kind of controversy appointment, because he was a very young man. There was a big fight over it. He was not.. He hadn't been quite accepted by the establishment in New Orleans.

SCHANCHE: He was very well-known even as a young surgeon, though, wasn't he?

DR. DeBAKEY: Yes.

SCHANCHE: He was a pioneer.

DR. DeBAKEY: Oh, yes. He was a pioneer. He became well-known.
DR. DeBAKEY: So, this was quite an honor for me to receive it from him personally and especially to have him recognize me, having virtually known me since I was a medical student. And it was very touching. And he was--he did it in his home because he was still. He was having some trouble. He'd had a little illness and he didn't want to go to the meeting. And they had a formal meeting--a presentation together and you were presented it there. He asked that the presentation be made by him personally, an exception to all the previous methods of doing it. So I had to go to his home.

SCHANKE: Was the house still the same as it had been when you were a student?

DR. DeBAKEY: Oh, yes, yes. Exactly.

SCHANKE: Did he offer you another glass of sherry?

DR. DeBAKEY: Yes.

SCHANKE: Did he?

DR. DeBAKEY: Yes. Absolutely.
SCHANKE: Have you been back there since those days?

DR. DeBAKEY: Oh, yes, I had been back there since. In fact, just before I came here, he called me and asked me to come to his house. He wanted to talk to me about something personal. So I thought maybe there was something wrong with him. I didn't know what it was about. When I got there, he showed me literally stacks of material that he had on the desk. And he said, "That is the history that I have been trying to complete." He said, "I haven't been able to do it. I just haven't had the time to do it." And he said, "I want you to take this material and finish this history." Guess what it is. It was a history of medicine in Louisiana. It began...was begun by a committee that was set up by the Louisiana Medical Society years and years ago. All the members of the committee are long since dead. You know, it's one of those things like the Association gets together and says, "We've got to have a history. Let's get somebody to write a history
of our Society before it's too late." So they set up a committee for this purpose. And he was the only working member of the committee. Well, of course, like anything else he did, he's such a scholar and historian, he wasn't satisfied with starting with the history of the Louisiana State Medical Society. He wanted a history of medicine in Louisiana. Well, he wasn't interested in just starting with the first doctor that came to Louisiana, he wanted to know about the history of medicine among the Choctaw Indians. You see. And, in order to do all of this, he had to, of course, talk about the history of medicine in the South, which led him into the history of medicine in the United States.

Which led him into the history of world medicine.

Exactly. You see. Well, here were literally stacks and stacks of notes and he wanted me to take all this with me, so that I could finish writing that history for him.

What did you say?
DR. DeBAKEY: Well, I was in a bind, you know. I said, "Well, Dr. Matas, I'd be glad to do whatever I can." But I said, "You know, I'm moving over to Houston and I've got to start a new department." And I said, "You know, I'll be working over there and I really won't have available to me the things that you have here." I said, "This is the sort of thing you ought to let one of the people here do it." And I named several people. And he didn't take to it very well. He said, "Well, you know them and they... You're the only one that can do this like I want it." I said, "Well, Dr. Matas, let me think about it. Let me see what I can do." And it wasn't too long after I left, that he became pretty feeble and had a either a stroke or heart attack or something and was in the hospital. So, it never did get done and I never did have to say "no" to him, really.

SCHANCHE: So the project sort of died with him.
Yeah, that's right. Died with him. But he was a wonderful man and very lovable man, as a matter of fact. You know, my wife was crazy about him. And we... Every year when we were living in New Orleans, we used to be invited by him to come and sit on his porch to watch the parade.

Watch Mardi-Gras?

Mardi-Gras, because the King always stopped there to toast him.

Yeah.

You know, as he went by. So we got an excellent view of the whole parade then in his yard.

He was head of the department of surgery before Ochsner?

Dr. Ochsner, yeah. Dr. Ochsner took his place, when he retired. That's right. He got along well with Dr. Ochsner. Dr. Ochsner was a great admirer of his too. He used to love to go down there and visit with him.
SCHANKE: Was Ochsner one of his students?

DR. DeBAKEY: No.

SCHANKE: No.

DR. DeBAKEY: No, Dr. Ochsner came there from Wisconsin where he was in the department of surgery at the University of Wisconsin. Dr. Ochsner was a German trained man. He spent two years training in Germany at Frankfurt. Matas was really French trained, I mean, background. But it was really quite a touching and moving experience to receive the award from him.

SCHANKE: Well, did a whole large group of people go there?

DR. DeBAKEY: No, not a large group. Just a small group. Very small group. It was intimate friends of his and of mine. Dr. Ochsner and a few people like that. Dr. Gage. And he did it with considerable dignity and so on. Made a very flowing speech. Mostly extemporaneous although he read the proclamation.

SCHANKE: What did he look like? Can you describe him?

DR. DeBAKEY: He was a rather short man, not tall. Somewhat heavy-set. With a little goatee beard. Very bright
DR. DeBAKEY: twinkling eyes that were penetrating. And very expressive face. He spoke in a rather pedantic way, because his words were so precise and clear. He spoke as though he were reading, but with great.. like an actor reading his lines. He had a flourish in speaking.

SCHANCHE: Did he have a Southern accent or had he lost that?

DR. DeBAKEY: Oh, yes. It wasn't a drawling accent, no. No, it wasn't a drawling accent. But it was Southern, in that it was a kind of, let's say, not crisp--soft. There was even a tinge of, as though he were a foreign person.

SCHANCHE: Deep voice?

DR. DeBAKEY: No. No, it wasn't a deep voice. Almost, not.. Moderate voice, but a little on a little higher pitch than you would expect.

SCHANCHE: A real gentleman of the old school?

DR. DeBAKEY: But.. Yes, clearly so. Clearly so. All he had to do was say a few words and you knew this was a gentleman and a scholar. Because his words were..
DR, DeBAKEY: He enunciated his words beautifully. That's one reason you could. You might think he had a foreign background. All of the accent was probably due to the fact that he spoke Spanish and French almost as a native tongue. But he spoke English as a native tongue too, because he was born and raised really in the South.

SCHANCHE: During the time when you were a student and using his library, did he introduce you to areas of literature and so forth, that you were not previously aware of?

DR, DeBAKEY: Oh, occasionally, he would. Yes, especially.

He saw I was interested in the library. He saw I was interested in things historical. He saw the things I wrote. And he liked them. He told me one time, "I like the way you write." And he used to say this in a very, very complimentary way, because he was very critical of the way most people wrote. He said, "They have no style." And it's true, you know. It's
DR. DeBAKEY: true. And, I appreciated it. I thought it was a great honor for him to tell me that—coming from a man who had style in his writing and wrote so beautifully. And he may have just been doing it to make me feel good, I don't know. But it was about an article I had written and he liked.

SCHANCHE: Did he open your eyes to things that you couldn't see? You know, is there something you know today that you wouldn't know, for example, without his guidance?

DR. DeBAKEY: Well, yes. I think that he did. He made me more aware of the interest in historical things, because he knew things about these people and he would relate them—personal things about certain men—people in history, which gave it a more interesting kind of relationship. It wasn't just a cold historical fact anymore. It was a living thing, you see. It came from a living person. And he would tell about these
DR. DeBAKEY: people. And he knew them.

SCHANChe: General history or the history of medicine?

DR. DeBAKEY: The history of medicine. The history of medicine. Leriche was a little like that. I'll never forget the story. He used to intersperse his lectures with stories historically. One time he told a beautiful story about the fellow who, the French man, whose name escapes me at the moment. But he was the Frenchman who broke the code of the Rosetta stone.

SCHANChe: Oh, yes.

DR. DeBAKEY: Can't think of his name now. Which opened the whole key to hieroglyphics and so forth. But Leriche once also told a beautiful story about.. There's a beautiful painting by Van Dyke of.. called "The Anatomy Lesson." I don't know whether you remember the painting or not. But there is a man who is the prosector and he's pointing his finger and there's a cadaver on a table that's partially dissected. And it's called "The Anatomy Lesson." And to. It's
DR. DeBAKEY: really one of the classic paintings of Flemish painting. And he tells the story about this man which is interesting. This man who posed for the painting was a physician. And at the time, he was also head of public health or hygiene or whatever you want to call it for the state. This was at the time that Napolean lived and it was at that time too it had come under the domination of France. You see, under Napolean. And, But this man was a very strong man and he took great pride in the public health he had done in that part of the country. And apparently had gained quite a reputation by it. And Napolean was impressed with it too. So he was allowed to stay on and to carry out his rules. Well, one day Napolean was traveling in his carriage along the canal, the road which parallels the canal when suddenly there was a barrier and a guard there. So he stopped the carriage. He didn't know that Napolean was in the carriage. Although, the guard realized there must be,
DR. DeBAKEY: you know, an important person. Well, the driver got out or the couchman or whoever it is, anyway, he got out and went over to the guard and he said, "You must remove these barriers. We must go on through." And the fellow said, "I can't. These are the orders of this Dr. So and so, you see? They're cleaning the road." You know, when they cleaned the road, nobody could pass through under the orders of this Dr. so and so. And this man said, "Well, we've got a very important person coming through." And the guard said, "Well, as far as I'm concerned, I've got these orders and nobody, including Napolean can come through." So this fellow went back and told Napolean that the guard said that. And Napolean said, "Well, if that's the orders of the..of this man, then they should stand. And Napolean won't go through." Well, I don't know whether it's a real story or not, but there it is. So, he'd tell these little stories and Matas was like that too. He'd tell stories about..
DR. DeBAKEY: He knew so much about the background, you see, and he'd fill it in. He'd get up to give a lecture and very often—I only heard him give one or two lectures. But I heard him speak at meetings. The same way at the meeting. He'd rarely get through his topic.

SCHANChe: Without these little diversionary tales?

DR. DeBAKEY: Well, sure. He'd get all involved in these diversionary tales and his time would run out at the meetings. And his lectures were the same way. His time would run out. He just knew too much and was full of it. And he had to tell about it.

SCHANChe: Loved to tell it.

DR. DeBAKEY: Loved to tell it. And he told it beautifully. You know, he kept you enthralled just the way he told it. He had a great, really great mind. A great person.

SCHANChe: When did he die, Mike? Not long after you got your award?

DR. DeBAKEY: Yes, not too long. He was about 94 or '5 when he died.
SCHANKE: So he was in his nineties at the time you received that.

DR. DeBAKEY: About ninety. Yeah. Yeah. Well, you see, it was in this period--1954--that I began to get some real recognition, in terms of my peers recognizing me and giving me awards. The Hektoen Gold Medal, which I told you about from the American Medical Association, is an example of this. The Rudolph Matas Award, you see. "The March of Medicine" television program, which was really for the first time it had ever shown anything like that. And then the visit to the Middle East which took me through several countries in the Middle East.

SCHANKE: Did that and subsequent trips bring you in contact with government leaders?

DR. DeBAKEY: It did in England, you see. The English recognized me too with the Carbutt Memorial Lecture. That's a visiting professorship at Guy's Hospital. I was there as visiting professor and operated there.
SCHAN Che: Did the fact that these trips brought you in contact with foreign leaders lead to a number of foreign political personages coming here for operations and...

DR. DeBAKEY: I don't think so. That always was done through doctors. The doctors really advise the patients where to go. For example, we have... The vice-president of the Parliament, who really is, I think, the second or third man, in Indonesia...

SCHAN Che: He was stabbed as well as I remember.

DR. DeBAKEY: Yeah, that's right. His doctor was with him. The doctor brought him here. Well, because of their ties with the Netherlands, they usually go there for their medical treatment. You see, they have very close ties with the Netherlands. They all speak Dutch. And many of them go there for their education. Well, he went there and this doctor told me about it. They were even too scared to do a catheterization on him. Much less an operation. So he didn't get any help at all.
SCHANCHE: He has an aneurysm.

DR. DeBAKEY: He has an aneurysm of his ventricle. He also has coronary artery disease. He needs an operation for both. He's a serious situation.

SCHANCHE: Pick up the book for '57.

DR. DeBAKEY: Yeah.

SCHANCHE: That's your first report of using the heart-lung machine and it's on page 43. And doing 300 open heart operations in that two year period.

DR. DeBAKEY: Well, you see, yeah. And you see the machine we used. This is really.. We built this in our lab, but it's basically the bubble oxygenator which, of course, we didn't really develop.

SCHANCHE: Was this.. This is the same thing that Gibbon developed, right?

DR. DeBAKEY: Yeah, it's not the same thing. Because in Gibbon's oxygenator, he used the bubble oxygenator early, but he gave that up and started using the film-filming method. Now there are a lot of people who still use
DR. DeBAKEY: the filming method. And we did for a while too.

We used it. But it's a much more difficult, technical preparation. The bubble oxygenator is much simpler, though it does have some disadvantages.

SCHANCHE: Explain to me the process here when someone like Gibbon develops something like that which is a real landmark. Is it common that everybody then begins working on his own to try to improve the apparatus.

DR. DeBAKEY: That's right. Exactly. Exactly. That's exactly what happens. Quite right. And, of course, it does improve it. It does speed it up. Everybody is sort of competing to do something better then. And it speeds it up. There's no question about it. It's a very good system, I think.

SCHANCHE: You developed your own oxygenator here.

DR. DeBAKEY: Yes.

SCHANCHE: I noticed you called it the Cooley oxygenator.

DR. DeBAKEY: No, he called it that.

SCHANCHE: Oh, he did?
DR. DeBAKEY: Yeah.

SCHANKE: But you repeated it.

DR. DeBAKEY: Yeah, well, that's because we were trying to give credit to it. Actually it's, you know, not right to call it that. And it shouldn't have been called that. Because he really didn't, you know, develop it. It had already been developed and what we did in our laboratory is build a little modification in the way it was put together. You know, simply the way you put it together.

SCHANKE: That is modifying Gibbon's own oxygenator.

DR. DeBAKEY: No, this particular oxygenator was not Gibbon's. It was, I think, DeWall at the University of Minnesota. They were the ones who worked mostly on the bubble oxygenator. And they used. What they used was a circular tube--plastic tube--. This was made out of metal. And therefore you could put it together and clean it and so on. Now later the disposable got rid of all of that. The disposable is still the simpler one but you dispose the whole thing. But basically, it
DR. DeBAKEY: really wasn't Cooley or anyone else here that did anything to the oxygenator.

SCHANChe: Is yours--the pump you use now--different from pumps used elsewhere?

DR. DeBAKEY: A little bit. Not much. Not much. It's a little simpler because we make it, you see.

SCHANChe: You make it here?

DR. DeBAKEY: Yeah, we make our own pump in the lab. Yeah. But it's not much different.

SCHANChe: When you first used this what were the circumstances? You had obviously ... with great joy that Gibbon had...

DR. DeBAKEY: Oh, yes. Yes. And we first used it for the simplest kind of lesions, like.. I think the first cases we tried it on were atrial septal defects. These are very simple holes between the upper chambers of the heart and they only have to be on the pump about ten minutes.

SCHANChe: You were feeling you way.

DR. DeBAKEY: That's right. We were feeling our way. And that's why we were doing it on the simplest kind of cases.
DR. DeBAKEY: And then we began to move from those cases into more complicated cases like the total correction of a tetralogy. Valve cases. Valvular replacements. When we first used it on valves, we used it mostly to open the valve and try to repair it visually. Not to replace it. But, later, of course, we used replacement.

So as we got more experience with the machine, we began to move to other areas. And then we applied it very quickly to aneurysms. I think in 1954. Just within a year, we had started applying it to aneurysms.

SCHANKE: How did the machine come to you? Did you just order one?

DR. DeBAKEY: No, we built it.

SCHANKE: You built your own here.

DR. DeBAKEY: Built our own.

SCHANKE: Then you just send a technician off to get the blueprints and learn how to put it together?

DR. DeBAKEY: No, we already knew what the pump consisted of. We had seen it. And I, of course, was thoroughly familiar
DR. DeBAKEY: with the one that Gibbon was using and had seen that and had been to his laboratory a number of times. So, I knew all that needed to be done to put it together. And then we tested it out in the experimental laboratory. And it showed it worked. Tested the blood, oxygenation and so on.

SCHAN Che: Did you involve Mary Martin in this...

DR. DeBAKEY: Yeah, she was a technician and started working with us as a technician. And later she became trained to do the whole thing. And she trained the others.

SCHAN Che: What were the special problems of it, Mike, when you first started working with it?

DR. DeBAKEY: Well, most of the problems were related to adequate oxygenation and the trauma to the blood. Mostly from the oxygenator. And especially when we were using the bubble oxygenator. But as our experience improved and we began to use..to be able to move more oxygen into the blood, then those became less and less.
DR. DeBAKEY: But we had embolization--micro-embolism, we called them. We had hypokolasia, lack of adequate oxygenation. Things of that sort.

SCHANCKE: Would you characterize this as the greatest single step forward in surgery?

DR. DeBAKEY: Certainly I would have to characterize it as one of the great steps forward--yes. Because you see it was the key to opening up so much in the field of surgery--cardiovascular surgery. It made it possible to do things which couldn't have been done without it. The whole field of intra-cardiac congenital and acquired diseases, all the valvular heart disease, all the septal defects. All of the aneurysms that involved the aortic arch or the descending thoracic aorta--you know, thoracic aneurysms. All of these became possible only because of this. I gave the first lecture--Gibbon Memorial Lecture. American College of Surgeons asked me to give the first lecture, which I did. And that was what my lecture was about.
DR. DeBAKEY: What the heart-lung machine meant in surgery. I can get a copy of that for you.

SCHANCHE: Yeah, I'd like it.

DR. DeBAKEY: It was really a tremendous contribution, no question about that.

SCHANCHE: Did the small additional, I don't know what you call it, but the additional small pump that I think you used to feed the carotids, did that follow immediately on the heels of the big pump, or was it a part of the same development?

DR. DeBAKEY: No. You see, that was an adaptation of the concept of profusion to taking care of aneurysm of the aortic arch. Because you had to profuse the brain. So what we did was find ways of taking from the pump oxygenated blood and pumping it into the special arteries that feed the brain. That's all. It was a natural extension.

SCHANCHE: But you developed that here.

DR. DeBAKEY: Yes, oh yes.
SCHANCHE: What was the process? Did you conceive this and got everybody together and say here's what we're going to do?

DR. DeBAKEY: Yes. That's right. First case. That's exactly what I did. And I told Mary, for example, to prepare the pump in such and such a way. I said, "Prepare the pump so you've got a pump, not only to the coronaries now, which she had, but I want one line leading to the carotid arteries so that means two -- a Y-shaped line going to both carotid arteries. And two leading to the axillary arteries and then one leading to the femoral artery. You see? Now I had the whole body being profused and I could completely isolate the heart and the lungs and the arch. Completely. Really, it's a very simple concept. I don't think you have to be a genius to do it. It just happened I did it first, that's all.

SCHANCHE: Without that you couldn't do the carotid surgery that you did, before the arch surgery?

DR. DeBAKEY: The arch surgery. That's right. Well, not the carotid
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DR. DeBAKEY: surgery. You could do the carotid, but not the arch aneurysms. That's a different thing, you see.

SCHANCHE: On page 46 there's more about your work on the aorta and the development of the plastic bypasses--the grafts and..

END SIDE A.

SCHANCHE: Don't pour any for me tonight, Mike. I was awake last night until about 2 o'clock?

DR. DeBAKEY: Oh, were you?

SCHANCHE: Yeah. I think your coffee's a little stronger.

DR. DeBAKEY: How about a Fresca?

SCHANCHE: Yeah, that'd be good.

DR. DeBAKEY: I've got some Fresca and some sodas here.

SCHANCHE: Fresca's fine.

DR. DeBAKEY: Fresca's alright.

SCHANCHE: Yeah. Thank you.

I think you make your coffee about twice as strong as the rest of the hospital's.

DR. DeBAKEY: Really. It is strong. I like it strong. Okay.
DR. DeBAKEY: It never bothers me. It doesn't keep me from sleeping at all. You know.

SCHANCHE: It does me.

DR. DeBAKEY: I don't know why. I suppose if I drank enough of it or else I've got a tolerance. You know, a certain dose tolerance. It just doesn't bother me.

We were talking about something. You said let's go ahead and do it.

SCHANCHE: Oh, we were talking about the... You said, as a matter of fact, talking about the plastic grafts when you stopped using homografts. An interesting sidelight.

DR. DeBAKEY: I was at a meeting one time in... I've forgotten whether it was New York or Bethesda... but it was at a meeting, I think of the Council. I think it was in Bethesda.

The Heart Council, maybe it was the Heart Association committee meeting, or something of that sort.

Anyway, I was on the board--a council. And there was a man from Los Angeles on this council, who
DR. DeBAKEY: was a friend of Arthur Hanisch, knew him well. And he said to me, "You know, I'm on the board of the (I think) Los Angeles Central Graft Center." What had happened is the doctors, or the society or something in Los Angeles had gotten together and decided that it would be much more efficient if they had a sort of graft storage center.

SCHANCHE: Like an organ bank.

DR. DeBAKEY: Like an organ bank. Graft bank, you see. And that each hospital would contribute whatever they could to it, but when they needed a graft, they'd go there and get it, you see. Well, the processing and storage of these grafts had become quite a technical operation. They were freeze dried and then they had to be put into these sterile tubes under a vacuum. And the work—the cardiovascular work began to increase, you see, as we began to be more and more successful. So, this became quite an operation and it was pretty costly. Most of the money came from the Heart
DR. DeBAKEY: Association--from local Heart Association money. Well, there was quite a drain on them because they had other things to support too. This thing was beginning to cost them, if I remember correctly, something like twenty-five or thirty thousand dollars a year and they weren't sure where they could get the money to support this. And he was on the board. Well, he said the doctors now were beginning to put a little pressure on him to expand it. They said they need more. And he said, "What would be your advice?" I said, "My advice to you is to tell them that you won't give them a penny. Make them close it down." He said, "What do you mean?" I said, "Well, they shouldn't be using grafts anymore." I said, "We haven't used a graft in the last year and a half or two years, something like that." He said, "What do you mean?" I said, "Well, we use artificial arteries everywhere now. We don't need anymore grafts!" I said, "It's obsolete." Well, I was saying
DR. DeBAKEY: \(\text{this, you know, from the firm conviction on my part, but there were a lot of doctors that didn't agree with this. And he said, "Do you think I could really say that when I got back." I said, "You certainly can. You can tell them what I said." So I saw him not long after that at another meeting. We were on the same committee. And he said, "Well, I told them what you told me." But he said, "I didn't get very far and they said, they told me that I shouldn't believe what you said." I said, "Well, all I can tell you is that you can not find any case that I have done in the last year and a half or two years or whatever it was at that time where I put a homograft in. And if any of them can demonstrate this, then I'll be glad to be exposed as a liar. But until then, this is the truth." Well, he said, "I sure wish I could get them to do that." He said, "Maybe I ought to try to get you out there." I said, "You don't need to get me out there. Those doctors}
DR. DeBAKEY: know what I'm doing, because I've been out there. And I've told them. They're just afraid to, that's all. It's that simple. They know what they can do with homografts and they're afraid to use these others."

But, I said, "The time will come." I said, "Don't worry about it. All you need to do now is to delay giving them any more money." I said, "Don't give them an extra penny. Just give this thing a little time and you'll save money."

SCHANCHE: Presumably he did and got them to...

DR. DeBAKEY: Well, you see, this is exactly what happened. I think it was in another year or two years they closed it down.

SCHANCHE: This is always the case, isn't it? When someone makes an advance, everyone sort of sits back in fear until it proven...

DR. DeBAKEY: Oh, yes. Oh, yes. I used to have this problem of grafts all over. I was at a meeting--international meeting and Clarence Crawford, who was the first
DR. DeBAKEY: man with Bob Grosse to give...to do a coarctation successfully. Now think of that. You'd think he'd be a very progressive fellow.

SCHANCHE: He's the Swede?

DR. DeBAKEY: Yeah. He was at this international meeting just about ten or twelve years ago and I talked... They wanted me to talk about the use of grafts to replace aortic segments in the thoracic aorta. So I told about coarctation. You know, what you can do with coarctation. Well, he had gone through a tremendous kind of complex operation to overcome certain types of coarctation and finally, reluctantly had used a graft--homograft. He didn't like it. I did the first graft operation in his hospital. You know, for an aneurysm. And at this meeting after really easily ten years experience--must have been about 1960, maybe '62--he got up and said that he has certain reservations about the use of any grafts for coarctation. And there must be very few patients that would need it.
DR. DeBAKEY: He didn't know where I got all these patients that needed grafts.

SCHANCHE: Yeah. Coarctation's always congenital, isn't it?

DR. DeBAKEY: Yeah. It's always congenital. Yeah.

SCHANCHE: An interruption of the aorta.

DR. DeBAKEY: Yeah, that's right.

SCHANCHE: How did he repair it without a graft?

DR. DeBAKEY: Well, he didn't!

SCHANCHE: Cut the two ends and put them together?

DR. DeBAKEY: Well, yes. And that's perhaps the most common type. But there are certain types you can not repair that way at all. It's impossible. It's too big a bridge to bridge, you see, to be a defect of the bridge.

SCHANCHE: Well, if you'd been using grafts successfully for so long, what caused him to remain so conservative about it?

DR. DeBAKEY: This... You know, this is a curious phenomenon about people... There are people who make pioneering advances, you know. Then a certain time goes by
DR. DeBAKEY: and they never make a single advance beyond that and they're usually back where they made the advance and haven't progressed a bit since then.

SCHANKE: They're one step pioneers that live in the glory of the one step.

DR. DeBAKEY: That's right. And are protecting it. You know. Any modification or change in it is an attempt to detract from the great advance they made. It's, of course, a reflection really on the fact that the individual probably just stumbled on this advance and wasn't mentally equipped to do it really.

SCHANKE: On page 39 of that same report, is the first listing of fellows or first...

DR. DeBAKEY: No. We had some..

SCHANKE: I was wondering if that was the beginning of your fellowship program which in other areas began in 1959, but this is in '57.

DR. DeBAKEY: No. No, there were some before then.

SCHANKE: Well, then later.. In later reports..
DR. DeBAKEY: Yeah, I know, but..

SCHANKE: Continually referring back to the fellowship program that began in 1959.

DR. DeBAKEY: Well, that's probably the one supported by the Public Health Service. But we had fellows before then. Let me see.

SCHANKE: They're always listed under personnel, I think, at the sort of tail end of the personnel section.

DR. DeBAKEY: Well, I'm sure we had some before then. I'm trying to see if there is any. You see. I can check that.

SCHANKE: There's a reference on page 39 of the '57 report.

DR. DeBAKEY: There were the fellows in ... See, we had what's called a U.S. Public Health Service Fellowship Program.

SCHANKE: Well, that's probably what started in '59.

DR. DeBAKEY: Yeah.

SCHANKE: The distinction probably isn't that important.

DR. DeBAKEY: Now, you see. Look at '52-'53. I told you I had some before. Eric Hardy was a fellow--research fellow. And this is '52-'53. You see. He was a
DR. DeBAKEY: research fellow. He came as a fellow of the Royal Society of Medicine, London, and the Royal College of Surgeons in Edinburough.

SCHANCHE: And the funds from this came from some other source.

DR. DeBAKEY: Yeah, that's right. Now. So we really began it about '52. And we had it every year. Now the fellowships you see here are those that came to us supported by the department, this fellowship grant. In fact, I think all of these were. It's very interesting if you look back, every single one of these people have distinguished themselves. Attar is head—he came from Lebanon—but he's now professor of surgery at Maryland. Castro-Villagrana's one of the leading surgeons in Mexico City and is a professor. Cecil Couves—I've just recommended him for the fellowship—for the professorship of surgery in Canada in western Canada. Oh what's the province called way out west? In Canada?
SCHAN C H E: Gee, I'm sorry.

D R. DeBAKEY: It's right on the end of my tongue.

SCHAN C H E: Alberta, isn't it?

D R. DeBAKEY: No, not Alberta.

Well, it'll come to me in a minute. Cecil Couves, I mean, Lynn Evans is now one of the big consultants in the hospital which corresponds with the professor of surgery. Jim Giacobine is in Pittsburgh as a professor. Paul Gryska is also a professor. Muashir in Jordan is now a professor there. Alain Sisteron--professor in Lyon, France. Villaca in Brazil. I saw him when I was down there. He's also a professor. Ruan in Venezuela is a professor.

SCHAN C H E: A distinguished group.

D R. DeBAKEY: Yeah. Now that was what you were referring to about the fellowships. That's '57. Yeah, it was a distinguished group, really. They all...

SCHAN C H E: Has that been generally true of the fellows that have passed through?
DR. DeBAKEY: Yes, we've had a very good group. Excellent.

SCHANCHE: In all the reports, incidentally, without any page reference you speak of developing a recovery room, I think at Jefferson Davis Hospital, on a more than eight hour a day basis and then of the development of an intensive care unit. And I wondered if the development of intensive care unit was an invention here or whether that...

DR. DeBAKEY: No, that was during the war. That... I brought that out of the war. We developed that during the war through necessity. Didn't have enough nurses. So we had to develop a recovery room for the post-op surgical patients where we concentrated the patients under the specialty trained nurses. It worked so beautifully, you see, that many of us during the war, became impressed with doing it this way. So I immediately did it when I was in New Orleans, as soon as I got back. We fixed up a recovery room in
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DR. DeBAKEY: hospital there. When I moved over here, it hadn't gotten to Houston yet. Like so many things, you know, it was a medical desert and I put it into effect here.

SCHANCHE: And the intensive care concept grew out of the recovery room.

DR. DeBAKEY: Yeah, that's right. Grew out of the recovery room. But we put it here in this hospital for the first time. And the reason we did it, I say we-- Mr. Bowen and I did it--over the objection of the whole staff. They objected to it. They said no, the doctors want to take care of their own patients and they wanted the families there and all that sort of thing. And I said, "The recovery room works. Why can't the intensive care unit work?" Well, Mr. Bowen and I were interested in doing it more economically and efficiently and I had enough patients of my own in the hospital to make it worthwhile. So he said, "We'll put it in." I said, "Put it in just with my patients." And we had twelve beds. That's all we started with. No six beds. Started
DR. DeBAKEY: with six beds.

SCHANNE: Here at Methodist?

DR. DeBAKEY: Yeah. That's right, in the old building. It wasn't long before everybody wanted to use those beds, so they increased it to twelve. And then everybody else wanted to put them in--other divisions.

SCHANNE: Was this the first modern intensive care unit in America?

DR. DeBAKEY: No, I wouldn't say it was the first in America, because I don't know. But that was. We put that in in 1954 or something like that--'55. I would say it would be '53-'54 shortly after the hospital was built. It was in the first year.

SCHANNE: The economy concept there is to, is to..

DR. DeBAKEY: Well, it's not economy--efficiency. Economy of personnel. Economy of personnel.

SCHANNE: It's not to tie up floor nurses with patients when they immediately come back from surgery.
DR. DeBAKEY: Yeah, exactly. That was the economy concept. I'm trying to see if there's anything else in this particular one. You see, we were making motion pictures too and listing them here. Scientific exhibits each year. This is all part of the effort to expand our word all around the country. That's the '57.

SCHANCHE: Want to go to '58 and '59?

DR. DeBAKEY: Yeah.

SCHANCHE: I noticed the H.E.W. grants had expanded vastly beginning on page 48.

DR. DeBAKEY: Yeah. This may have been the year--'59 was it? I'm trying to remember whether that's the year. See, we were still getting Army grants. And you can see the Health, Education, and Welfare grants. We got... Yeah, that's the Cardiovascular Surgical Investigation and then a training grant. A training grant in cardiovascular. And, you see, we got the cerebral vascular. That was the year that
DR. DeBAKEY: put pressure on the Council to do something about cerebral circulation. You see, and we got a grant for that.

SCHANKE: Which Council? The National . . . ?

DR. DeBAKEY: Heart Council. Yeah. The Heart Association. Yeah, that's right. That's the year that we got that going. And you can see the tremendous number of activities we had going then. The disposable oxygenator came in too.

SCHANKE: And that was essentially the same hanging . . . that you have...?

DR. DeBAKEY: That's right. That's right.

SCHANKE: On page 59 you mention that the first open heart surgery on the pump was done in January of 1956. Do you recall the circumstances of that?

DR. DeBAKEY: I think it was at the Ben Taub. I think it was at Ben Taub. They did a . . . They operated on a patient not long ago at the Ben Taub that I did open heart on in Jefferson Davis Hospital around...
Tape # 14

Where does it say open heart in '56?

It's on page 59. There's just a reference to it.

Page 59? That doesn't sound right to me. Oh, yeah.

"Since January, 1956 when the...

Yeah. I guess that's right. That's right.

Well, what about the patient at Ben Taub?

Well, this was a patient that I did a mitral valve and the power went...

The power went out when you were...

.. out right in the middle of the operation. All the lights, the pump, everything went out. And I don't know how many minutes it took to get the power back on, but it seemed like an hour. You know. But it was only a matter of minutes, I'm sure. It couldn't have been more than say seven, eight, nine minutes. Well, in the meantime we got some flashlights started, and so that we could see what we were doing--not
DR. DeBAKEY: necessarily to do much operating. But the main thing was to get that pump going, because the patient was dying, you know, while the pump was off. And it was very difficult to get it to move by hand because it was kind of stuck, you see. Well, anyway, we finally got it going by hand, but not with...

SCHANChe: Using these little hand things that were on the roller pump?

DR. DeBAKEY: That's right. That's right. But it was very inefficient and secondly it was not getting us a pressure. So I thought the patient was gone. Well, we finished the operation and the lights came on. The power came on a bit later--maybe six, seven, eight minutes. It was estimated about eight minutes. And this fellow did beautifully. Never turned a hair. Woke up without any trouble at all. This was about, I guess I operated on him in '57-'58--something like that--'59. And just recently, thirteen or fourteen years later...

SCHANChe: But that was when you weren't using these valves?
No, no, no. They were a very crude type. I hadn't started with valves. And just recently he came back and they had to re-operate on him for the other valve--aortic. Nearly thirteen years later. Been doing well ever since. I operated on him at Ben Taub.

What was it--an electrical storm that knocked all the power out?

No, no. It was something that went wrong with the power system.

With the hospital's own power system?

Yeah.

There's not an emergency...?

Yeah, it's supposed to go on, but some fellow had turned it off. That's right.

What went through your mind as you stood there in that dark...?

Oh, god, it was one of the most frustrating thing. I was cursing everybody. Everybody and his brother.

This Rigsby reminds me--Mrs. William C. Rigsby
reminds me. She died just recently.

Who was she?

She was--I see her name here as a donor. She was a rather colorful character. She lived in San Antonio and was the..was a Shreiner--member of the Shreiner family, which is one of the old pioneering families of Texas. They have huge--like the King's Ranch. You know.

That's S-H-R-E-I-N-E-R?

Yeah. As a matter of fact, there's an institute called the Shreiner Institute which they endowed. It's a prep school--very fine school, too. It has a very good reputation in Texas. Well, her name was Mime and she was the youngest daughter of this brood of Shreiners. Her oldest brother was at that time 95 years of age. And she must have been about 75 then when I first knew her. Although, actually, I think she was close to 80. But she never allowed her age to be accurately put on. She was very vain about it.
DR. DeBAKEY: Well, I got this call one day from these friends of mine in San Antonio, as a matter of fact from Julian Barton, who is an old friend of mine. He was a medical man and he was in the department of medicine at Tulane when I was in the department of surgery and actually was one of my instructors. He was a few years ahead of me. And we got to be great friends and I'm very fond of him. He called me up one day and he said, "Mike, we've got several doctors here seeing a Mrs. Rigsby--a very prominent woman here. And she's got gangrene of her toe and foot and it looks like she's going to need an amputation. But before we decide to amputate, we told her that we'd like to have a consultation with you. To see if there was any chance, you thought there was any chance of saving her leg." By that time I had gotten the reputation for doing grafts on clogged arteries in legs. So Al Hartman, who is one of the surgeons there and also a good friend of mine and Julian Barton, the internist, asked me to come and
DR. DeBAKEY: see her. Well, I got there on a Sunday morning and they took me over to her hotel. She lived in a hotel—had a little suite. And, of course, she lived alone. Her husband had died years ago. And she was a kind of a... the grand lady of San Antonio, you know. Highly respected. Always started the society with the big ball for the season. And this was on New Year's Eve. And, so she was, you know, quite an important person in San Antonio in society. I walked into the room with these doctors this Sunday morning and before I could say good morning or how do you do or greet her, she looked at me sitting in this chair with her leg propped up on a pillow and she said, "Doctor; I hope you didn't come all the way from Houston to tell me that my leg has to come off. Because if you did, you can just turn around and go right back to Houston. Nobody's going to take my leg off." Well, I smiled and said, "Well, Mrs. Rigsby, first let me just say to you good morning.
DR. DeBAKEY: Secondly, if you'll allow me to examine your leg, then I may render an opinion. I haven't the slightest idea right now what to tell you about your leg because I haven't seen it or examined it." So that settled her down, you see. So she said, "Well, young man, I may have spoken too soon, but I did want you to know what my sentiments were about my leg." I said, "I know them now." But I said, "Let me examine it." So she did. And I looked at this leg and I said to the doctors, turned around to the doctors, I said, "Well, it may have to be removed, but, " I said, "I think it's worth a try. I think it's possible we can save her leg. And she may be right. I think the thing to do is to get an arteriogram and let's take a look. She may have an occlusion high up." Well, the interesting thing is that as you develop experience in this field and you correlate your clinical experience with the arteriographic experience, you begin to
DR. DeBAKEY: be able to pick out certain observations clinically that give you a clue. Now the first thing I noticed in this girl was that she didn't have a pulse in her femoral area. To me this is evidence of a high occlusion. Well, the odds—the statistics from clinical experience of a high occlusion having a patent vessel beyond to which you could attach a grafts are very good. So even though she's got gangrene of her toe, if she has an open artery to which I could attach a graft, I knew I could save that leg. So, this was, in a sense, the, what my experience had given me over them. I was a leg up on them, so to speak.

SCHANCHE: So to speak.

DR. DeBAKEY: You see. And, well, they were, of course, very pleased. You know, even though they had recommended amputation and even though it had proved wrong, they were good doctors. And they were glad to be wrong in a situation like this, sincerely. And they were very, very good doctors. And they've always bragged about
Tape # 14

DR. DeBAKEY: the fact that I came over there and saved her leg. So, I expressed this to her and she came directly on over to Methodist Hospital.

SCHANCHE: Came right up?

DR. DeBAKEY: Oh, yes. Yeah. She was ready to have her leg saved. I did the arteriogram. And by god, there it was--beautiful. I operated on it and her toe--the gangrene in her toe just melted on down so she just lost the two little toes. And she went around the world. She was very active after that. She had me come over for the first ball after that--that she gave. Diana and I went over and had a wonderful time. And she traveled a great deal--went to Europe, everywhere. One time I went over there. She insisted that I come and visit the ranch. And she'd go hunting on the ranch. And I didn't want to hunt. But she insisted on it. And we got to be such great friends that I went just because of that. Got over there.
This is what amazed me. One of her, her grand nephew took me around. She wanted me to go see her brother -- older brother. She was very fond of her older brother. And he lived alone in this ranch house with a housekeeper. We got to the ranch house. This was about eight or nine o'clock in the morning. The housekeeper told us, "Oh, he's out. He's not here. He's at the pond. He's out at the pond shooting ducks." Ninety-five years of age! And I expected to see a man in a chair barely able to move. So, I said, "You mean he's out there shooting?" They said, "Yeah, he's out there." So we went... we were traveling in a jeep and got out to the pond and guess what he was doing?

What was he doing?

He had shot his ducks. They were out in the pond. And he had a fishing rod and he was casting this rod trying to get his ducks to bring them to shore. (Laugh.)
DR. DeBAKEY: Ninety-five years old! Incredible. You know, incredible.

SCHANKE: That's a marvelous story.

DR. DeBAKEY: Oh, yeah. You should have heard... He entertained us at great length. He just loved to tell stories. We had dinner that evening with him. He loved to tell about the early days when they used to drive the cattle to Kansas City to sell the cattle and drive'em. And the dangers they encountered, you know. There were hijackers in those days.

SCHANKE: Rustlers? Still had Indians to fight.

DR. DeBAKEY: They had Indians, that's right. And rustlers and so forth. I don't know what they called--there were these hijackers. They'd wait for them, you see. And just take all their cattle. Either shoot them, kill them, or drive them off and then take the cattle. Bands of raiders, you know. And they used to have to be prepared for that.

SCHANKE: You had to be pretty tough to survive.
DR. DeBAKEY: Oh, yeah. Yeah.

SCHANKE: Did she become one of your favorite contributors after the operation?

DR. DeBAKEY: Yeah, she contributed pretty regularly.

SCHANKE: Was she known for her philanthropy before that or?

DR. DeBAKEY: No.

SCHANKE: No.

DR. DeBAKEY: Well, I wouldn't say no. I shouldn't say that, because the family was sort of philanthropic, yeah. They had done many things. And there was the Shreiner Institute. There was a Shreiner... all kinds of Shreiner things, you know. Her family had done very well, I think. It's a very well-respected family. They had banks and so on. But she recalled herself her early childhood days on the ranch when her mother would drive off a few Indians coming to raid them. Yeah, shoot them through the window. And drive them off. The men were out in the field some place or out on the ranch, you know. Think of that. Well, you see,
DR. DeBAKEY: you're going back to around, I guess it must have been about 1885-'90. That period, you see.

SCHANCHE: She sounds like a movie version of the Texas 'grand dame" at that period.

DR. DeBAKEY: Yeah. Yeah. But she was always a lady, though. I'll say that for her. She was a real lady, inherently. But, of good pioneering hard-stock, that's the thing. She had.. I got very fond of her. Seeing her name here reminds me of her.

SCHANCHE: I notice, incidentally, in that report --'58-'59--you still have white and colored divisions--separations at Jefferson Davis.

DR. DeBAKEY: On the services?


DR. DeBAKEY: 46?

SCHANCHE: Yeah.

DR. DeBAKEY: Yeah.
So that was a tough long process. Desegregating.

Yeah. Yeah. The only--as I told you. The one thing that we were able to completely desegregate were the intensive care and the ..

Emergency service.

Emergency services. Intensive care and recovery. It's interesting, isn't it? That we had no trouble there.

Yeah.

None at all. Never a single complaint of any kind.

Now look at these. You see here are another whole group of.. look at the fellows we have here now. Large numbers of them. You see.

What is that?

The fellowships. We've got them from Argentina, Mexico, Tennessee, North Carolina, Pennsylvania, Bagdad, Venezuela, Lubbock, Texas--I don't know how that fellow got in. Buenos Aires, London, Paris, Colombia, South Australia, Alexandria, Djakarta, Danville, Virginia, Israel and Italy.
Yeah.

It used to be a kind of United Nations.

The word was spreading.

Yeah.

Do you want to go on to '59 to '61?

Yeah.

This is the report in which I see the first reference to a cardiovascular research center on page 69.

I think you'll note there that the Cardiovascular Research Center is established during that period.

Yes. September 1, 1960. That was the first center and the only center. Isn't that amazing? It's still the only Cardiovascular Research and Training Center--the only one the N.I.H. has.

Is it really? I didn't realize that.

Yeah. Yeah. Only one.

Why is that?

Well, one reason is that they never did authorize it by means of Congressional intent.
SCHANCHE: This was one of your recommendations to the President's Commission, wasn't it?

DR. DeBAKEY: Yeah, I know. That's right. Yes, sir, it was. Definitely. And we tried our best to lobby for it in every possible way. Now Dr. Jim--James--who was head of the N.I.H. before he retired.

SCHANCHE: Sherman?

DR. DeBAKEY: Sherman. Was opposed to it, basically.

SCHANCHE: What were his reasons?

DR. DeBAKEY: Well, just philosophically. He didn't want big centers of any kind. Just philosophically opposed to it. And so he did everything he could to discourage its being done.

SCHANCHE: Yeah.

DR. DeBAKEY: And the other thing is--that you've got to remember that basically you have this problem. These centers cost relatively large sums of money--three to five million dollars, I would guess, although ours never has cost quite that much.
SCHANCHE: You mean as an annual cost?

DR. DeBAKEY: Yeah. Well, people who... small people, you know, who are dealing in smaller research areas become a little paranoid about this. They say this is money that is being taken away from them. They don't realize that this money also has to be spent on people. Now the people in this center are getting that money. I'm not getting it. I don't get a penny of it, personally. I've never drawn a single penny from the N.I.H. money. So that it's a kind of reaction on the part of many basic scientists particularly who are scared of these big grants. Even though, in most instances, they're the ones who get most of the money. See, most of the money in this center goes to the basic scientist. You see? It's a peculiar reaction on the part of the scientific community.

SCHANCHE: Was the establishment of the Research and Training Center a kind of umbrella idea to pull all of your research under one roof.
DR. DeBAKEY: Yeah. That's right. But mostly--mostly it was designed to kind of stimulate the work on clinical diseases. So that you get these basic scientists to be thinking about clinical diseases and to direct their attention to it more and more. Try to inspire them and stimulate them by associating with the clinical problem. Now this is what we've done here. Many of our basic scientists are working on basic science activities, but at the same time they're working on a clinical problem. You see? This is what we want to do, so as to get some resolution to clinical problems.

SCHANCHE: For example, I've forgotten his name, but you have a doctor here I talked to--researcher--been here...

DR. DeBAKEY: Arnold Schwartz.

SCHANCHE: Yeah. Right. He's a microbiologist isn't he?

DR. DeBAKEY: Yeah, but he's working on clinical problems, even though at the basic science level. You see.
SCHANHE: So his concern is the heart.

DR. DeBAKEY: That's right. How the heart functions, how it fails, how does it contract and so on.

SCHANHE: Was that. That's a significant step, I suppose, wasn't it?

DR. DeBAKEY: Oh, a tremendous step for us. And you see, there that's eleven years ago and still, in spite of all the efforts we've made, it's the only one. Now, the Rodgers-Kennedy Heart Bill has just passed--has put these centers in the Heart Bill. The intent of Congress now is clear. And we'll ultimately get centers. Look how long it's taken. You see?

SCHANHE: That seems to be the lea-time, doesn't it?

DR. DeBAKEY: That seems to be the lea-time, that's right. And again.. But that's only if you continually persist. Now think of what the lea-time is if you don't persist. Don't perservere. And it does suggest, you know, that there are times when the democratic process is not the best way to get things done. (Laugh.)

SCHANHE: Slow.
DR. DeBAKEY: I'm all for involving more and more people, don't misunderstand me. I believe in that act, you know, but it's not efficient. It's not efficient. This is a good year. I think we ought to spend some time on this particular year.

SCHANCHE: I have some other questions.

DR. DeBAKEY: Yeah. Well, the reason I was just saying --it's getting on a little bit where I'm beginning to get a little weary. And I don't want to...

SCHANCHE: Do you want to cut off?

DR. DeBAKEY: Yeah, and I don't want to get too weary with some of this because this is a good year to bring out...

(PAUSE)

DR. DeBAKEY: It is. You see, with the..this grant really meant a great deal to us because it gave us the opportunity to put together many of the basic sciences to working more closely with us. And when we first..

SCHANCHE: That allowed you to expand and get more people.
DR. DeBAKEY: Yeah. You see, this concept of the center was really developed in a report that we made to the Congress. It was a special committee that was convened for that purpose. This was, I think, what was called the Senate's Consultants Committee. Senator Listor Hill arranged it. And a fellow by the name of Bacauley Jones who was from Atlanta and was associated with Emory University and also with the Woodward Foundation which is really..

SCHANKE: Coca-Cola.

DR. DeBAKEY: Coca-Cola company. was the chairman of that committee and I was a member of it. And this committee was charged with the objectives of reviewing and analyzing the N.I.H. research support. And..

SCHANKE: Was Jones a physician?

DR. DeBAKEY: No, he was an administrator. And it was a good committee. Well balanced with a number of lay people on it. And we can get the committee structure
from the report. And we made some recommendations and among these was the center concept. We conceived this concept. I was on the Council at the time and so I immediately started the discussions within the Council of the establishment of some of these centers. And there was considerable discussion about it—pros and cons. There was always the concern that such projects are too large, can't be managed, too much money. You know, everything to prevent putting together that kind of an activity. Well, I decided I'd test it out. So I came back here and got hold of Dr. Olson and several other people—Hebbel Hoff being one of them. And so Olson convened a sort committee by faculty to discuss this. To my amazement I found that there was a great deal of reluctance on the part of a lot of people in the basic sciences and other clinical disciplines. They were afraid they would be swallowed up. That they would be under sort of a dictator who would run the program—
DR. DeBAKEY: run the research.

SCHANKE: And they'd be swallowed by your Oedipus complex.

DR. DeBAKEY: Yes. And so, I had to do a great deal of persuasion to point out that that is not the basic idea. The idea is to collaborate in an area of mutual interests—being the cardiovascular area. That as far as the individual research programs are concerned they could be just as individualistic as though they were on their own. That it would be structured in such a way that you would have the Board or a committee that would organize to supervise the total program, to be responsible for the dispensation of funds, for the way the research was going, and so on. And we had a great deal of discussion about it and finally most of them were persuaded to join up. Some of them very reluctantly. But Dr. Olson and I persuaded them that this would be good for the school and it was on that basis.

SCHANKE: What was the telling persuasion: that this brought all the disciplines close together without stepping on one another's toes and gave them access to more
SCHANCHE: facilities?

DR. DeBAKEY: That's right. That's right. And so we put together a proposal and submitted it. It was reviewed by a study committee. They sent a project sight group down here. Finally, it went to the Council and it was approved. So that's how we got it. And as I've said before, it remains the only one, in spite of the fact that we have lobbied for it in Congress. Congress has appropriated money for planning these things. But they never have appropriated specific monies for funding. We've recommended it in the Commission on Heart Disease, Cancer, and Stroke, again. It still hasn't been done. And now the Heart Bill has come out recommending it. So hopefully it will ultimately come into being. But you see..

SCHANCHE: When it gets funded?

DR. DeBAKEY: Yeah. Ten or twelve years have gone by. And you'll notice it takes ten or twelve years to get things done from an original concept.
SCHANCHE: What have been the accomplishments, Mike, and the benefit values of it?

DR. DeBAKEY: Oh, it has done a great deal to strengthen the basic sciences. As a consequence of that we Evans Horning. We never would have gotten him any other way in the Lipid Institute. We have Tony Gotto whose. The two outstanding people. We have in the cardiology field, we've gotten new blood in the cardiology--new strength there. We have Arnold Schwartz in myocardial biology. We have the immunology program, you see. It has strengthened our whole basic science disciplines. All of them. And it has improved the quality of both the research--the research training and the quality of patient care.

SCHANCHE: Have there been any noteworthy discoveries where in its absence it perhaps wouldn't have occurred?

DR. DeBAKEY: Well, it's hard to say that. whether they would not have occurred were it not for this. But, I would say this that the total quality of the research endeavors
DR. DeBAKEY: would not have occurred without this. No question about that in my mind. But in terms of any great breakthroughs and discoveries, there really...it'd be difficult to point at...point out to any single one. This is true in the whole cardiovascular field, really. But I think it was... And I think the fact that many others are trying to develop similar things...

(Phone)

DR. DeBAKEY: I recall a time when they wanted me to come up to New York and develop a cardiovascular center at the New York University Hospital.

SCHANACHE: At N. Y. U.

DR. DeBAKEY: Did I tell you about that?

SCHANACHE: You told me, yeah.

DR. DeBAKEY: But that's an example of the fact that others want to emulate this. And they've come and looked--reviewed our program with that idea in mind. So it has meant a great deal to us. There's no question about it in terms of up-grading the whole service and it's meant
a great deal to the College of Medicine, because it's up-graded the basic science departments--
strengthened them in every way.

In that report, if you want to skip back to page 72, you mentioned the priming of the pump with 5 percent dextrose solution as one of the most important advances in the last five years.

Yeah, well I think this yes was a significant advance because.. Now, I think it's important to recognize the fact that this was not really initiated and discovered by us. This had been discovered by others. But we quickly seized upon it and developed and did some studies. And Dr. Beall actually did the studies. Experimental studies and then we applied it clinically very quickly and found that it worked very satisfactorily.

What had been the problem before--not only that it was wasteful of blood..?
DR. DeBAKEY: Well, it took.. Yes, it took about 1500 cc. --three pints of blood just to prime the pump. Secondly, the hemodilution is apparently a better way of doing the cardio-pulmonary bypass. You have less complications during the time with blood that partially diluted. And.. and I think particularly for the.. with the use of the disposable bubble oxygenator it has proved particularly satisfactory. So, it has, no question about it, been a good clinical improvement.

SCHANKE: On page 74 you mention some further advances in Dacron grafts.

DR. DeBAKEY: Well, this was.. You see, this was a study of the long-term, sort of long-term study of what happens to grafts. And we..

SCHANKE: This had been your first opportunity to follow up.

DR. DeBAKEY: Follow them up clinically, you see. And we found this was really in a sense the clinical evidence of these grafts really could function for a long periods of time and in that sense, we totally demonstrated that these
DR. DeBAKEY: grafts would do what we had hoped they would do for a long period of time. Now we did all kinds of things in order to see whether we could improve the grafts. But you see, we didn't.

END SIDE B.