

ASHRAE Leadership Recall (formerly Leadership Recalled)

Transcription

Interview of: Chuck Sepsy

Date of Interview: January 1993

Interviewed by: Charlie Henck

Charlie Henck

Good afternoon. My name is Charlie Henck and I'm a member of the Historical Committee. As part of the Society program to conduct Leadership Recalled interviews, today we are in Chicago for the 1993 winter meeting. It's our pleasure today to interview past presidential member Chuck Sepsy who was president of Society, 1980-1981. Chuck, welcome to our interview.

Chuck Sepsy

Thank you.

C.H.

We're going to start off Chuck, by having you give us a little background about yourself, your education, your work experience.

C.S.

Okay. Born and grew up in Rochester, New York and after high school I joined the Air Force and became a pilot. Flew B-17 bombers and B-29 bombers in World War II. And after that I came back and by the GI bill I was able to go to school and went to the University of Tennessee for undergraduate work and then back to Rochester at the university for my master's degree. And then from there I went to Ohio State University where I worked on my PhD. And I liked Ohio State so much, mainly because of the football team, and we stayed there. And I've been a professor and research supervisor for some 39 years at Ohio State University.

C.H.

So you like staying with the Woody Hayes and the football years.

C.S.

Woody Hayes and I, we both arrived at Ohio State in June of 1951 so.

C.H.

That's good, that's good. So what kind of projects were you involved in at Ohio State throughout the years?

C.S.

Eventually I became a full professor and director or research in the area of environmental control which was heating, ventilating, and air conditioning as we know. And I was responsible for all the graduate and undergraduate courses that were taught in that particular area and during that period of time we had a number of really outstanding projects, research projects. We started off with some fundamental studies, frost formation on extended surface heat exchangers for the Edison Electric Institute. And also

that was a sponsored ASHRAE project. One of the first ones, back that was about, '57 I guess, it was something like that. Then we had a very extensive one for Columbia Gas where we studied fuel utilization in gas fired commercial buildings. Then after that we got into an extensive project. In fact at that particular time it was the largest project that ASHRAE had ever funded. It was something close to \$250,000 if my memory recalls. And it was a field validation of the algorithms of the ASHRAE heating and cooling load programs. And what we did, we took a building on the Ohio State campus, it was completely instrumented with some 100 data points, complete weather station on top of the building and we measured for an entire year every 15 minutes the various points of measurement. Air flow, temperatures, so on and so forth, energy requirements and so forth for the buildings. It was all put on computers and in turn then we used that to develop a program where we could use it in conjunction with the ASHRAE algorithms and we came out with a validation of the program that the Department of Energy and at that time it was the National Bureau of Standards started with and then from there went to the DOE. And with the validation of the DOE One program. And that was a very interesting project. One that was very basic in validation of the heating and cooling loads that we have for the ASHRAE program. From that we went to a very extensive one for EPRI, which is the Electrical Power Research Institute where we had eight residential homes in the Columbus area. These were completely instrumented, some 30 to 50 points on some of them. In fact my house was one of them. It was a one story ranch style house. We had a computer, an IBM system 7 computer in the garage and every time the door opened or my wife would open the refrigerator door or turn the stove on or the oven or something the computer would know it. And we also had a complete weather station in my back yard. But we had eight homes. They were different styles, different orientations but they were all living, all had families. There were two adults, two children of teenage, so they were 10-18 something like that. In addition to that we had what we called the control house. It was just an empty house. We actually had it built. And we completely instrumented and we used that as the control and we measured it against the actual building energy use for an occupied house. When that was completed we then went to nine different cities in the United States and we took eight homes once again through the local utility, electric, local electric utility and then we also then set up measuring devices not by computers but by other means of measuring about 15 different points of energy use in the residential homes. And all of this information was fed back to Ohio State, which we analyzed. And the purpose of that was to get a geographical differential and so forth. That was a, we did that for an entire year so we got heating and cooling loads as well. And it resulted in 10 or 12 ASHRAE papers. This was done, an ASHRAE project, but certainly ASHRAE is very much interested and tuned to it and very much involved in one way or another. Those are some of the more important research projects that were done in 1974, built the first solar house in the state of Ohio. It was done through cooperation of all local industries and industries such as PPG that gave us the solar collectors and so forth. And we built the house and it was open for the Ohio State Fair. And we had thousands of people going through it. The house was completely instrumented again. We had an IBM system 7 computer in the garage measuring all the data and so forth. It was an empty house during the period of time when the fair was not going on. Eventually when we were through with our project the fair director moved into it and I guess he's still living there as far as I know. That was another interesting project, but a demonstration project.

C.H.

Are they still measuring any of the data on that house?

C.S.

Not in that house.

C.H.

Are the solar panels still there?

C.S.

No, the panels were taken down and were converted, mainly because they were having so many leaks around the panels. Not the panels themselves but the roof itself. We had finished our project and I guess the panels stayed there for four or five years and then they took them down. But we had walked away from the project at that time.

C.H.

Are you seeing any additional research today in the area of solar energy?

C.S.

Emphasis is lost. The emphasis that we had in the 1970s and so forth and there was very little going on in that last year, I think two years ago we did pretty much a survey of activity that was going in the solar field and it was very, very limited.

C.H.

How'd you get started in ASHRAE Chuck?

C.S.

Well I guess I have to attribute that to one of my old professors Aubrey Brown. He was one of the co-authors of the first heat transfer book written by Brown and Marco. And he was an ASHRAE director many, many years ago. And he took me to my first ASHRAE meeting as a graduate student at Ohio State University. He took me to Pittsburg and we took the train over and that was my first meeting of ASHRAE. Then of course teaching in that area is really in my interest.

C.H.

So from there you went to your first meeting and then you got involved in Chapter activities in the Ohio area.

C.S.

Yeah very much. I was through all the chairs in the Columbus chapter and president and from that I went as Regional Director of five and I served in that position for three years. And after that I became a Director at Large and as Director at Large I was involved in that for three years as well. As a Director at Large, you know you're responsible for, at least we were at that time, for various committees. Could be a program committee or could be in a research and R&T committee. But we, DAR's are responsible for those areas.

C.H.

And what kind of technical committees have you been involved with in ASHRAE over the years?

C.S.

Well I was on the Heat Transfer Committee, Thermodynamics Committee, the Duct Design Committee, one of the heating and cooling load calculations but I forget the number. We've changed a lot of the numbers over the years but the heating and Cooling Load Calculations Committee. That's TC 4.1, could be wrong on that.

C.H.

Probably applies back into all the research you've been doing over the years. Getting into your year as president of the Society, what was your theme for that year?

C.S.

Ok, the theme was: "Continuing growth through professional development". And a number of years ago we had a very active group in ASHRAE. They wanted to take the "R" out of ASHRAE and we have it today the "R" in ASHRAE. We have our ASHRAE refrigeration cocktail parties and so forth. And we got the idea, why not take the "E" out of ASHRAE and use this for education, engineering, and energy. So we made a theme around those three particular things. Particularly in education, being a professor, very much interested in young people. And I think our source of man power is definitely going to be our young people and we have to replace people, like myself, who are going to be retiring soon. They have to come in and take the helm of the ship. So I was very strong in getting young people involved in ASHRAE, young graduates in the local level ASHRAE chapters and then also in the national level. I think a committee was formed, Young People in ASHRAE. And it was a standing committee for a while. Also along that same line un-sourced, untapped I should say, is our young female engineers. More and more a percentage of women going into engineering is increasing. You know, 20 years ago they were one percent. Now it's up 10, 15, 20 percent. Some of them even higher than that like particularly electrical engineering. And these are, this is a real potential for ASHRAE to get more young people in to ASHRAE and so I was very much in favor of getting the women in ASHRAE more involved. Then of course in energy or engineering we took a very strong stand on continuing education through professional development. And during my term as president we started a lot of the programs in professional development that are very strong now and are being presented all over the country on controls, heating and air conditioning, load calculations and so forth. And then of course on energy, the third "E" was energy conservation in buildings, existing and the new buildings and of course during that period, I think '81, we had the first revision of 90.75 of about three sections.

C.H.

What was happening in the world during your time? In '79 we had another oil shortage. What was happening in the early 80s and '81?

C.S.

Well we were still getting over that shock of long lines at gasoline lines and so forth. That was one of the reasons we really push for energy conservation. We felt that rather than alternative sources of energy such as solar and geothermal and so forth, the impact could really be on energy conservation and we demonstrated that in a number of buildings where we can save 30, 40, 50 percent of energy being used. Just about that time, about '80 or '79, the president of the university called me and said, Sepsy you're supposed to be an expert in energy conservation. I have a utility bill that's 3 to 4 million dollars here. I have 150 buildings on this one campus alone. I want you to do something about it. And so when he tells you this you don't say, no sir I'm busy. So really what we did we set up a really strong committee consisting of two portions. One is the service department set up on campus which are the people involved in the day by day maintenance and so forth and repairs and so forth. And then in the mechanical engineering department we have what we called the environmental control group. We were involved in the calculations, the analysis and so forth. And we went through the campus building by building. We took it completely apart. We went in, we had our field people going in making measurements of where energy was being used in various methods, air flow measurements, air

distributions and so forth, investigating the thermal breaks and investigating the structure of the building itself, the doors, windows, and so forth. And we would make recommendations, well we would do our calculations and that first and then from that we would make recommendations. We can save X amount of dollar doing this, X amount of dollars by doing this. And so the first building that we did was very interesting. I think we spent, our recommendation was to spend 31,000 dollars, which is not very much in today's monetary world. That was like 31,000 and we told them we'd better get it paid back in about a year and a half. And this had to go to the board of trustees and they voted on it. They said well, we'll give them a chance. We'll let them spend 31,000 and we did and we got a pay back in about 8 months. So this, we were ecstatic over this. Ah, that's great, you know. Let's do it some more. And so we went to the next building. And we went through all of the major buildings on the campus during that period of time in the early 80s and so forth. And really we are one of the leading campuses throughout the country, we have administrators coming from all parts the country, talking with president and other people and groups sometimes and make presentations sometimes and what we've been doing on the campus. And we really got the whole campus involved as well, another aspect of it as well. You turn your lights out in the classroom type of thing. You don't open the windows if you're air conditioning. It's simple things, like leaving the doors open or propping the doors open. So we tried to get campus involvement with students and faculty. I think it was very successful.

C.H.

A lot of just educating the people who were using the building.

C.S.

Absolutely.

C.H.

Okay, what significant accomplishments happened during your term as president of Society?

C.S.

Well we had a number of things that happened. I think that perhaps one of the most difficult was the fact that, when I was still an officer in the Society, we found out that we were so overcrowded in our New York offices and we were in the engineering building and I think we occupied around 12,000 square feet. And staff was about 40 or 50 at that time. And it was so crowded that they had some desks in the corridors even. And the storage room was in the corridor. Piles of books and so forth. So what are we going to do? So our Executive Committee went to the Board and said well, you know we can move across the street and get some room there. But then we have two, how does A talk to B when they're over here. Well we can move outside the city. We can go to Long Island. If we could go to Long Island, why don't we go somewhere else. And so we set up a committee and they investigated what cities would be best to go to as far as availability of man power, ease of transportation and all the other factors that go into making a, they did a super job on it. They came back with 3 cities, Washington D.C., Dallas, Texas, Dallas Houston area, that area there, and then Atlanta Georgia. So the committee that for them went to, I was not on that committee but I was on the Executive Committee then. They went around and they looked at the various availability of buildings and so forth and came up with Atlanta, Georgia. So we started looking for property in Atlanta, Georgia and we found a lovely property in the north east section of town out by I85 and Tullie, I guess, I think that's the road. And so we found the property and when I was president, at a \$2,400,000 check I presented to the owners representative and we had a new building of some 32,000 square feet, a little bit more than we needed. But then we had

people up here and we had this empty building down here. So we had to move them and of course if you know New York, there's no place like New York City, you know. I'm not going to move. So out of about 40, 50 staff, I imagine we lost 15, 20. Director of Standards, membership, director of membership, and so forth. They just didn't want to leave their family and ties in New York City and a number of others of course, high level members of our permanent staff. And our first move was to move the research and technical department under the leadership of Richard Wright. Richard, his first day aboard was the day that I became president which is in 1980 at the Denver meeting, and it was his first meeting. He moved, he took his department down to Atlanta in January of 1981 and then by June the rest of the staff left. And of course we had to have some replacements for some of these people. One of the important ones was, I guess, Andy Boggs at that time felt that he had been with Society for so many years and he wanted to retire. So we started looking around, this was before I became president, I was President Elect then. And we set up a committee and we interviewed a number of people all over the country and we hired a new director, Executive Director. Frank Coda was then hired during my period as president and I think the title was assistant executive director because Andy was going to stay on for a year or so to help in that transition period. So Frank Coda has now been with us for some 12 years and also Richard Wright entering as Director of Technology and then we had for Director of Membership a young lady who's no longer with us, Andi Abbott. She has married and left our organization. It was a quite a move to go from New York City and to relocate but I will say I don't think any of the people that did relocate, they just so happy that they moved to Atlanta. They like the city, the environment. They like the, they just seem to be very pleased. I hope they're saying it as a truism.

C.H.

It's probably a different lifestyle, slower pace than New York. I mean I think of the big apple as being fast paced and I think of the south being slower, more laid back in appearance, very more relaxing.

C.S.

So you were also asking about some of the other things. One of the fun things was it was the first time that ASHRAE had had a meeting outside of the continent of the United States with another society. And we had the CIBSE, C-I-B-S-E, which this Chartered Institution of Building Services Engineers which is the counter part of ASHRAE in Great Britain. And ASHRAE, we had a joint conference May 10-14 1981. And we attended that and there were some 200 members that were in attendance. We had 62 technical papers. It was a very significant event as far as the history of Society goes because it's truly showing to the world that ASHRAE is an international society. So that was very important and also was a memorable experience for me going to Great Britain and joining with our overseas members. We have, of course, a lot of members in Great Britain and Ireland and so forth.

C.H.

It's really interesting how today there are a lot more international members of ASHRAE and how there are a lot more different meetings all over the world that ASHRAE's involved in. That has really grown tremendously in the past 12 years. It really has. It says a lot for ASHRAE in the programs and the research that they have been doing.

C.S.

Another thing that came out that was quite interesting during that period of time of our presidency was I mentioned energy conservation. We always felt in order to make this more important to the practicing

engineer that there would be some kind of award to show his excellence. Not in a monetary way but as a peer review and so forth to say well here this guy did a real good in this design. So we instigated our first ASHRAE annual energy award in that year. And it was set up for three different categories. It was institutional, commercial for new construction and the other was institutional commercial for existing buildings and then industrial buildings. And there were first, second, and third place in each of these three categories at the meeting. In Cincinnati we had awards and plaques and so forth. We got our Director of Publications and his staff to come up with a beautiful logo for energy conservation award and so forth and they established a plaque and it's still going on of course. It was a first and we're certainly very proud of that.

C.H.

That's good. What else was happening during your year? Anything else you can think of that was significant? You had, your first meeting was in Denver and then you went to Chicago for the Chicago meeting. And then the annual meeting was back again in Cincinnati.

C.S.

Back in Cincinnati. I think those are pretty much the highlights that I can think of right now.

C.H.

During your term the Presidential Award of Excellence, did you make any modifications to that you recall? Your emphasis was on education you said during that time.

C.S.

Right. We did give extra points and so forth for new members in at chapter level. But it's pretty much the PAOE award pretty much stayed the same. It was the changing of the point values and so forth and nothing really significant in that area.

C.H.

What personal accomplishment do you feel you had being involved in ASHRAE?

C.S.

Oh, it's been a tremendous experience. I'm glad I had the opportunity to serve as chairman. Some of my best friends are ASHRAE people and it's always a real pleasure to, you know our annual, semi annual meetings to see them and re-visit them. Some of them are such close friends we see them during the year. We have golfing vacations or something like that. It's been rewarding in many ways besides professional reward.

C.H.

What kind of Society activities have you been involved in since your term as president? I know that once you become a presidential member they don't just let you off the hook. I'm sure you're still involved in things.

C.S.

No, no they certainly don't. They want to keep you involved. Well of course after my presidency you're very active on Nominating Committee, you're chairman of that by succession. And then the Long Range Planning Committee for a number of years. We started a program, shortly after that which we started as professional development. It was one of the items I mentioned to you. We had these professional development courses that I spoke of earlier. In addition to that we wanted some type of home study program. And we started what we called the ACES program. And an ACES program was really a course finance program that you could get from ASHRAE and we'd recommend reading assignments and so

forth. And in turn you then had a questionnaire that you'd fill out and so forth and would send it in to Princeton University. Statistically they'd do the grading and so forth and sent your grades back to it. And if you felt that you saw you were inefficient in some areas well then you'd have a chance to go back and review that to do more reading and so forth and you could retake the test again if you wanted to. And I and about seven other people I guess were instrumental in helping these tests. We had a lot of fun doing that. It was very interesting to see it develop. It was called the ACES program which is no longer in existence but it was in the early 80s.

C.H.

Can you tell me about some of the people that you've encountered along the way in ASHRAE and some of the influence they've had on you? You mentioned your original professor at Ohio State who got you interested in ASHRAE. Who else along the way has had a big influence on you?

C.S.

Well right out of school I had the opportunity of meeting and spending some time with Carl Ashley who was director of research for Carrier. He's really a giant in research and development and certainly one of our great ASHRAE members, people like Jordan and Priester who I had the opportunity to work with. Burgess Jennings is another one. Clark Humphrey. I can name a number of people that I think had influence on my direction and interest and goals.

C.H.

What kind of advice would you give to a young person today about ready to get started in their career? About their career in engineering and also about ASHRAE.

C.S.

Well of course as a professor we get this all the time. They knock on the door and say, you know I'm a freshman here and I don't know if I want to be an engineer or an economist, what would you suggest and that type of thing. So you sit and talk to them and you try to guide them. Everybody doesn't need to go to college. As a professor I can say that very strongly. But we do need both types so people are not fitted going to advanced schools, college or in the grad study. But the ones that do, and if their interested in engineering they have a direction and so forth, you know, we have counselors, we open the door for them, at least at Ohio State, they're welcome to come in and talk and help in any way they want. I had a young son that, I wanted to be a medical doctor. They're the ones who make all the money. And he turned out to be a mechanical engineer and of course I said "You're going to go to Ohio State". And he said no I'm not going to go to that school. I'm going to go to one of those eastern schools, so he picked Cornell, graduated from there. And he went on and got a job as a consulting engineer in Philadelphia and now he's president of the Philadelphia chapter. And he was just saying to me, you know dad I'd like to stay involved in ASHRAE. He said, what do you think I should get into? Would you recommend some TCs, some technical committees that I could get on that would be helpful to me and be a help to them. Anyway so we had a nice long talk over that. Another very important item that happened during my presidency was formation of our council structures for our Society. Previously all the issues were brought to the Board of Directors and you mentioned the fact that the Historical Committee needed X amount of dollars to do certain type of work. Well in order to get that approved it went before the Board of Directors. It's not a large figure you were mentioning, but something that had to be approved by the Board of Directors. We were doing a lot of committee work on the Board of Directors and it just ate up our time and we'd go to some twelve, one o'clock in the morning sometimes

at our board meetings trying to accomplish all the work that needed to be done. So the idea was right then and the decision was made why don't we go into what we call the council structure. And in council structure we set up five councils. One is the Technology Council, the Publication Council, Administrative Council, Member Council, and Regions Council. And each of these councils were responsible for the activities of their committees such as R&T Committee, technical council. Or for administration, publication is an example. It could be for the new Handbook, detail for the new Handbook. And the councils then, meeting separately with their committees that they were responsible for made the decision, they discussed the items and so forth and votes were made and a vote was taken and they in turn then came to the Board of Directors and report. Now we put some restriction on the council like, and these restrictions have changed and so forth I think. Some of the early restrictions like Research Council cannot spend more than say, 100,000 dollars for any research project. You had a research project over 100,000 dollars, I could be wrong in that figure. It could have been fifty, I don't recall the number. But that was the limitation and if you wanted more than say 100,000 dollars you had to directly to the board and then that research project was discussed. Why they needed that kind of money, what they were trying to accomplish and so forth. And it became a board function rather than a council function. And that's true all the way down. In the Regions Council they had some problem in chapter operation, they wanted to make a change, well it was settled in Regions Council. So the council chairman then came back and made a report to the Board of Directors of this is what we decided and then in turn we vote on it, yes or no type of thing. But we didn't have to take the time to go over and make the detailed discussions of why they came to that particular conclusion.

C.H.

It sounds like base on that, you really freed up a lot of time for the Board of Directors.

C.S.

Absolutely.

C.H.

You could get involved in more pressing issues.

C.S.

Right. Of course the length of time that the board now is in session has been reduced because like the president or the vice president and presidents and treasurers and so forth, they're involved in councils. They're either the chairman or vice chairman of these so but five are going at one time instead of just the Board of Directors. And it's been extremely beneficial and its streamlined our operation. We're very, very happy about that.

C.H.

What else did you accomplish in your term as president?

C.S.

Well there were a couple of items that came in. I remember the director of ARI, Air Conditioning and Refrigeration Institute, spoke to the Executive Committee one time early in my presidency and said we have a problem particularly with the ozone layer and the chlorofluorocarbon issue. He said there is a lot of activity going on in Congress about the depletion of the ozone layer and he said I want to bring this to your attention that I think we should be concerned about it. So one of the first things I did was set up a blue ribbon committee of outstanding researchers in the area of chlorofluorocarbons. And they met two or three times a month. They presented a position paper to the Society which in turn went to the

Board of Directors and then we in turn approved it or made changes and so forth and it became a position statement or a paper of our Society. Now that was one thing that I felt was very good and of course out of that came of course our research projects and direction to take in addressing the chlorofluorocarbon issue, which of course since that time has become voluminous and very, very important. Another item that was extremely important at that particular time was the Legionnaires Disease. Remember we had a lot of people dying, that had died in Philadelphia and then in Pontiac and they felt it was due to air conditioning equipment. We felt, the board and I as president that we ought to look into this. You know if our air conditioning equipment is causing this we should be doing something, setting up standards, maintenance suggestions and so forth. So once again we established a blue ribbon committee to look into the issue of Legionnaires Disease. And we went outside of Society and got people in that particular area, botanists, MDs, and so forth, particularly from the control disease center in Atlanta, Georgia and they in turn came back with a very meaningful position paper of Legionnaires Disease. What we should do. And from that came standards, research projects, and so forth which have been very, very meaningful in that particular area. Another thing, this was all going on, the chlorofluorocarbons, Legionnaires Disease, we really don't know what's going on particularly in Washington particularly when the director of ARI came to us and said we better start looking at this chlorofluorocarbon issue. We said, you know we really ought to have a presence in Washington DC so we established under my presidency, the Washington office. We hired Jim Cox from Texas A&M, Dr. James Cox, outstanding administrator and professor, and he went to Washington DC and he's still there. His role is to, not to be influential of legislation and so forth but to be our representative and report back to us of what is going on and so forth. If they need expertise we have expertise in refrigeration, we have air conditioning, expertise in ventilation and so forth. And we would help you with these problems if you need expertise in that particular area. And the Washington office has been very, very successful. It's grown. I think we have three or four members on that staff now. We've outgrown our old offices. We've moved to new locations now but it's a very important part of our Society.

C.H.

It sounds like you got quite a bit accomplished during your term as president.

C.S.

Well it seems like it but you know there's a lot of us, everybody before us and people came after to make sure, we did our bit for one year.

C.H.

It's a team effort.

C.S.

That's right, absolutely.

C.H.

I'd like to thank you on behalf of the Historical Committee for participating in this Leadership Recalled interview. And once again thank you Chuck Sepsy.

C.S.

Thank you.