

**NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT
ORAL HISTORY TRANSCRIPT**

HARVEY L. HARTMAN
INTERVIEWED BY SANDRA JOHNSON
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JOHNSON: Today is May 7, 2002. This oral history with Harvey Hartman is being conducted in the offices of SIGNAL Corporation in Houston, Texas, for the Johnson Space Center Oral History Project. The interviewer is Sandra Johnson, assisted by Kevin Rusnak and Jennifer Ross-Nazzal.

I want to thank you again for joining us today to share your history and experiences during your more than thirty years working with NASA in the JSC Personnel and Human Resources Offices. I want to begin by asking a little bit about your background, where you went to college, and how you got started in this direction.

HARTMAN: Okay. I grew up in Nebraska on a farm, Seward County, Nebraska, eastern part of the state, and wound up going through Seward High School, a smallish high school, graduation class of about seventy-five folks, and then on to the University of Nebraska in Lincoln, and I have a degree in political science from the University of Nebraska. So that's kind of the early start of it.

JOHNSON: When you left the university, you joined the Navy right out of the university?

HARTMAN: While I was at the University of Nebraska, I was part of the Navy ROTC [Reserve Officer Training Corps] program, and that provided a commission upon graduation, and I went to

active duty. I had a two-year commitment. I actually stayed four years at that point. I initially went to the East Coast to drive ships for Uncle Sam, and was assigned to the USS *Mullinnix*, a ... [Forrest]-Sherman-class destroyer there on these East Coast based out of Norfolk, Virginia, and spent a little over two years there.

At that point I was due to be released from active duty, but I extended for an extra couple of years but went back to Nebraska. You wouldn't think the Navy would be there, but it was. The Navy was really fairly flexible in a lot of ways around that. My father had just died, and I really needed to be back there around a little closer to home to help my mom and my brother with what we were going to do with the farming operation and things like that. So I said, "I really need to go back to Nebraska."

The Navy said, "Well, if we find you a place in Nebraska, would you consider staying for a couple of extra years?"

And I said, "No chance of that." But they actually came up with two possibilities, and one of them was recruiting duty based out of Omaha, Nebraska. So I spent a couple of years doing officer recruiting in the Midwest, Nebraska, Iowa, South Dakota, a little bit of Minnesota, that sort of a thing, for a couple of years before I left the Navy then at that point.

JOHNSON: And what made you decide to leave the Navy?

HARTMAN: That was a hard choice, really, because the Navy was really a very good experience for me. It was the kind of opportunity that gave you a lot of responsibility very early on, taught you a lot of leadership skills, a lot of good life skills that you learned out of that whole thing. I loved it. I really had a good time. I liked going to sea. I liked sailing ships. I've never been

seasick a day in my life, so I must be a match somehow. The Navy gets a lot of good folks out of the Midwest to be sailors.

But as I look at it at that point, my next assignment in the Navy, the offer they made me was a good one for a junior officer at that point. It was to be the executive officer on a minesweeper based out of Yokosuka, Japan, a good career assignment in the sense of a growth. But I was looking at probably the next three tours were probably sea tours, and we'd just had a brand-new one-year-old at home, and all of sudden, you started thinking about, "Wait a minute. Is this really what I want to do, and what I want to put my family through?" and we elected to [say] "Maybe there's other things we ought to explore."

So the Navy was very, very good to me. I learned a great deal. In fact, I stayed with the reserves for another ten years after that. In fact, my deal with the Navy, at least mentally my deal with them was, as long as you let me go to sea two weeks a year and it's fun, I'll stay with it. They stopped doing both, so I left the Navy reserve at that point.

JOHNSON: In 1966, you took the Management Intern Option Federal Service Entrance Exam. What prompted you to do that?

HARTMAN: Well, as I said, as I was looking at my options as my second tour with the Navy ended. I looked at a variety of things. With a political science degree, you immediately look around and say, "Gee, where could you work with a political science degree?" I took the law school test. I had been accepted at the University of Nebraska law school, and, in fact, I even had a small scholarship for that purpose, and I'm ever so grateful that I wasn't led to go there. I [would have] been a terrible lawyer. I really would have been. But we gave serious thought to

that, and we were looking at other possibilities. The Navy assignment was a very real possibility.

But government service had always been an interest to me, and that appetite really got whetted as an undergraduate student, and my hope is that maybe you had the same experience, and I hope this for everybody, that somewhere in the course of your undergraduate career, there's somebody who really lights a fire in you and a passion about something that you're good at and that you care about.

I guess when I was a sophomore, I had a political science instructor, who also was a state senator, and one of the most powerful state senators in the state of Nebraska, who really was a patrician politician. He was very well off, Senator Richard Marvel from Hastings, and he had traveled widely, and he was well educated and that sort of thing, and he just thought it was one of his duties, was to not only be a legislator, but to teach. He really made it come alive. It wasn't just a book. He matched the politics that was going on in the state and in the area at that time with the theory that you were finding in the books, and that really kind of excited me and got me moving down that road and probably got my interest in government. When you see good role models like that, you say, "Yeah, I'd like to be able to do something like that."

So that got me thinking about that, and at that point that was 1966. This was a year, really, after the big buildup in Vietnam, and the government was expanding rapidly at that point. That was [President] Lyndon [B.] Johnson's Great Society time, so we were in the guns and butter business, and the government was expanding not only on the military front, but on the other sides as well. So they were out looking for lots and lots of folks. So there was a lot of publicity about that, and in the recruiting business I'd spent a lot of time on the campus, a lot of time with placement offices, a lot of time with recruiters from other organizations, and, in fact,

had run across NASA recruiters in the course of my travels, too. We spent some time on the same campuses, and that kind of got me intrigued about it. So I checked that out, and at that point what you did was you took a test. Not much of that goes on anymore, but you actually took a written test to jump the hurdles, to be considered for government employment.

JOHNSON: Can you tell us a little bit more about that process, of taking the test and you had to do after that?

HARTMAN: It was, you know, you're not that far from being out of school, so taking a test is, how hard is that? That's probably one of my core competencies, is to be able to take tests. So that part of it wasn't that difficult. The one piece, though, that I do remember was that they had an oral interview process that went with that, except it wasn't an individual interview, much like you and I are having; it was a group interview. There were a couple of three panel members from different agencies, and I think every agency must have ponied up a couple of three interviewers, and they put us in teams of, like, six or eight or nine candidates in the same room at the same time and interviewed us all together. An interesting interview approach.

I guess the theory behind that was to not only watch you individually, but to see how you worked in a group kind of a setting. I'm not sure I would recommend that today, and, as a matter of fact, I don't think I ever did that again. But it was kind of an interesting process, and out of that I must have said something right or done something right or didn't do something wrong, and screened into it at that point.

What was happening at that point, again, was because the government was growing so rapidly, once you screened in through that process, all of a sudden the offers started just flowing

out from everywhere. I think I had probably somewhere between twenty-five and thirty job offers out of that, the kind of thing that people thirst for right now when maybe the job market isn't quite so hot, and most of them were cold ones. It was, at that point, a telegram or a letter that said, "We're proud to offer you a job," you know, almost "Dear Occupant, We're proud to offer you a job." Some of those were from agencies you said, "What is it these folks do, and why would they be interested in me?" But one of them was the National Aeronautics and Space Administration, and that was interesting.

The other reason, I guess, that matched up was maybe even at that point—I probably hadn't even refined it in my thought process that much yet—but we pretty much had a WOM strategy at work: West of the Mississippi. We had lived on the East Coast. We'd been in Virginia. We'd been up and down to Washington a few times, and we'd kind of decided, "Hmm, I'm not sure that that's where we want to go," although that's clearly where most of the jobs were. Since Houston [Texas] was west of the Mississippi, that was a nice fit, along with just the fact that at that point NASA was an extremely attractive employment opportunity. It was where the action was in government.

JOHNSON: And you mentioned that you had met some NASA recruiters before that, so—

HARTMAN: Right, right. So you knew a little bit about that, and you said, "Yes, this is intriguing. This is doing something that makes a difference. These are good folks. This is about doing things well. It looks good." So all that kind of dovetailed together.

JOHNSON: Quite a change, Houston from Nebraska.

HARTMAN: Yes, it was. I have often told the story that we'd never been to Houston before in our lives. We rolled into Houston in August in an un-air-conditioned car, with a one-year-old crying in the back seat. Probably our lives were saved by the fact that my wife had an uncle and aunt who lived here. He was a Texaco executive, and we stayed with them for the first week. We'd probably turned around and driven right back out of town if it hadn't been for that.

In fact, I've told folks that I told my wife, Carolyn, at about the end of September, I said, "Look. It's really been bad. But if we can stay just a year, it won't look so bad on the résumé." But by the end of that year, we had been hooked on the work, on the people, on this place, and Houston has been home for us ever since.

JOHNSON: What were your impressions, before you came, of the Manned Spacecraft Center? How did you think of it? Once you got here, was it what you thought it would be?

HARTMAN: Yes, I think so. As I said, I think NASA was very high-profile at that time. The programs that NASA was working on looked challenging. They looked exciting. It was about doing things well. There was a lot of energy around that. The country seemed to be very interested in supporting that sort of a thing. So all my preconceptions fit that, and it really matched up from the time that we got here.

As I say, we got here in 1966. The site had been built a couple of years earlier. So here's a brand-new campus with little pine trees about that tall all over the place. So it's brand-new facilities, lots and lots of young people engaged in doing something exciting and working very hard at it. So, no, I think that all matched up pretty well. It really did. The kinds of people you

ran into very early on were people who you felt had the same kind of motivations that you did, to do a good job and to make a contribution.

JOHNSON: Well, you began your year as an intern, and it began by rotational assignments. Is that correct?

HARTMAN: Yes, the way I came to NASA was part of this intern program, and a part of that deal was the first six months you just spent in one-month rotational assignments in different organizations. At that point, we may have had a little more luxury of having a little more people capability, and so you could spend a little time growing some people. There was a class of, well, I think it was, like, a dozen or fifteen. It was one of the larger ones. They tended to vary anywhere between eight and a dozen folks, something like that.

We rotated to different organizations, procurement, the resources organization, flight operations, that sort of a thing, to get an appreciation for what the work was like there, what was expected of you, for them to get a little look at you and say, "Hmm, is this somebody we'd like to add as part of our team?" that sort of thing. Then at the end of the six months, you put together your wish list of your priorities of what you'd like to do, and the organizations kind of said, "Yes, this is who we'd like," and generally matches were made, and you wound up going to work then for the next six months, in most cases, for your career position in the area that you had chosen.

It was a good experience. It gave you a chance to meet lots of people and to see different aspects of what was going on here at the Center at the time.

JOHNSON: So did your wish list match up?

HARTMAN: It did, although I have to tell you, initially as I came in here, I thought, well, really, what I want to do is finance. I think that's where I ought to be. I've looked at the papers, and, boy, all the job offers are to be a controller, to be a financial wizard. That looks like that's really where there's careers and there's money. But I wasn't very good at that, and I really didn't much like it. Apparently it wasn't a fit from their standpoint either.

But one thing I was interested in and had some experience with was dealing with people. So there was a fit there. I really liked the people that I worked with. So I was led to be in the right place at the right time. So my choice was to go to work for the personnel organization. At that time Jack [R.] Lister was heading that, and it really was a good match.

JOHNSON: What was your first assignment?

HARTMAN: I wound up being a personnel specialist supporting the flight operations organization, headed by that unknown aerospace engineer by the name of Christopher Columbus Kraft, Jr. He didn't stay unknown very long. Truly a special, special leader. But I supported a couple of organizations within Flight Operations, the Mission Planning and Analysis Division, and the Flight Support Division. The mission planning crowd was doing all the trajectory work for all of our flights, and a lot of the software associated with it, onboard software and that sort of thing, The Flight Support Division was basically building and developing the next-generation control center activity. So it really felt like you were right in the middle of everything that was really quite interesting.

JOHNSON: What type of duties did you have working with them?

HARTMAN: I think in those early few years, I think I spent most of my time going out and helping them hire more people. We were hiring people right and left. We've laughed about the fact that I think the first year we sent out a job offer list with 300 addressees on the list, saying, "Welcome. A job offer at the Johnson Space Center for young engineers." So a lot of time was spent on hiring people and getting them here and getting them situated and getting them assimilated into organizations and helping them take care of the problems that they had.

I think, also, probably part of it was helping an organization figure out who it was,—most of these organizations were very, very young—and sorting out the leadership capability within there and helping them get their arms around the size of the task that they had. When you think back and when you look at it, it really was very courageous on the part of a lot of those leaders to step up to that and say, "Yes, I think we can do this. Yes, I'll take that assignment on, to build a trajectory for a lunar flight," and things that had never been done before. So, getting people engaged around those tasks, there was a lot of that.

JOHNSON: Was it difficult finding people at that time, engineers?

HARTMAN: Absolutely not. Absolutely not, and, you know, it never has been. There's always been good folks, always been a lot more than we could ever hire, because so many people just get drawn in by the mission and get drawn in by the work. The exploration of space is just an inherently exciting business, and it's always attracted people, particularly young people. So, no,

we've never had that problem. We've had a lot of people, you know, use innovative ways try and get our attention and say, "Hey, me, over here. I'd like to be considered," kind of a thing. But we've always had an awful lot of good folks. No, that was not a problem.

Hanging onto them sometimes was, because the market was competitive for engineers, and at that point in particular, many of our contractors were paying more money than on the government side. So we sometimes lost people to the contract side with some regularity, and we had kind of a running battle with hanging onto our folks from the military, picking them up as well, often in uniform. I spent a good bit of time writing draft deferment letters for young engineers who said, "Oh, please, oh, please, help me get a draft deferment so I can stay working here on the space program," and at that point a lot of draft boards considered that was just as important an obligation to the country as serving the military as well.

[Randal F.] Randy Stone, our Deputy Director now, often tells me how much he appreciates me writing his draft deferment letters for him, and some of those I don't even remember, but we did a lot of them.

JOHNSON: That Flight Operations Directorate had some interesting personalities.

HARTMAN: It really did.

JOHNSON: Do you have any memories about any of those people?

HARTMAN: From very early on, from the first time you met him, you knew that Chris Kraft was somebody special. There was a natural leader. He's one of my heroes, always has been, and one

of the very special people of the world. But Chris was a wonderful, wonderful leader to work for, and I learned so many lessons from him. But, yes, there were some interesting people.

[Henry E.] Pete Clements, who at that time was an Air Force major assigned to NASA, and he led the Flight Support Division, putting together the control center thing, “Prince Henry,” as many people called him, was one of the wonderful, delightful people of the world, with an incredibly clear sense of purpose, but a light touch to it and a wonderful people touch.

John [P.] Mayer, who led the Mission Planning Division, was a brilliant guy, could be sometimes irascible and kind of hard to deal with. John always used to say, “This place is getting more like the government all the time.”

I’d have to say, “John, it *is* the government.”

He’d said, “No, no. I mean it’s getting like the government.” But John was a wonderful leader and, again, another person who took on an incredible task and an incredible responsibility.

[Eugene F.] Gene Kranz, who was leading the Flight Control Division, at that time. [Robert F.] Bob Thompson, who was leading the landing and recovery effort. It was an unusual team. [Sigurd A.] Sig Sjoberg, who later became the Deputy Director as well, who was Chris’ deputy. It was an incredible team, and a few others around the edges—the [Rodney G.] Rod Roses of the world and the [Peter J.] Pete Armitages, who had come to us through the Canadian routes. It was quite a collection of people. It really was.

JOHNSON: And you were in that position during Apollo and the Moon landing?

HARTMAN: Right. Right.

JOHNSON: Where were you when all that was going on?

HARTMAN: Yes, yes. I was a worker bee at that point and in a supporting kind of a role. But you couldn't help but be caught up in that. We got here just at the end of the Gemini Program, and were here throughout Apollo. I can remember when we had the [Apollo 1] fire, driving, hearing it on the radio, driving along Highway 3, and just taking the breath right out of you. I'm, like, you know, how could this happen? What are we going to do? You know, that sort of thing. And watching how the organization recovered so very quickly from that.

You know, people like George [M.] Low, who provided just incredible leadership. Dr. [Robert R.] Gilruth, you know. At that point being a pretty low-level worker bee, I didn't see very much of the Dr. Gilruths and the George Lows, but you came to have a real appreciation for what they've done. I know Chris speaks of Dr. Gilruth in almost reverent tones every time he's talked about him. If he has a high regard for him, so do I. So he did provide us some wonderful leadership. It was special being here during that time, and especially as you got closer to actually doing it and realizing, "Hey, maybe we have pulled this off." So, while you didn't sit on a console, you still felt very, very much a part of that team. It was very, very exciting.

JOHNSON: And you had a supervisory position at that time, from '69—

HARTMAN: Yes, at about 1969, I became the leader of a group of personnel specialists, four or five folks, basically the first-line supervisor ... of the group of people doing what I was doing before. So at that point, I probably started working a little more with Kraft and a few of the other directors as we were helping them solve their people problems. So from that point, really, from

'69 through '73, those were really kind of early leadership roles in the HR [Human Resources] program, and the first part of that was, again, still getting the right team and the right people in place and then hiring the folks.

Then as time played out there, it also meant tuning down the program as the budget squeezes came, and we wound up having to go through a period of layoffs, and that was a really very, very tough time. We spent a fair amount of time trying to help the organization do that in the right way, because we were still trying to fly. We were flying a couple of flights a year, and at the same time, you're running layoffs in an organization. To keep people focused on getting the job done and making sure that we didn't hurt anybody in that process, while at the same time having to do the piece that isn't very much fun, which was adapting the government's very regulated and very mechanistic layoff procedures to an organization like this, in a way that made some sense, was consuming a fair amount of time.

JOHNSON: And how did you adapt that?

HARTMAN: First of all, we got as knowledgeable as we could about that business, and we had some folks within the HR organization, the Carl [P.] Maxey[']s and the [Richard A.] Dick Kuhn's of the world, who had had some experience with that in prior military organizations, as civilians. People like Jack Lister and myself and other folks hadn't had experience with that, but we got as smart as we could, as quickly as we could about, okay, what are the rules? How can we adapt them and tailor them to the NASA situation, do it right to make sure that we honor people's rights and that we honor the laws and the regulations that apply, but do it in way that fits this particular organization?

So we got smart about it. Then we spent a fair amount of time with the managers talking about it, “Here’s the potential impacts. Here’s what could happen. Here’s your options,” really, a fair amount of helping them sort through their options and working it one step at a time to do it right.

JOHNSON: What was the impact on the morale during that time? I know in ’68 there was the possibility of a RIF [Reduction in Force] that actually didn’t occur, and in ’70, of course, it did.

HARTMAN: Really, it was in 1970 that we started that, and it was, as I recall, it was like four major layoffs over the space of ’70, ’71, ’72, ’73, so about every nine months we were going through a major layoff thing. It was not a good time. It was demoralizing, and we lost good people out of that, not only folks who you wound up having to lay off, because the government process is very regulated. It’s very veteran, non-veteran oriented. It’s also very seniority-time oriented. So we lost some young folks that you really hated to lose. You really did. Now, we got some of them back in a variety of forms.

Lynn Heninger, who spent a fair amount of time with NASA as the number two guy in legislative affairs in Washington, did a wonderful job of that, always reminded me that I laid him off in 1971. Here was just an outstanding young man, a financial guy, who had been a helicopter pilot, been shot at more than his share of time in Vietnam, and I had to tell him, “I’m sorry. We’re going to have to lay you off.” So we hated losing people like that.

But in many cases, those folks who cared so much about NASA and what we were doing, they found ways to re-engage. Some of them we were able to hire back. Some of them popped up other places. But it was a tough time on morale, to try to maintain that, coupled with the

declining flight schedule. As our plans for Apollo kept getting curtailed, curtailed, and curtailed, and the shape of Skylab, behind that, was uncertain yet in where that was all going, it was a tough time.

JOHNSON: Did the Personnel Department help the people that they were laying off by helping them find other positions?

HARTMAN: I think we did what we could at the time, certainly not as much as we do now or as companies have done much later. We had active out-placement efforts to try to help people find jobs. Most of them wanted to find their job back in the same office that they were in, and that was probably the hard part, because they really were valuable contributors and you hated to see them go. But we tried to place as many folks as we could with other people, and our folks were sought after. There were a lot of good folks that were picked up by other people.

JOHNSON: During those times of the RIFs, you moved in to the Chief of the Institutional Personnel Management Branch.

HARTMAN: Yes, understand, those were [just] more supervisory positions, a larger cluster of them ... [people]. For a while, we had two groups of people caring for the operational needs, the operational personnel needs of the organization, and eventually we consolidated that into one, and I took that role on. At that point, it's all the operational HR needs—it's all the hiring; it's all the pay-setting and administration; it's all the employee relations; it's all the employee benefits kinds of things. Those were all kind of hooked together in one place. It's really getting the HR

people linked close to the organizations, understanding their needs, and helping them get their people problems solved. That was fun.

Part of that was building a good team of folks who are competent, who are good at what they're doing, and helping them really connect with the organization. From the very beginning, and Jack Lister gets a lot of credit for this, was the one who taught me this lesson, and he was really good at it, was connecting with the organizations, understanding what organizations' needs were, being responsive to them, staying close to the customer, learning the organization. We put a real premium on our people, spending a lot of time out with their people. Know what your organization is about; talk their language; know their business and get real close to them so that you can help influence things from a people standpoint, so that the people needs are properly taken care of.

JOHNSON: In 1964, the EEOC [Equal Employment Opportunity Commission] was established. It wasn't until '72 that the Equal Employment Opportunity Act was actually passed, and I think '73 was when NASA developed that office. What are your memories of that time?

HARTMAN: From the very beginning, NASA, I think, was relatively color-blind about the race-gender kind of issue, because we had minority and we had female engineers at that point, but not many of them, because the pool wasn't very large at that point, and we weren't doing very much actively. If we found somebody that fit, we did that.

By '73, that whole affirmative action wave really started to get a little bit stronger, and it also became a federal initiative. So our response to that was, we need to do the right thing here to help organize that in line with anything else we do, find a way to tailor that to the NASA

setting, and to make that work for NASA as well. So there was a big emphasis, I think, at that point, on, number one, making sure that we were doing all the right things. Number two, though, was start building the feeder pools, start looking for how we can increase the potential pools that we would draw people from. So, a lot of student programs. We created a lot of student programs and particularly emphasized minority and women applicants to try to help grow that pool and increase our chances of finding the good kinds of folks that we really wanted to join our team, plus taking a look internally to our own staff, and say, “Are we doing the right things by the people that we’ve got internal to the Center?”

So that got started, I think, at a fairly early age. I think we kind of did that right at the beginning, not in everybody’s eyes. Obviously nobody was completely happy. That was a relatively contentious time, rather the fallout of a contentious time, from the sixties and really into the seventies. It was exacerbated here at Houston and maybe at many of the other NASA Centers, because in the layoff activity, one of the byproducts of that was to create a fairly strong federal employee union movement, to protect the people, kind of a thing. So a lot of things got all wound together with that, and the affirmative action activity kind of got also woven into that, as unions saw that as a horse to ride.

So we got a lot of help from lots of sectors in how we ought to do that. So there were some contentious times there. There were some times where you had to really negotiate and pick your way through that, to make sure that the outcomes were right for the Center.

JOHNSON: Did you have any direct dealings with the union personally?

HARTMAN: Yes. A good number of us did, and we negotiated union contracts and, again, tried to do those in ways that helped the Center get its job done. Yes, I spent a fair amount of time doing that, too. That was interesting. That's a different aspect of the HR business, and I think because we had people of good will on both sides, that generally worked out pretty well. It was a little rocky going in the early seventies.

Jack Lister gave some excellent leadership to that. Carl Maxey was invaluable at that point. Dick Kuhn was another one who was very skilled in that area, and then for many, many years, [Robert F.] Bob Hall, who worked with me and others to guide that relationship and to try to honor the principle that employees have the right to belong to a union, and unions have a stake in the role of this thing. How do we do that and work together to make this whole thing work out? Bob, in particular, was probably the best that I've ever seen at that. He was really good at doing that. But he and I and Dick and some other folks negotiated our fair share of contractual activity.

JOHNSON: It must have been interesting.

HARTMAN: It was fun. It was fun.

JOHNSON: In '73, the Personnel Office reorganized. What was the reason behind the reorganization?

HARTMAN: I think Jack was always looking for the best way to put together the combination of people that he had, coupled with what's the best way to provide service to the organization. So

he was forever kind of reshaping and retooling that around people and around the emerging needs. At that point, we were coming out of the period of the layoffs, and we were going to be heading into a new period, which was a fairly austere period as far as hiring was concerned, but already starting to ramp up to support the emerging Space Shuttle Program. How are we going to put our resources together in the best way to help the organization to get people where they need to be, the right people, to be able to do the next program?

JOHNSON: So your title changed at that point. Did your duties change at all, or was it—

HARTMAN: No, it was pretty much the same. It was pretty much the same, right.

JOHNSON: I believe around that time also you became an Education for Public Management Fellow at Cornell [University, Ithaca, New York]?

HARTMAN: [Laughs] Yes, that's a big title, but I went to graduate school for a year at Cornell. It was a wonderful experience.

JOHNSON: Was it?

HARTMAN: Yes, it really was, and that was another one of those things where people really sometimes take care of you more than you think you deserve or you recognize. I remember being mildly interested in it. NASA had a fairly active program at that time, and still does. They always sent a few people away to graduate school each year to different kinds of programs. This

was one of them that was out there. There was a cycle every year that that call came out. In fact, I helped go find candidates for it for each year, that sort of a thing. But I didn't give it very much thought.

I can remember being at lunch at the Singing Wheel over on Highway 3, an old barbecue joint—the red building is still there, although I think it's been empty for years and years—and getting a phone call from Jack Lister, my boss, at lunch, and he said, “You want to go the graduate school for a year?”

I said, “Sure.” [Laughs] I said, “Well, let me think about that. Let me talk with my wife about that and see what we want to do, but, gee, that sounds kind of interesting.”

He said, “Well, I'm sitting here with Dr. Kraft, and we're putting together a list of names. If you'd like to go, we'd like to have you go.”

Well, that's a hard offer to turn down, kind of a thing, and I've always appreciated Jack being willing to, in effect, give up one of his people at a time when there was plenty of work to do, and he was going to have to find some other way to get my job done. But he was really making an investment in me for the future, both he and Chris, and I've appreciated that. So we talked about it and said, “Yes, this looks like a good experience and a good opportunity,” and so I did a one-year program at Cornell.

It was the best of all worlds. It isn't there anymore. All good deals of the world disappear eventually. There were about a dozen of us that were there from different government agencies, Secret Service, EPA [Environment Protection Agency], Department of Defense, at that time Health, Education and Welfare. It was a real mixed collection of people. But we were allowed to take whatever courses we would like to take. We could take them for credit or we could audit them. We didn't have to get a degree at the end of it. It was a year in residence, was

really what it was. You make the most of it, and the only requirement was we had one coordinating seminar. It was run out of the Business and Public Administration School, and it was a core seminar that one of the professors there taught. But all the rest of it was build your own program.

Well, it was just delightful. I took an astronomy course from Carl Sagan. I took a bunch of courses in Cornell's Industrial [and] Labor Relations School, which is one of the premier ones in the country, took some courses in the business school, took a couple of history courses that were just delightful, constitutional law, a few things like that. But you really were putting together whatever program you wanted. Some folks really went over the top and tried to knock out a master's degree in nine months there, which was really very, very tough. We chose to make it a little bit more of "make it an experience to broaden yourself," and it really did. It gave me, I think, a broader foundation and a better awareness of so many areas. So it was a rich experience. It really was.

JOHNSON: So after that year you came back in the same position?

HARTMAN: Came back and still was leading the team of operating personnel specialists. We called it the Personnel Management Branch at that point, but it was the biggest cluster within the personnel or the HR organization, and, again, the operating people, the people who do the hiring and the staffing plans and the employee relations and all the pay and benefits of that whole world. So, yes, I did that then for another year, again, still focusing on helping meet customer needs and put together the best team of folks you could find to do that.

JOHNSON: You headed the personnel management evaluation teams at two different NASA centers in 1975.

HARTMAN: Yes. Yes, yes.

JOHNSON: Do you want to talk about that?

HARTMAN: Yes, that was fun. At that time NASA decided that one of the things they needed to do was do a better job of evaluating how HR programs were being put in place. Up till that point, it was not uncommon for our oversight agency, which was at that point the Civil Service Commission, later the Office of Personnel Management, provided the third-party assessment of how you were doing. They tended to be very nuts-and-bolts, very “Have you dotted the i’s and cross the t’s right? Did you fill out this form right?” As I said, it was very procedural oriented. It wasn’t focused very much on outcomes.

NASA said, “Hey, let us take that over. We’ll do that piece of it as well. But we’d like to focus a little more on the outcomes and on how well we’re doing the HR business.” So we put together that, and at each Center then, about, I would guess probably at about three a year, Centers, or something like that, we would take a team of folks for a week or so to a Center and precede that with doing some surveying questionnaires and try to find out what kinds of issues were on people’s minds, what was hot, where were problem areas, that sort of thing, do a lot of interviews with people to try to gather data to put before the management of that Center and say, “You know, here’s what your people situation looks like. How do you want to problem-solve that?”

It wasn't as good as probably what's been done later, because we were still probably a little more prescriptive, "You need to do this," "You need to do that," kind of a thing. We probably got a little smarter later on, which is put that in the hands of the folks who have to live with that and have them do something with it. But that gave me an opportunity to spend some time at Marshall [Space Flight Center, Huntsville, Alabama], spend some time at Goddard [Space Flight Center, Greenbelt, Maryland], to spend some time at [NASA] Headquarters [Washington, DC], and, really, to see the insides of their operations. So, yes, that was fun. That was fun. Plus, work with a team of folks that you didn't know before you showed up on site, and you had to weld into a team in a couple of weeks and turn out a product. So that was a lot of fun.

JOHNSON: Did you find anything out that you could bring back to JSC?

HARTMAN: Oh, you always found good things. You know, we like to think that we had most of the good things in the world already in place. But, you know, you'd always find different ways to see it, different ways to do it, plus an amazing number of people that you ran across, that you ran across later in your career as well, that you'd built some working relationships. So it was a very rewarding kind of an activity.

I think that played out partly because the funding started to dry up for that. We just didn't have enough people at the time or the energy to go do that. But it was probably a good developmental experience for an awful lot of people. You didn't stay locked in your own little world. You got out to see, hey, there are different ways to do these things, and there are different settings. When you go to Marshall, it has a whole different set of needs and a whole different culture. Goddard's a different world. Headquarters was yet a different one. So you picked up, I

think, another appreciation for—much as we weren't sure that it was true, there is life outside the Johnson Space Center.

JOHNSON: You also had an opportunity to go to Ames [Research Center, Mountain View, California] as the Director of Personnel. How did that come about?

HARTMAN: That was a Chris Kraft deal. Got a call from Chris Kraft and from Jack to come to his office and spend a little time up there. And he said Hans Mark, who was the Center Director at Ames at that point and went on to be Deputy Secretary of Defense and a couple of other kinds of jobs like that, and a really interesting character, was Center Director then, and his Personnel Director was going to be gone for a year, and he was looking for somebody. He didn't think he had anybody internal to Ames that he wanted to do that. He wanted an opportunity to look at somebody new, and did Chris have anybody that he'd like to give a developmental experience to.

Again, it goes back to I'd been working with him for nearly ten years, so he knew who I was and what I could do and what I couldn't do, and he was another one who really believed in giving people opportunities to go try yourself out at something a little bit different, particularly if it was a challenge. So I really owe to that Chris and, again, to Jack Lister, who said, "Okay, I'll give him up for a year. I just gave him up for a year to go to graduate school. He's back for a year, and I'm giving him up again." But he was willing to work around that, and so it was a reminder, again, that leaders need to keep watching for opportunities for their folks, where there's a chance to develop them a little bit further. It was a rich experience.

This was a whole different part of the world. Ames was the research side of it. It's west of the Sierra Nevada, so they're not real sure there's anything east of that, you know, kind of a

thing. A rich cultural center, in the sense that that place had been there since 1940, with some wonderful, wonderful capabilities and some great people. Really picked up an appreciation for them. Prior to that time, I was pretty sure, well, those researchers, they've got to be all nerds and kind of crazy, and who'd want to hang around with them? There were some wonderful people doing some very, very good work there.

So that was a good year to find a new setting with some things going on that were interesting and, for the first time, to have an opportunity to run your own organization and to be the top leader in an HR organization. So that was fun, to really kind of—I'd been watching Jack Lister do that for ten years, and all of a sudden I realized, hey, there are some things to this business that I don't know, and I probably spent my fair share of time on the phone getting some advice and counsel from him.

JOHNSON: And you also implemented a career management program while you were there? Is that correct?

HARTMAN: Well, that was a period of time where there was a, I think, a growing interest in helping people sort out their own careers. Up until that point, the organizations kind of told you where you needed to work and that sort of thing, and I think that the balance was starting to shift a little more towards, let's put in place systems and processes and provide people tools to help them make good career choices. So I did some work with some of the universities out there and with Lawrence Livermore [National] Laboratory, [Livermore, California] had an interest in doing some of that as well. So we tailored something that worked for the Ames Research Center.

JOHNSON: And that position prepared you, I suppose, for coming back and for your new position as the Deputy?

HARTMAN: Yes, when I came back, Jack decided that—up until that point, he had never had a Deputy Director, and he said he'd like to go do that because he had some things that he wanted me to do, plus it was time to recognize and grow some of the people we had in our own organization, to backfill into my job. So we went that route, and then from that point on, really until Jack retired in 1990, I shared the leadership with him for that organization, and it was a chance to make some contributions at the Center level as opposed to maybe at the organization level down below that.

It was a chance to get involved more with the strategy of the organization. It was a chance to work on lots of different projects. There really was more work there than one person could handle, and so Jack would do the things he liked to do, and he let me do some of the things that I liked to do, and it was nice relationship.

JOHNSON: You also served as Manager of Special Projects?

HARTMAN: I think that was on the title. That probably just made the title look longer and a little bit better, but it basically was work on any kinds of assignments that really had kind of a Center-wide emphasis to them and where the HR organization needed to play a role. So it could have been just about anything.

JOHNSON: In 1978, the Civil Service Reform Act went through, and you had to help implement some of the civil service reform.

HARTMAN: Yes, the civil service system moves about at glacier speed in terms of the structure around it, the processes, and the rules and regulations they have, but every now and then it kind of breaks free a little bit, and under President [Jimmy] Carter, he took on the task of trying to make some reforms in the process. There were a number of them that were there, and, of course, they then presented opportunities for us to see, again, how we could tailor that to the NASA environment and to the JSC environment. Probably what I spent more time on than anything around that was trying to help improve the hiring processes so that we had a little bit better [system]—but mostly an awful lot of time around performance appraisal, performance management, and at that time the notion of merit pay for our management team, to try to put some variability into the pay process.

That was a mixed experiment. We tried that. I'm not sure it produced the results that the visionaries had for it. It didn't produce the wide discriminations that you were looking for. People kept saying, "I want to have the opportunity to really distinguish between my mere mortals and my true stars," you know, kind of a thing. But when it came time to do that, the greater emphasis was, "Jeez, these guys are *all* really valuable to me. These people are *all* pretty valuable. I don't know whether I want to make those kinds of choices," and it tended to gravitate back towards a more core kind of a thing.

Performance appraisal systems were the same thing. People kept saying, "We need to distinguish more about performance. We need to be harder on that. We need to go to maybe even some forced appraisal systems." And that's all bold talk in the planning rooms, but when it

goes to putting it in practice in organizations with people who have to deal with folks one on one, and when you look at what the impact's going to be on the total organization, a lot of that tended to move right back towards the Center.

So there was a lot of work on that. There aren't going to be any giant monuments created to civil service reform. But, hey, the goals were right, to try to make the system more responsive and to try to help government be better. There was no question about that. It's just hard to bring off in what is essentially a tenured situation, just like universities.

JOHNSON: You also worked closely with the Department of Defense.

HARTMAN: Yes. That actually went back to the early days, when I was a personnel specialist with the flight operations organization. One of the things that I found when I got there was that a deal had been struck to provide—it was called the 128 Program. The Air Force gave us 128 young Air Force officers to be trained as flight controllers and flight operations people. They really were a cadre of people who worked right alongside our flight control teams, our NASA people, and our contract people in flight operations, and we had some wonderful, wonderful, bright, young military officers.

The Air Force's notion was that they were going to train here and then move into a military space program. That played out as the Manned Orbiting Laboratory and other projects got cancelled and those folks probably wound up in Minot, North Dakota, and other kinds of places that they hadn't really intended. But, gee, we got some awful good work out of it. We hired a number of them. In fact, they left the Air Force and came back and said, "I want to be a

flight controller,” or, “I want to be a mission planner,” that sort of thing, and we picked up a number of people that way.

Then as we moved into the late seventies, that kind of resurrected again. As we got into the Shuttle era, the Air Force got very interested in that and having a role in that and how that would play, and so this time my role was different. The first time, it was kind of administering a program that was already there and helping make sure that they were at the places they needed to be, and efficiency reports got written, and that sort of thing.

This time it was more in the deal-cutting. “What kind of arrangements can we strike with you? What do you want out of this? Where do you want officers? ...Where do you want ... insight? Where do we have needs? Where could we benefit from having some military people who know their systems and can work that?” So, spent some time negotiating that from the NASA side and with the military people, and it really started taking on a larger-than-Houston scheme, too, because we were also talking about putting people at Vandenberg [Air Force Base, California], and we were working with the people at Kennedy [Space Center, Florida], who had some of the same common interests.

It was probably Kennedy and us that were working that particular need at the same time. So it was between here, Kennedy, and Vandenberg, that we spent some time lining all that out and trying to come up with an arrangement that would serve the Air Force’s needs and that would meet our needs. We probably wound up with twenty-five to fifty Air Force officers coming here for assignments in Shuttle Program offices, in operations organizations, that sort of a thing, to help meet their needs and ours. So, yes, that was a fun one.

JOHNSON: During that time, too, the first Shuttle class was chosen. Do you have any memories about that?

HARTMAN: Our good friend Duane [L.] Ross had a lot to do with that. Here, again, my boss, Jack Lister, was, I think, in front of the times, because he worked very closely with the senior management folks and said, “Hey, I think we can put together a process that will work to help recruit and select astronauts.” George [W. S.] Abbey had a big role in that at that time as well, and George has always had a really solid appreciation for HR organizations and giving them room to do things, and I think he knew that Jack could deliver on that.

So we put together that process, and a younger Duane Ross was the operational leader of the team of folks that supported that whole astronaut recruiting and selection process, and Duane has supported that ever since. Every single astronaut that we have here right now, Duane has touched somewhere in the process of coming through that. But, there again, it was the genius of Jack and other folks to say, “Let’s find the right person to do this job,” and Duane was clearly it. He understood operations; he understood customer support; he understood how to do this sort of a thing; he understood the business and did a wonderful job.

So we put that whole thing together, worked out of some trailers near the water tower, down—I don’t even remember the street designations—by the Acoustic Vibration Facility and the water tower, that area as you’re going towards the Gilruth [Center]. There were some old leftover trailers from the [Army] Corps of Engineers that we worked in for that first year and, literally, were inundated with thousands of applications. Jack was part of that first board. I served on the second board in 1980 that picked the class of 1980. What we put together were

teams, mostly a team of astronauts, managers, HR people to sift and sort through that and find the folks who were going to help us fly the Shuttle.

JOHNSON: The criteria changed somewhat from we looked for in the early astronauts to this group.

HARTMAN: Right, right, and I didn't know very much about that process. The early part, I think, was clearly [outside] the HR purview. That was probably done by [Donald K.] Deke Slayton and other folks that we just didn't have much insight into. By the time we got to '78, '80, we did change that process, and particularly we said, "We know we're going to need different kinds of people."

That's when we created the notion of there are pilots and that there are mission specialists, and within mission specialists there are five or six different brands of them, from earth sciences people to astronomers, to life sciences, to engineers, that sort of a thing. So, yes, we created that whole process, kind of made it up as we went along, but all geared towards what do we need out there to help get the job done.

JOHNSON: Of course, the first class was the first one to have women and minorities in it.

HARTMAN: Yes. Yes, it was, and here I think the George Abbeys of the world deserve credit for recognizing that that was an important consideration, that our astronaut corps needed to look a little more like the face of America, and working to make sure that we had enough people in the pool to consider, good folks. We've always had lots of good candidates to consider. We wind

up passing on a lot of people who could do the job. The trick is making sure the ones you get can, are good enough to do it as well. You're going to leave some good ones on the table. So our goal was to try to build that pools as broad and as wide as you could, so you had choices.

JOHNSON: You also served as the chair of the steering group for the NASA employee teams.

HARTMAN: That's probably one of those things that fell under Manager of Special Projects, the deal that you asked about earlier. There was a point at which the quality movement was taking shape in the private sector, the quality movement and employee involvement kinds of things, to try to—if you remember, that was the point at which your Chevys and Fords were falling apart on you a week and a half after you drove them out of the showroom, and they were realizing something had to be done to shape up our organizational outputs to compete in the world market. That's kind of where the beginnings of that were.

So you started casting about. What were they doing? How did they do that? One of the things that clearly came out of the Japanese experience was a lot more teamwork, a lot more of employee input into work processes and designs. So this was a NASA adaptation to try to find a way to put that idea to work here. It really, I don't think, was that big a deal in many respects, because NASA's been about teams from the very, very beginning. They weren't called NETS [NASA Employee Teams]. They weren't called quality circles or anything like that. But take a look at the movie, *Apollo 13*. It was just teams everywhere helping to go solve a problem. That was a way of life with us. So when we talked about, "Well, we need to put together NETS," people would say, "Why would we do that? We do that anyhow."

“Yeah, yeah, but we’re going to have to have some of this as well.” So we probably relabeled some activities that we were probably doing, plus we probably created some new ones. We probably created in some settings new opportunities for some people to have a voice in how the work was being done in their organization, and that was healthy.

JOHNSON: Also, during that time period, the late eighties, you were the Director of Human Resources Development for the Center, the Chief Employee Development Branch.

HARTMAN: Right.

JOHNSON: How did that differ from what you were already doing?

HARTMAN: This was another one of those Special Projects deals. [Laughter]

JOHNSON: Oh, another Special Project. You found a lot of those.

HARTMAN: I’ve always had an interest in the training and development business, the growing people for the future, and there was a point at which Jack and I had looked at what we were doing with our training and development activity, and it wasn’t where we kind of wanted it to be. So we did some organizational changes at that time, and I agreed to go lead that effort as well as do the Deputy Director job for a while, to change the look and the face of that organization, and it was a fun thing. It was another one of those things, “Well, why don’t you go over there for a year and see what we can do,” and five years later, it’s a done deal. But it was a delightful

experience. It really was, because, as I say, I have a heart for the training and development activities. We've always had a strong support of that sort of a thing, and to be able to get more systematic and more aggressive about providing the kinds of skills training that organizations need to help be able to get their job done.

If you think back to the mid-eighties, PCs [Personal Computers] were just beginning to show up in sizable form, and folks were scrambling, "What do I do about this? How do I learn about using this CAD/CAM [Computer-Aided Design/Computer-Aided Manufacturing] capability?" and things like that. So there was a lot of opportunities around data training that we had never done.

Student programs. Student programs were always important to us here at NASA, and it was an opportunity to go work that and extend that and really make that come alive, and then a chance to also do a fair amount of work around the leadership and management training issues, which we hadn't done nearly enough about. We had relied on growing our leaders on the job, and we needed to supplement that with a little bit more formal kind of an activity. So it was a chance to put all of that together and put together a good team of folks to go do that. We probably didn't have our strongest players in that organization, and so this was an opportunity to reshape that a little bit and engage some new people in that, and it was a lot of fun. I enjoyed that.

JOHNSON: And you actually doubled the Center's training capacity during that time period.

HARTMAN: Yes, probably at least, because we did that. We really expanded our cooperative education efforts and got it a lot more targeted. I think the main thing we really did was to line it

up a lot more with the needs of the organization. We weren't doing just whatever seemed like nice stuff to do or somebody sent us a course and, "Gee, let's offer this" kind of a thing. It really was focused a lot more on plugging into what the organization needed and trying to go solve their problems.

JOHNSON: And the people that took advantage of those programs, did you have a lot of people that wanted it, and it was a good response from people working there?

HARTMAN: Yes, I think NASA folks have always responded positively. There's a curiosity among an awful lot of folks out here who just want to see what's over that next horizon a little bit, so are more than willing to get involved in a training opportunity. "Yeah, I want to learn something more about the capability. This new computer's coming out here, and it's got new capabilities. You know, we need to get somebody in here to tell us how to do that," or, "We're getting a little thin on this skill in this organization. We'd better go find somebody to come in and start beefing up our capability." "We want to learn more about what's going on with program and project management. What are other people doing? How are they doing it?" That sort of a thing. So there's always been a healthy curiosity, I think, and a healthy interest. Now, it was never hard to find folks to go do that. I think the real trick is matching it up with what the organization really needs, and getting the biggest bang for the buck.

JOHNSON: You also helped develop—I know when we talked to Mr. Lister, the training was very important to him—the programs where people could go to the local colleges and to the junior colleges and the secretaries on that level and all those types of programs also.

HARTMAN: Right. Right. We did a lot of encouraging people to work on advanced degrees. We certainly did, with our support staff, encourage going to junior colleges. Get that degree. That's never a bad investment.

We worked a lot of cooperative arrangements with schools in this area. We sent people off on graduate study to organizations, particularly where we thought we'd invest in an individual or we needed a capability that we didn't have before. So, yes, that was always a big deal.

JOHNSON: We've talked to some people in here that had involvement with the Sloan Fellowships. Did you have any involvement with that?

HARTMAN: Yes. While I was in the training organization in particular, my folks would run the process that would collect candidates for that, and then all the time Jack and I were together running the organization, that was where we would spend a fair amount of time with senior managers, saying, "Hey, are we doing the right things on developing this person, this person, this person? Is this somebody who's going to be a program manager? Maybe they ought to be thinking about getting something else in their background. Is this the right time in their career?" That sort of thing. So we would do a fair amount of that sort of a thing.

We probably did more of the Sloan, the full-year kinds of programs, earlier on, really, in the sixties and the seventies, than we did later. And part of that was the pace of life, I think, picked up even more, and we got thinner and thinner on people to have available to you, and folks' lives changed to where they said, "I don't want to be gone for a year. But if it's just an

eight-week program, I'll go do that." So the movement tended to start to shorten down to where people said, "All right, yes, I need the development experience. I know that. But don't make it too long," and so we started shopping for other high-quality executive education programs that would meet that need, and that's a trend that you see a lot of in industry, too, where they want it packaged in shorter doses, on target, get in there and get out.

JOHNSON: I imagine a year away was somewhat difficult on families.

HARTMAN: Everybody who got into that, for the most part, said, "You know, I don't think I can unplug from here for a year. It'll be so hard. Who's going to do this?" Dah, dah, dah, dah. But everybody who came back said, "It was a wonderful experience. You all need to do that." That kind of thing.

So I don't think anybody who ever did one of these programs came back and said it wasn't a good investment of their time or wasn't grateful for the fact that NASA sponsored things like that. But it's hard, and it's increasingly hard to get people to do those kinds of things, because it's doing something different. It's a change of pace. It's unplugging from the known worlds and from all those responsibilities that you have. So it's not always easy to do, and it's hard to get people to let good people go, to go do that.

JOHNSON: Of course, you had someone that you were working for that was willing for you to do that twice.

HARTMAN: Yes, he was, and I'm forever grateful for that.

JOHNSON: In the late eighties, the ... [culture] surveys. You've talked about the earlier surveys.

HARTMAN: Right, and that built a little bit on that. But by the late eighties, there were a couple of folks in NASA Headquarters, —a guy by the name of Lou DeAngelis, who was the Training and Development Director for NASA in Washington, probably pushed this notion and found a receptive audience ... [with] some key NASA leadership to do some studies that looked at what the NASA culture was and to help understand it at each Center, and then out of that, what do we need to do to make that as strong as possible and to help make the organizations as effective as possible.

Lou found a partner in Warner Burke out of Columbia University [New York City, New York] and his organization, who probably gave it some good academic underpinnings, and out of that we wound up surveying, oh, I think, a couple of three times, every couple of three years, within NASA, surveys of people to find out how they were feeling about different kinds of issues. Then what we would do out of that is take that data and work that with management teams and say, "Here's what the folks are saying. Here where they think we're doing well, and here's where they think we've got problems that need to work on. Do you believe this data? Is it right?" We ran focus groups of our own folks and said, "Survey says—. Does that sound right?"

"No."

"Why would they say that?"

"Well, it's because of this, this, and this."

You get some depth to the data, and then the next question you ask them is, “Okay, what should NASA do about that? What should JSC do about that?”

“Well, here’s an idea. You ought to do this. You ought to do this. You ought to do this.”

You start bubbling up some of those ideas, and then the senior management teams would look at that and try to craft some initiatives that were responsive to helping move the organization to make it a healthier and stronger organization. So that was kind of fun, too. Yes, that was a lot of fun.

JOHNSON: Do you remember any specific changes that came about because of those surveys?

HARTMAN: Well, I think that’s really kind of hard to say. I guess I wouldn’t recall any off the top, although I know organizations—certainly we shredded it by organization so you could look at that and you could see where maybe you had some real pockets of unhappiness around certain issues, and I’m sure there were places where leaders took that into account in subsequent steps. I think probably what it did more than anything was it got us listening a little more closely to people and what they were saying and what they were doing. I think we got some better dialogues going on in organizations as organizations took that back to theirs and said, “Here’s what it says about our organization. What do you think?” I think you got a little bit more of a cohesive team trying to problem-solve what does it take to make this a better organization. That was probably the healthiest outcome.

JOHNSON: In 1987, it became a little bit more difficult to hire workers because of the hiring freeze, the Graham-Rudman-Hollings Deficit Reduction Act. How did that affect your job?

HARTMAN: Well, actually it always seemed like there was hiring restrictions, partly because we had so many folks who wanted to come to work for us. If we could have hired every individual, good-quality people who wanted to come to work for us, it'd be wonderful. We'd also have thousands of people all over the landscape out here, because everybody wanted to be involved in it. But I don't remember that point as being the hardest point at which the hiring started to dry up. It really started a little later. I think '90, '91, and '92 is where things really started to slow down a good bit. Then Mr. [Daniel S.] Goldin came on as our Administrator in '92, and we went into some fairly active reshaping of the organization. That's really where we put the clamps on for about four or five, six years, for entirely too long, in my judgment. But maybe we needed to do that to create the capability to reshape organizations. But it had a lasting effect on us that I don't think was entirely healthy.

JOHNSON: We talked about the morale earlier as far as the RIFs were concerned. What was it like during that time period?

HARTMAN: Well, I think to kind of pick up from that eighties time period, the post-*Challenger* [STS-51L] period was—I think there was a sense of quiet determination and resolve to go fix what needed to be fixed, to make sure that that never happened again or anything like that, and to get back to the business of flying. So I think a lot of people kept asking us at that point, “Morale's down, right? Morale's down.”

I don't think it was really down. It never really was. Solving a problem is what this group of folks is really good at, and this was a biggie problem to be solved. Certainly a lot of people grieved over the loss of friends and colleagues and crew, and what could we have done to not have that happen. But I never sensed that morale was down over that. We came through that and refocused efforts and really got back, and it was a really special experience to get back, to return to flight and to be flying again.

As we moved into the nineties, I think maybe morale drifted again a little bit there about "Where's NASA going? Are we going to fly a zillion Shuttles forever, or what's going to happen? Where are we going?" So I guess I wouldn't say morale was down so much as it's kind of a feeling of uneasiness. What's the future hold? Where are we going? What are we doing?

Then as Mr. Goldin came on board and really kind of served as a catalyst, I think, to raise those questions, to lay those out on the table, and really actively work those in his own inimitable style, it had two effects. One, probably the initial early effect was, "Who is this guy and what is he doing to us?" But I guess I've always felt that as painful as that was, he took us through a process that we needed to go through. We needed to go through a re-looking at what business we were in, what we were about, how we were doing that, and where we were going, and making us relevant to the needs of the country.

We don't exist as an entitlement to space flight and to exploration. You're going to have prove your worth. I think we kind of lost some of that. I think we got kind of disconnected. People were still of good will, but somehow we weren't on target probably as much as we should be with what the country needed and wanted and connecting into the country's priorities. He put us through that, sometimes in very painful kinds of ways. But it was a necessary kind of a thing to go through.

JOHNSON: You also spent a number of years chairing the Exchange Council.

HARTMAN: Yes, that was a fun thing. That's another one of those Special Projects. [Laughs] I got involved in that, I'm not quite sure how, probably I think in the early eighties sometime. Well, I know how that happened. [Leslie J.] Les Sullivan ... worked in the flight operations organization for Chris Kraft. I had worked with and for Les a number of times over the years, and he was chairing that, and he said, "You know, you really need to get involved in this. We need some people input in this," and he was very stealthily setting me up to replace him so he could go off and do some other things. I wound up chairing that activity for a number of years and really, really did enjoy that.

That's basically the entire welfare, recreation, and association kind of a thing for employees. It had a whole bevy of things with it—all the cafeterias in the cafeteria system, although I never picked a single menu, so I just want to make sure that that's real clear. I didn't take beans and wienies off the menu. [Laughs] They were still on there, nor did I add any of the other new ones. But all the cafeterias at the Center, our vending and concession kinds of programs, all of our retail store outlets, all the Gilruth Center activities, and all the sports activities around that, were all kind of clustered in that, scholarship programs for young people, things like that that were clustered in there.

Exchange activities are a wonderful little world unto themselves. They're called non-appropriated fund activities. They're kind of a separate little world. They're not run with tax money, but they have to be green-money operations. So it's the money that you make has to sustain the activity. They are parallel to base exchanges, post exchanges, in the military. NASA

and the Veterans Administration have these kinds of things through some specific enabling legislation. Partly it was modeled after the military thing, and when NASA was set up—“Well, gee, it ought to be like, it’s kind of military-like. Maybe we ought to give them this authority.” And it always gave us a way to provide those kinds of things for our employees.

It was fun because it was kind of its own little profit center. You really had to pay attention to the bottom line and make sure you were making money and that you were spending it wisely and you were doing the things that supported the organization and helped that. It was typically staffed by a collection of individuals from around the Center who served on the Council to represent the Center at large and to make sure that we were responsive to the needs. Then we typically had an exchange manager who was a civil servant, whose full-time job it was to manage the non-appropriated funds staff, which ranged anywhere from forty to seventy or eighty people, depending on what we were doing.

JOHNSON: Did you have an involvement with the scholarships in the program?

HARTMAN: Yes, yes, that’s maybe where Les got the hook in me initially, was, “Why don’t you come serve on the Scholarship Committee. You’d be good at helping evaluate these kids.” We’ve had a long history of providing scholarships for sons and daughters of employees, modest ones, you know, five, seven hundred dollars a year, whatever it was, something like that. But every year we picked a few, and it was one of those kinds of things where parents could say, “Yes, I can get some help right here for my son or daughter going to college.” We’ve seen some really neat kids go on to get Ph.D.’s and that sort of thing.

Eventually I also got involved in the NASA scholarship program, which was when [James A.] Michener got involved with writing the book *Space*, and he got hooked on space, as so many people do. He gifted us with—I think it was \$125,000, 100 or 125,000 dollars of the proceeds of the book, and he said, “I want to set up a scholarship fund for the sons and daughter[s] of NASA employees that I’ve picked up such a huge respect for.” But that was nationally, for all NASA employees. The first one I was involved with just was for the JSC people. But this other one was nationwide. But he specifically stipulated, “I want the people in Houston to run it,” which was kind of interesting. I think because he had spent so much time here and probably because of his Texas roots. So I was involved in from when that was set up and at one point chaired that. That was a nonprofit board of directors that we created to run that activity, and I chaired that board for a while, too, and that was fun. Man, you saw some outstanding young people from all over the country. We’ve helped educate a good number of folks.

JOHNSON: You also were on the board of directors for the Manned Space Flight Education Foundation for Space Center Houston.

HARTMAN: Another Special Project. Right. [Laughs]

JOHNSON: What are your memories of that?

HARTMAN: That was a fun one, because that kind of got started in the early, mid-eighties time frame, and the threads for that came from lots of different directions. Increasingly, there was

less and less space on the Center that we were able to open up to visitors, to taxpayers. You'll recall at that period of time the front gates were wide open, and you could drive on the Johnson Space Center and park anywhere you want and walk on the streets here. You could eat in our cafeterias. You could roam around in Building 2, where our artifacts were and that sort of thing, and walk over to the control center.

But we were starting to feel the pinch, in that more and more laboratories were needing extra space, and our ability to show the visitor very much was declining. It was going downhill fairly rapidly. There wasn't any money available to build anything. Nobody even wanted to ask for money for programs, let alone buildings, let alone Visitor Centers or visitor kinds of buildings. That was going away, so there was a thread there around that.

Even at that point there were some folks who were a little uneasy with, "Gee, we've got an awful lot of people just rumbling around inside this facility wherever and whenever they want to," you know, kind of a thing, probably played out mostly from somebody who would come stalking in and saying, "I just got back from lunch, and there's a camper from Iowa parked in my parking space." [Laughter] Yeah, that happens. That's right. They're taxpayers. They get to be here, too.

We started looking at what could we do to do something about that, and we cast about and looked at what other places had done. Particularly the Kennedy Space Center had done a number of things at that point. The decision was kind of made that maybe what we ought to do is go start something entirely different. This was the Reagan years, a lot of privatization emphasis. Is there a way that we could do this that would be offline? Is there a way that just wouldn't be a demand on the federal budget?

We create something called the Manned Space Flight Education Foundation, Incorporated—"Ms. FEFI" to all of her friends—as a nonprofit 501C(3) corporation, to go about designing, building, and operating a Visitors Center for NASA. I was one of three directors that signed the charter for the original incorporation papers with Texas. Carolyn [Sue Leach] Huntoon, [William R.] Bill Kelly, and myself were the original three directors of that. We set up a board of directors that was, I think, eleven: six NASA folks and five outside people, people here in the community who had an interest in that.

We set about raising some money. We raised about \$5 million in the local area and nationally from foundations and that sort of thing. Then we went out and floated bonds for about \$70 million to go build the facility. We found a little neighborhood company in Glendale, California, called Disney Imagineering to help us with that, and Disney became our owners' representative and became our designer. They held two roles with that. So once they finished the design, they stayed with us as the owners' representative to make sure that the design intent ... was carried through. We spent a fair amount of time with those folks helping them understand what NASA was all about.

It was interesting talking to them initially, because they said, "This is neat. We're about doing imagination. We're about doing imaginary things. This is real stuff. This is different." I remember specifically they said, as we were talking about site locations, there was some preference to, "Well, we ought to get it off of the NASA property, maybe over on I-45 some place, where it would be highly visible," and that sort of thing, and they specifically said, "No, you don't want to do that. It needs to be on the NASA property. It is the real thing. It needs to be where the real stuff is," and that was good advice.

But we wound up striking a deal where NASA provided the license to do that and the property to do that on the front of the Center. And then in a couple of years we raised that money and we built that facility, opened it in '92, and had all the fun that goes with a building process and the early learning and operations processes, and also that sometimes your eyes are bigger than your wallet as we went through some tough times. And we realized that maybe we had sized the facility a little larger than—maybe we were swimming in the same bathwater of, “Oh, gee, we’re a wonderful organization. Everybody will want to come see us,” and the numbers didn’t pan out quite where we thought we were, and we wound up doing some refinancing to contract that and get it where it is.

But we’ve got it on a good footing now to where it’s providing what we set out to do, which was two things: one, tell the story of human space flight in a compelling way to our customers and to our taxpayers and to everybody who’s a constituent; and, number two, to inspire young people, get more people interested in careers in science and technology, math, that sort of a thing. I think we’re doing a pretty good job of those. You only need to go over there, and I was over there last month when there were 3,500 young people in the building one morning from school districts all over the area. The energy that’s in there and the excitement is just—it’s wonderful. It’s doing what it set out to do. Or when you see somebody with a camper from Iowa stopping and saying, “This is really a special place. I’m proud of what our country has done,” then it’s doing what it set out to do. So that was a neat experience. I was with that board from '86, from when we started it, through '96.

JOHNSON: We’re going to stop for just a second so we can change out our tape.

[Tape change.]

JOHNSON: Okay. We were talking about Space Center Houston. The expectations, you kind of mentioned that the expectations when you all started out was a lot larger than it ended up being. You were mentioning that you felt like it did still—

HARTMAN: So how did you guys let that happen? [Laughter]

JOHNSON: Yes. Do you feel like it lives up to the goals that you set out as far as education and that sort of thing, but—

HARTMAN: It gave us a different game to play than we originally envisioned, and we did that with some of the best help that we could find. You'd mentioned while we had the break here, that Bill Kelly had been to talk to you, and Bill was real involved in this as well.

We went looking for the best help we could find. When we started with Disney, Disney brought us to a guy by the name of "Buzz" Price, and Buzz did all the projection work for Disney and for a lot of other folks, at Orlando [Florida] and in California and in other places like this. This is not a guy who's just some yahoo; I mean, he had a long proven track record, had good help with this, and he did a study for us, and he said, "This is a slam-dunk. You guys will see 2 million people here, no question about it," and we've seen 800[000] to a million a year. So it never quite materialized at the level that he projected.

So we sized the facility for 2 million in many ways, and as that didn't materialize, then it made it harder to do some of the things that we later wanted to do with new exhibits and new

features to the facility. So it forced us a few years downstream to have to go through kind of a difficult period where we had to reshape the organization and re-do our financing arrangements and things like that. That was not any fun. That was a painful, painful time, but to get it back on a sound footing, so that we could do the job that we wanted to do, which was to tell the story. I've seen other ones as well. I think these guys do as good a job as any with doing that and telling that story well.

JOHNSON: Do you have any idea or any opinion why you think that we only have a million instead of the 2 million people?

HARTMAN: I think maybe Buzz overestimated the drawing power of this. We certainly didn't disagree with that. It drew us and drew a lot of our folks. But Houston is not Orlando. It is not a destination resort area. We're kind of out on the end of the spoke. We're not at the hub of the wheel. It isn't California. It presents a different dynamic maybe than they had expected. Now, I think our leadership that we had there, both in the board and in the staff folks, did very well to adapt to that in the very best way possible, by looking for lots of sponsoring organizations, whether it's Southwest Airlines or Coca-Cola or DuPont or Southwestern Bell, any of those folks, who really came in and helped us in substantial ways, both financially and with their skill and their capabilities, and new things like rotating exhibits in there that keep giving the place a fresh look, putting more things in for younger people.

As we did it initially, it was probably geared more towards an intellectual kind of a thing and an older student. We realized we needed to catch those younger students as well, and so we adapted to that setting. I'm proud of what they've done. I think they represent NASA well. And

who would have ever thought it? If we hadn't done that, we sure would have slammed the gate shut post-Oklahoma City. We sure would have slammed them with an extra set of locks after 9/11. Having made that move to move Space Center Houston to our Visitor Center off-site really was a move that paid off for us later on to provide a more secure setting now for our folks. So, yes, I think sometimes it takes a while for an idea or for something to really to play out, but I'm proud of it and I'm proud of what it's done.

JOHNSON: It's a wonderful place.

In 1990, Jack Lister retired.

HARTMAN: Yep, sailed into the sunset.

JOHNSON: Then you moved into his position as Director of Human Resources.

HARTMAN: Right. Right.

JOHNSON: What sort of changes did that bring about? You mentioned earlier you got a taste of it when you were at Ames, and you appreciated what he did.

HARTMAN: Right. It was one of those mixed-feelings times. On the one hand, I really felt like, man, I'm really ready to do that. I've been in this organization now for, at that point, twenty-three, twenty-four years. I've got lots of ideas about things that I want to do, that sort of a thing. But wait a minute. Jack's always been here. Jack's been the leader of this organization ever

since I've know him, for twenty-four years, and done a masterful job at leading the organization and putting together a really first-rate group of folks. So it was a sense of anticipation, a sense of trepidation in some respects, that, gee, I can't even imagine what this place would look like without Jack here.

But it was an exciting time, and it gave me an opportunity to work even more closely with some of the senior management at the Center, with Aaron Cohen, who was the Center Director at the time. I have just the utmost respect for that man. People of great integrity need to look to an Aaron Cohen as a model. He was truly a remarkable man who devoted his life to the Johnson Space Center, to NASA, and to its programs. He was a wonderful man to work for. I truly enjoyed him.

He was really the first Center Director that I reported directly to. Up until that point, I had worked reasonably closely with [Gerald D.] Gerry Griffin, before him, Jesse [W.] Moore, who was here just a very brief time, but had a very tough job at a tough time. But, Jerry, I had worked with him and, of course, I'd worked with Chris when he was a Center Director, before he left in '82.

But this was the first time, okay, now this is your Center Director that you've got to take care of. And so I had a chance to work with him. I had a chance to work with Carolyn Huntoon, a chance to work with George Abbey more directly, and that's a very satisfying thing, to be able to work with a senior management team and help them get where they want to get.

So that was an exciting transition to make. But in many respects, things didn't change. Our team of people initially stayed pretty much the same within the HR organization. I moved into Jack's office. I probably didn't even move the desk, just moved in and sat in the same

location. But Jack's presence is everywhere in that organization, in the way he shaped it to begin with, and it was just my responsibility then to pick up the baton for the next leg of the relay.

JOHNSON: During the time there was the threat of the furloughs, and that was right when he was leaving and you were taking over. What do you remember about that time period?

HARTMAN: I remember I was the only guy working while everybody else was off. [Laughs] There was that three-week period there where the mechanics of government broke down, and we did have the threat of furlough, an awful lot of people were pretty sure they were going to miss paychecks, and it was a relatively unhappy time. In effect, we kind of had to lock our people out, and an awful lot of people saying, "Yeah, but I've got work to do."

"No, you can't do that, because if we let you work, then we're liable for paying you, and we can't pay you. We haven't got any money to do that." I think myself and just a handful of other folks wound up being the ones to be there to kind of deal with whatever needed to be done. But it was one of those kind of goofy times, where people were saying, "This isn't really happening, is this? Would we be doing something this dumb?" kind of a thing. Eventually sanity came around, and it all came back together. But it was kind of a pre-retirement program for an awful lot of folks, where they got to try it out for three weeks and an awful lot of them said, "No, no. I think I'm going to keep working." [Laughter]

JOHNSON: Well, during that time there was a lot of budget cuts and, of course, in '95, President [William J.] Clinton was trying to cut the federal budget. A buyout program was implemented.

HARTMAN: Yes, yes, and this was really part of Mr. Goldin's, I think, reshaping the agency and reshaping the direction that we were going. As he was doing that, it was, if we can't hire very many folks, how could you reshape the people that you've got? How could you create more capability to hire people? One possibility that became available, and it was a build-off of a downsizing of the DoD, was where they first came up with that notion, is, "Well, let's offer some incentives to people to consider leaving. So if you will retire, or if you resign, or you'll leave, we'll give you a separation package."

Well, that conjures the connotation of "golden parachutes." Well, these were probably more Saran-wrap parachutes. There weren't any big silver-lining parachutes here, because the government, in its own inimitable way, had to make it very egalitarian. Everybody will get no more than \$25,000. And then the system's set up on, we'll do it based on how much time you've had with the organization, the seniority theme. Well, pretty soon it didn't take a rocket scientist to figure that a secretary making \$25,000 says, "Hey, a year's salary. Color me gone," and a senior scientist making \$100,000 said, "Why would I leave for three months' pay?"

So we wound up with some unintended consequences out of that, that we probably got some turnover, but we got it in some of the wrong quarters, and we had to get a little bit clever about, "Okay, how do we district this so that we don't get effects that we can't stand?" But it did create a way to downsize that was much preferable to what I had experienced following the Apollo period, where we laid off people. That was a difficult period of time where you'd just wrench people out of the organization. This was more of, can we incentivize people to consider leaving the organization, and then we have to choose, where do you think you can stand that?

Didn't always work. We lost some good people out of that, people who left early incentivized by that. But it did create some additional turnover, which gave us some opportunity

to hire a few folks. But mostly it gave an opportunity for the agency to reshape where do you want those people, and that was kind of always a tension was going on, particularly between JSC and the agency Headquarters, which said, "Gee, we need to take a lot of people out of the Johnson Space Center."

We were saying, "No, you don't. Yes, we're good team players. We'll play, but, no, we don't want to lose a lot of good people, because we've got a lot of things. If we're going to fly Shuttle safely, if we're going to build Space Station, if we're going to go exploring Mars and places like that, we're going to need some folks here." We were kind of playing a dual game of educating them as to what they needed to keep here while we were staving off ripping out very many people from the organization. So it was constant strategy-education kind of an effort and an execution of that policy.

JOHNSON: You also implemented a number of awards for the employees in the nineties, I think, the Go the Extra Mile Award, the Time Off Award.

HARTMAN: Yes, and, again, this got into the business of, can we find ways to recognize people who do good work and, Lord knows, we had a lot of them. Often though most of the folks we got are not 4.0 Ph.D.'s from Harvard and Stanford; most of them are ordinary kinds of folks doing extraordinary kinds of things, and you wanted to find ways to recognize those folks and, in some cases, to motivate people to higher levels of performance, or to motivate them in certain directions, such as team awards, to motivate teams to work productively.

My good friend Duane Ross was a key co-conspirator in a lot of this, because Duane was responsible for the awards program and has been for, I think, somewhere back to the landing of

colonists at Jamestown [Virginia] in 1620. It seems, I think, he's been doing this forever. But he's got a wonderful sense of how to do that and do that in thoughtful kinds of ways. One of the things we created, some new capabilities came along in the regulations that let you do things in different ways, and so, again, our bent was to try to find things that help the organization get its job done and do its work well, and one of them came along.

They came up with something in the regulations that they called On the Spot Awards, which was you can give out 25 or 50 or \$75 in cash for something well done, that sort of thing, on the spot when you see that. A lot of people labeled that, "Well, we'll have an On the Spot Award." But we don't want to recognize the procedure or the way you do it. What we want to recognize is *what* you do, and what we were looking for was, what do we want to really recognize? We want to recognize people who go the extra mile, and it just happened to have a nice little acronym with it, GEM. So, for us, it became GEM awards as a way for line supervisors to do something. We can't give out a \$50 gift certificate to Carrabba's [Italian Grill]. We can't give you a jacket with SIGNAL Corporation on it, that sort of a thing. But we could give out some very small cash awards, and we tried to do that in ways that we tried to gross it up so that you didn't get to see \$37.12, but that you got a set award. So we kept looking for new ways to do that.

Flown flags was another example. Again, that really ties right into the heart of what our people care about, which is getting the job done, doing a mission, that sort of thing. I can't even imagine how many little flags we have flown on Shuttles over the years. But there's an inventory of them from every state, from every country, American flags that had been flown and then present them to individuals, and they mean a great deal. I've got a flown flag that Chris Kraft gave me, that flew on Apollo 17, went to the Moon. That means a great deal to me. That

hangs there as a mark of my being part of a team that did something extraordinary. So you always look for things like that to try to find new ways to recognize and incentivize people.

JOHNSON: You also began a new employee evaluation system in '96.

HARTMAN: Yes. Again, it's kind of the cyclical thing. You're always looking. Evaluation systems, in particular, in any organization are kind of the bane of their existence. Nobody wants to be evaluated unless you're being told you're perfect and you're outstanding. So the trick is to find ways that you get some communication going between employees and their management about what's expected, and how am I doing towards those, and what can I do to do it better. So we've worked on that. I can't tell you how many systems I've worked at over the years and how maybe my philosophy changed from, well, we need to be hard with these things and call them where they are and tell you you're a turkey and tell you you're a star, kind of a thing to, no, the name of the game is, be real clear about expectations, and then give people good feedback on how they're doing towards meeting that, and what can I do to help you get there and do the job better.

Yes, it seemed like about every five to ten years it was time to go back and revisit that. There's only two kinds of organizations on appraisal systems: ones that are unhappy with their system, and they're in the process of changing it; and those that are just about to change it. It seems that nobody stays very happy with them for very long.

JOHNSON: Do you want to talk about TQM [Total Quality Management]?

HARTMAN: TQM. Again, that's another wave that moves through, as we talked earlier about quality circles and that sort of a thing. I think that was a real emphasis on helping organizations produce outstanding results. Never much of a problem with this organization. It's always had high standards, always had high expectations, always focused on producing outstanding results. So part of that is wading and sifting through a movement, a cult, if you will, to see what's in there that's useful for this setting to help it get its job done. In some ways, the TQM process was good, again, to get us to think about what are the basics, what are we focusing on. We want to turn out a quality job. We want to make sure we did it. We want to make sure we involve our people in that process.

But all those almost always bring bureaucratic baggage with them and their own language and a wave that goes through an organization. For managers, for HR people helping lead efforts like that, keeping your eye focused on the long-run goals are what really matters, helping organizations do the important things, get to their vision, do their mission, is what's really important.

It's a lesson I learned from Skip LeFauve, the President of Saturn Motor Corporation, a guy that we brought in, we created something, we called it the Leadership Series, where we brought in practitioners to talk to our management team about what's this business of leadership about? How do we get to be better leaders? We'd bring them in about quarterly, every three months, four months, six months, whatever it was. And Skip came in and talked with us about his experience at running Saturn Motor Company, which was taking General Motors and going and doing something new and different.

Skip made a point in there that's really always stuck with me. He said, "Leaders really only have three jobs, and it doesn't make any difference whether you're working at NASA or at

Saturn or wherever you are. They have three jobs to do: get the mission done, take care of the people, and grow the next generation of leaders. These are the only three things that you've got to do." So when you see something like TQM come along, you say, "Is this going to help me get the mission done? Is it going to help me take care of my people? Is it going to help me grow the next generation of leaders?" If you can kind of look at those waves of things that come through there against some enduring principles like that, you're probably going to be all right. So TQM had some pluses for us, and it had some baggage with it, too, that we probably could have done without.

JOHNSON: As you mentioned earlier, you worked under several different Center Directors, some directly and some not so directly. You do have a somewhat unique perspective because you worked under seven of the eight JSC Center Directors. Is there anything about any of those directors you'd like to mention?

HARTMAN: They all shared in common just an incredible passion for this business and for doing it well and for just being, I think, models of public service. Any of those people could have stepped out of there for much higher paying jobs, much more prestigious jobs with all the trappings that come with that. But all of them, in one way or another, really modeled what it means to be a public servant, to do a job on behalf of the people of this country, that needs to be done, and often those jobs were really, really tough, more than glamorous.

People keep thinking, "Well, Center Directors, they get all the glory. They get to meet all the dignitaries. When Prince Charles comes, you're going to tour him around, and when the

President shows up, you're going to take him around and present him with an astronaut flight suit. This has got to be a really neat job."

The more you work closely with those guys on a day-to-day basis, and particularly in the last ten years, as the Director, when my office was on the other end of the hall from the Center Director, and I wore a lot of carpeting out going back and forth there and see what goes on in their lives day to day, you realize what a really tough, tough job that is, and the challenges, and the amount of sacrifice they ... [make] to do those jobs.

So, they were all special in so many ways. But, clearly, Chris Kraft has to stand out among those as a giant. He is a leader in the finest sense of the word, maybe because I encountered him at an early and impressionable age. But Chris wasn't all that much older. He's probably fifteen years older, fifteen, twenty years older. But he always set an incredible example as a leader and being real clear about what needed to be done and being willing to tackle any job and being very good about using all of his people to get that job done. When he walked into a room, you knew he was the leader in charge. There was no question about that.

To watch him listen to somebody, talk to you about a problem or something like that, he's a very quick study and had probably one of the best BS detectors I've ever seen. I went to an awful lot of meetings with him, where if anybody tried to blow smoke at him, Chris knew that in heartbeat and would zero in on you with those laser-like eyes and would take that apart and get down to what really needed to be done. He was really, really good at that.

He was incredibly loyal with his people. He really believed in his people and he gave them room to go do their jobs and to do them well. And he took care of his people, too. I count him as a kind of a lifelong friend and in a special way. He and Betty Ann have always [been]

really, really special people. He really embodies, I think, the heart and soul of what JSC is about.

But they're all special. It's just that I probably caught him at a very formative time in my life.

JOHNSON: You retired in '99.

HARTMAN: I retired in '99, right.

JOHNSON: What do you feel like, during your years, more than thirty years there, what do you feel is your most significant accomplishment or your greatest challenge? Or maybe that's the same thing.

HARTMAN: Again, going back to Skip LeFauve's principles, get the job done and do the mission. I think we put together over the years, both as a worker and as a supervisor and later as a leader and the senior manager of an HR team, we did that job as good—we played the hand as well as it could be played. We provided the Johnson Space Center with an outstanding people program. It's really probably in the last—maybe I knew it intuitively earlier, but probably within the last ten to fifteen years that it really became crystal-clear that HR organizations are most effective when they line up with the business needs and help an organization to win in the workplace, understand what needs to be done, and helping them get to that point is so incredibly important. This organization did that, partly intuitively really early on and maybe more planned and systematic later through the years. But I think that's a biggie.

Taking care of the people, we had some wonderful people. I had the opportunity to work with some really, really neat people through the years. We had an awful lot of them in the HR organization. There was any number of times I've told people that I wouldn't trade a single [one]—given the opportunity to say, “You can take 10 percent out of this place and send them away and replace them with other people, would you do that?” there were an ... [awful] lot of times in that organization where I wouldn't have traded a soul. They were just all good, good folks, and that's really important.

Probably one of the lasting satisfactions is to see so many of them still there and doing some wonderful work. Greg [W.] Hayes, who followed me, we hired in 1973. I just really loved watching and shaping him and so many of the other young folks who came along and help make that place even stronger. So that's a piece of it.

The other piece of it is being involved in something that really has made a difference. NASA's about doing something worthwhile and going someplace and doing something. It's not about making a better Dorito. This is about something that makes a difference, and so you can really sign on to that, and you feel like you've invested yourself in something that's worthwhile.

The opportunities, I guess, to provide so many other young people with a chance to get involved, through our student programs and that sort of a thing, our cooperative education programs, I'm really proud of those things as ways to engage so many young people in it now.

Thirty-five, forty, forty-five years ago, growing up on a farm in Nebraska, trying to figure out what you're going to do, knowing that you're not going to be farmer, *real sure* that I'm not going to be a farmer, but what's life going to hold? God has blessed me richly with wonderful opportunities to do some incredible things, and I just couldn't have asked for a better script, almost, had I written it.

JOHNSON: That's wonderful. We've just got a couple of minutes, and I was just real quick going to see if Jennifer or Kevin had any questions.

HARTMAN: Okay.

JOHNSON: Jennifer?

ROSS-NAZZAL: I do, but it might take more time. So I'll just ask one question.

HARTMAN: Okay.

ROSS-NAZZAL: You had mentioned earlier that the relationship with the union in the 1970s early on was pretty rocky. I was wondering if you could describe some of the issues that were raised by the union, some of their concerns, and some of the solutions that they wanted, and some of the solutions that you and the HR department—

HARTMAN: You're going to test my recollection here. Obviously, that formed up out of a concern for employees saying, "What can I do to help save my job?" Well, the government allowed unions to be formed, and it provided, in effect, another layer of insulation, if you will, another protection for you, if you would. Government unions can't bargain over wages and can't strike, so mostly what you wind up doing is haggling over procedural kinds of issues, the processes by which you do things. So unions tend to want to put in place processes that are very

protective of people, more concerned about that protective stuff than concerned about “Is this going to make it harder for us to do our job?” So most of that haggling was probably over those kinds of things. People would see, “You really need to give us more notice on this,” “This needs to be structured,” “It needs to be done only seniority.” You know, we aren’t going to pick our management team by seniority. You know, those kinds of things. We’re going to pick the people who can do the job. So you start, okay, well, then how can we honor your concerns and how can we get what we want to get. So you just start looking for common ground. Later, much, much later, it became called, I think, mutual interest or common interest, whatever, trying to find those common grounds that you have and build off of those things.

I think once we got through the contentious layoff phases and probably the early years of active affirmative action, when you’re trying to sort out what shape that would take in an organization, by the later seventies, things got to a point where I think we were much more in a partnership kind of arrangement, where we could talk with folks and we could work with them and try to be respectful of their views and their concerns, while also maintaining the areas of prerogatives that management needed to be able to do to get its job done. Again, that’s a tribute to a lot of the people like [Robert F.] Bob Hall ... and the Carl Maxey and the Dick Kuhn of the world, who worked very hard at, I think, doing that well and treating people with respect out of that, that we wound up with a much stabler situation than many other parts of the government, still have.

ROSS-NAZZAL: I’ll let him ask a question.

RUSNAK: I'd like to ask one as well. You mentioned a couple of times a few things about the culture of NASA. I was wondering if you could describe your perspective on the culture here at Johnson Space Center and how as a human resources person you could take advantage of that and, I guess, in some cases, how you might have had to work around that.

HARTMAN: Sure. Every organization has a culture. Your organization has a culture. The church you belong to, the Rotary Club, the company, whatever it is, has a distinctive culture. JSC's, from the very start, I think, was a very goal-oriented culture: get a job done, get a job done. It was a culture that had high expectations because we were given one of the highest challenges to begin with that you could ever have.

It also had some underlying things that kind of came out of that, mainly from the kinds of folks who initially staffed and ran that. One of them was a real emphasis on competence. From the very beginning, this organization placed a high premium on competence. If you were good, then you had standing to debate an issue, to talk about how we would do something, particularly in the early days. It was not uncommon for a green GS-9 engineer to challenge a forty-five-year-old branch chief, GS-15, and say, "No, that's dumb. We can't do that that way. Let me tell you what's wrong with that," dah-dah-dah-dah, and get to the board and start drawing it out. So there's always been the organization, I think, placed a premium on competence, no matter where it was in the organization, is the highest value, not hierarchy. That was important.

Accomplishment has always been—you've got to get a job done. You've got to get results. That's been a biggie. There's been a "can do" spirit about this place. "We'll find a way. Somehow we'll find a way." And I think woven in there is a little bit of the spirit of Texas. There's a little bit of the frontier independent mentality in the Johnson Space Center, that's now

very nicely represented by those longhorns that are out there. It's just another reminder that there is a special spirit about that.

HARTMAN: There's a special spirit of pride. I remember from these culture surveys that one of the questions was, "Are you proud of your organization?" Our people blew the top out of that, compared to any other NASA organization, and most of NASA— feels proud of what they do, but within that, JSC's out the end of it. "Are you proud of your organization?" They're gone if they don't feel proud. It's just so much in their bones, and that partly comes because we've got this wonderful collection [of people]. We owe that to the Gilruths and Krafts and the Lows, who had the foresight to put together the design people, the operating people, the people who have to do it, the astronauts, and the program people, all in one place, close beside each other, and say, "You guys go solve this. You go figure out how to do this kind of a thing," and that was a real stroke of genius from the very beginning.

Now, we've strayed from that occasionally, and we've paid the price on that. You know, in the early eighties, the mid-eighties, some of our early attempts at Space Station design with, "Let's let all God's children have a stake in this thing, no matter where you are on the planet," and we had trouble with that. We kind of got away from that principle. We kind of came back to it as we got to a working one, and maybe we're finding our way to expand that now internationally a little smarter than we've done in the past.

But the design of this place around putting together the people who can do the job all in one place was genius, and that helped produce, I think, this incredible pride in it. So there are things like that competency, the professionalism, the "Get the job done," the "can do" spirit, the

pride, all those things are really bedrock kinds of things. What do you do from that? You make sure that your strength doesn't become your weakness as well.

It may be a bit of a weakness for us, because people kept saying, "The Johnson Space Center's arrogant." Maybe at times we overstepped that, and we were pretty sure we could tell the rest of the world how to run as well, although Chris Kraft was fond of saying, "It ain't arrogant if you can do it." And he's probably right, but I think you can overstep that to the detriment of your organization. That would be a case of that pride where pride is in the past and not pride in what we can do in the future. You can get hung up on being really proud of all that stuff back there, but you're going to have keep on tackling those high mountains. So, yes, in fact, that's part of what we did with that culture survey thing.

I remember one of the things we did was to put together a little card of ten points for supervisors that said, out of this, "Here's the kinds of things you can do as a manager that really drive those numbers up for you in terms of your people feeling like they're engaged, being used, challenged," and just ticked off some practices that came out of that. So you do try to build on those strengths out of the culture and make that work for you.

RUSNAK: Thank you.

HARTMAN: You bet.

JOHNSON: Well, we've kept a couple of minutes past what we promised, so we're going to let you go.

HARTMAN: Okay.

JOHNSON: But we want to thank you for being here today and sharing your—

[End of interview]