

JON RASH

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Interviewer (Q): Lize-Marie van der Watt | History Department | Stellenbosch University

Respondent (A): Jon Rash | Physicist | SANA E 16 | 1975

Q: I just want to know. You spent a year there? Now how did it come that you went down as an expedition member? Were you involved in Antarctic research before then or was that your introduction?

A: That was my introduction to Antarctic research. I had been a fulltime student up to mastering a Masters degree at UCT. And I was getting tired of being a fulltime student. I wanted to earn a bit of money, but I wanted to do something interesting at the same time: sort of keep my hand in science, but have an adventure. And I heard about the Antarctic through my Masters Supervisor in Cape Town, who sort of knew the head of Physics at Rhodes: [Richard Lezzle]. And he suggested that I contact him and find out about this Antarctic thing... And I did. And he said: "Okay, well you know. Go spend a year in Antarctica and then get some data and come back and do a PhD". So that is kind of what I did. I spent a year at Rhodes before going down to SANA E. So that was 1974. So I started my PhD-project in sort of preparation. And then spent 1975 at SANA E. Then came back and spent another 3 years... 6, 7, 8. *Ja*, 3 years finishing my PhD and so graduated from Rhodes. Well they had the graduation early the following year, so it was early 1979 that I graduated my PhD. So yes, it was an opportunity to do science in an interesting environment. That is really what it amounted to.

You know, I had an idea that I wanted to continue doing science, but I didn't want to just stay sitting, sort of full-time, at the university. So it came just the right time and, you know, I saw it as an opportunity. And the science was interesting. It wasn't directly related to what I have been doing in my Masters degree. Sort of related, I mean in the sense that I was doing Plasma-physics and this was Applied Plasma-physics in a sense to the upper atmosphere. Other than that it was not related, but it seemed very interesting. And I had the opportunity as well, in a sense, because Rhodes just purchased some new equipment at that time, and had in mind to set up a sort of a new experiment, which I basically set up. Because the old way of sounding the ionosphere, which was what they were doing basically. Sending vertical radio signals up to the ionosphere and getting reflections back. The old equipment was kind of pulsed, as they say. They send a short burst and then wait for the thing to get reflected and come back again. And the new equipment that they purchased at that time was, they call it [chirpunosance], so it basically... It sort of sweeps up the frequency really, rather than sort sending pulses and so on. So it was a different idea. But they bought two of these things and it actually presented the opportunity of having one in Grahamstown and one at SANA E, and actually communicating between the two. And that is essentially what I did. I looked at radio communication between SANA E and Grahamstown. And so... *Ja*, it was a new project. It was an interesting... It was a good opportunity. And so, I got a PhD out of it. Then after I got my PhD then, well I had to get a job. As you will find I am sure. And so I thought, well, I'll look around for lecturing positions at universities. And what was available at that time, I think I had applied for and got offers from the University of Transkei, which I decided no I'll pass up on that one, and UNISA. And I went off to UNISA to lecture. And it wasn't... It was... You

know there is no Antarctic reserves or anything there. Well, I thought this isn't really where I want to be, but it was... I thought well, you know I shall use it as a kind of stepping stone. And actually sooner than I expected a position came up in Durban. And so that was 1980. And so I applied for that and I have been here ever since. And involved in the Antarctic-program in one way or another, pretty well the whole time since then.

Q: Did you get a second opportunity to go down?

A: I went down for the summer, for the take-over period. That would have been '86, '87. *Ja*. So that was, what we now call, the SANAE III. The... Because we spent 1975 in SANAE II. And *ja* it was interesting, during that time, during the '86, '87 visit to... Because our old place was still accessible. Just. So we could actually go down into... and sort of crawl around and see the collapsed structures and things.

Q: Did Antarctica change much between '75 and '86?

A: Antarctica hadn't changed much. I mean there is a bit more snow on top of the whole place. So it was really crushed. But *ja*, it is interesting. I think the thing about going down just for the summer is that it doesn't really get dark. So you don't really... If you are interested in stars or anything like that, then there is not much to see. But obviously from the wildlife point of view and so on, it is interesting to go in the summer. There is lots to do, and if you have got time...

Q: So was Agulhas much different from the RSA? Because I presume you first went on the RSA and then on the Agulhas.

A: Well, it was certainly bigger and better. *Ja*, I mean the memories of the old RSA were... wasn't a very pleasant boat to travel on. As I am sure you have heard from many people. No, it was... It sort of surprised me initially that this small little boat kind of took everything down to Antarctica, to supply this whole operation. And then seeing the Agulhas, it did seem much... much more... a bit more like what it should be. It still looked kind of something like the Polarstern in Cape Town here. You thought, well now that is the real thing. But *ja*, it was okay. It was good enough. *Ja*, so that was quite interesting.

Q: And did you have any dealings with captain. McNish and Herr Funk?

A: Herr Funk. Yes I remember him.

Q: He sounds like quite a character?

A: When I say: "Jamp, you jamp!" *Ja*, no, he was quite a character. No McNish, I think was... had just retired, about the time that we went. I think that is right. *Ja*, well certainly...

Q: So was Herr Funk the master of the vessel?

A: Funk was the master of the vessel.

Q: Oh Okay. I see.

A: I think he had just taken over in the previous year or so. So he was very new, but *ja* he certainly could throw his weight around.

Q: When you went down to Antarctica on the RSA, how did you get from the actual ship to the ice-

shelve? Were you swung over?

A: We were swung over, I think. *Ja*, that's right. *Ja*, we were swung over in a net with a square wooden thing in the bottom, to help grip.

Q: And then there is the very cold sea below?

A: *Ja*.

Q: Okay. I am just going to backtrack a little bit to the year you spent at Rhodes before you went. What kind of preparations did you do that year? Was it Antarctica-related, or was it just general scientific research for your first year of your PhD?

A: Well, it was both in a way. It was learning to operate the particular equipment that I would be using down there. And what had happened was that the... It was originally planned that this equipment would go down the year before. And Allan Pool, who was at that time the Antarctica... I don't know if you spoke to him?

Q: No.

A: Oh Okay. He would be an interesting guy to speak to.

Q: Definitely.

A: At Rhodes. He was the Antarctic Research Officer at Rhodes. And he has... He had... He actually travelled down to SANAE for the Summer take-over, in order to install this equipment. This is the end of 19... Well, the beginning of 1974. *Ja*. And he was, sort of on the ice-shelf, kind of waiting for this thing to come out of the hole. And waiting, and waiting, and waiting... And eventually it didn't come out of the hole. Then they discovered that in fact the transport company that was supposed to deliver this equipment from Grahamstown to the stores in Cape Town hadn't delivered it. But why it hadn't been, you know... Nobody had noticed.

Q: Wow. So do they still forget stuff?

A: *Ja, ja*. So we, in fact, had two... You know, we still had the two instruments at Grahamstown. So what this enabled us to do is to really test out things, prior to doing it over a long distance. But we took one of the iron samples to Fort Hare University in Alice. Okay. Now that is not very far away, but at least it is kind of... we have got an idea of how to operate two instruments. And how to... Because you had to sort of synchronize them. You know, this one has got to know when to receive the signal from the other one, and so on. So you have to get the timing right. And we got a good idea of what was involved in that. So certainly it was a very good direct training on the equipment that I was going to be using. And my background was really pure science; I had very little electronics training. So one of the things I did, and this is one of the strengths of the Rhodes Physics Department... Well they later became the Department of Physics and Electronics. Largely because there is no engineering at Rhodes, you see, so they kind of, just had to educate themselves. And they are very strong. They are very strong on the electronics side. They develop a lot of stuff for use in [Radioastronomy] for example, you know, which is strength is as well. Anyways, so one of the first things I did when I started at Rhodes at the beginning of 1974, was to do their, I think it was their third year electronics course. And I really learned a lot just from that. Because I mean, I had to operate this equipment. I mean, by today's standards it is probably not that sophisticated, but, you know, there was nothing like computer control or anything like that.

But still I had to...

Q: It's like trying to get directions of how to fix it yourself...

A: That's right. I mean, I had to maintain this, to keep it running through the year. So I had to know some basic electronics and how to do some basic testing and that kind of thing. So that was an important part of it. It was really a technical side. I mean, these days very often the people who go down to run the equipment are engineers, you know. So they need to learn a bit of science. I was a scientist who needed to learn some engineering, essentially. So that was an important bit, learning electronics. And then how that applied to the specific instrument. But certainly, in terms of training for the job I was going to do in Antarctica, it would be hard to false it. So I was real fortunate that we could do what we could, because we still had the two instruments there. But it certainly helped, the future... the people who went on after that, was that they could actually train on an identical instrument in Grahamstown, before going down. So at least they are familiar with the instrument and so on. And I mean that time... These days everything is kind of digitally recorded, but at that time we recorded data on

35 mm film. *Ja, ja*. So we had a...

Q: So you had to take rolls and rolls of film?

A: You had rolls of film. *Ja*. And then you had like an oscilloscope, basically, with the line thing... And then the film went slowly past and recorded this thing as the lines of the sound hit. So *ja*, so you had these rolls of film, which you then had to develop. You know, go in the darkroom, put in the chemicals and hope that you got it right. Wreck a whole weeks' data or something. To develop and then sort of analyse with a... basically sort of like a little projector, so that you role the film and then with a light above, and then it sort of shone down onto it.

Q: And was it very manually counting and...?

A: It was very manual. *Ja*, it was manual stuff. You know, then manually from this, get sort of numbers, from the ondograms.

Q: And then how would you get the data back to South Africa?

A: Then the data was sent back essentially by tele... I mean we sent some of the stuff back by telex, I think.

Q: And some of it just, you took back the next year?

A: *Ja, ja*. We took back also the actual films and the... But I think we did... *Ja*, I am sure we did communicate some of the sort of basic data, like which, wasn't a lot. But, because I mean all the communication besides the actual radio voice communication... occasional voice communication. The main communication was by telex, whatever rate that was. You know it was 75 baud or something, compared to, you sort of think of megabytes these days. So it was very slow and limited, but you could still send data. And the way we do it would be to type it in on a telex... I don't know if you have seen these antiquated things? Type it in on a telex machine and it generates a paper tape. You know, with punched holes in it. So generate that in the Science block, which has a machine there. So we could do this: enter the data from what you had written down by hand. And then take the paper-tape along to the radio shack, to the radio operator, when they got a good connection, to send. So they put the paper tape in, said: "Here comes the data", and

put it in and "chaka-chaka-chaka-chaka".

Q: Did you get to have phone calls with your supervisor?

A: No, I spoke to Allan. Allan as the Antarctic Research Officer was kind of directly... But I certainly... I did not speak to professor [Glezzle] as my PhD supervisor, during the year I was down there. I don't think. No, I am pretty sure I didn't. I mean, I always spoke to Allan on typical occasions. And the sort of once a month private phone calls were...

Q: And private Telex's?

A: Sometimes you were lucky and sometimes you were not, in terms of getting a reasonable, you know, voice... Because that is the problem. I mean it was short wave, depended on what I was studying in the ionosphere.

Q: Did people... some of your team mates sometimes ask you: "Jon, please correct our..."

A: *Ja*, sure. "Can't you do something? You measure it all the time." And I'd say: "Well, I don't have any control over it." *Ja*, so sometimes that worked, and sometimes it didn't. And you had to beforehand, send... Say: "I want to phone this number on Sunday", or whatever. So they would then try and establish the connection within South Africa. And sometimes you try and phone family or a girlfriend, or a fiancé, in a couple of cases. And *ja*, sometimes it worked, and sometimes the ionosphere on that particular day, at that particular time was bad. And so you hardly got into it.

Q: But you did send telexes?

A: Telexes *ja*. I mean you were limited to 200 words per week, I think it was. *Ja*, 200 words per week. So you had one or two telexes.

Q: That is incredibly little.

A: *Ja*, If you think how much you can say in 200 words. It is not a lot. That was it, you know. That was it, because of the limited communication. When you think now, all the... I mean, the via satellite communication and the kind of stuff you can send backwards and forwards. I mean the data we are getting now from the radar, is kind of a 100 megabytes a day, or something like that. So *ja*, at that time it would have been completely mindboggling.

Q: I remember when I was at HMO they told me about the first computer that the HMO got.

A: Oh *ja*.

Q: And how fantastic it was. And nowadays the computing-power of that computer is probably in most ordinary cell phones, so similar computing power.

A: *Ja* and it probably occupied a whole room or something.

Q: *Ja. Ja* it did... how big it was and... In terms of preparation again, when did you meet the rest of your teammates? Did you have team training?

A: *Ja*, we had team training. I mean that was the time that I... the first time that I met most of the team. I think the team leader...At that time what would happen, would be that the team leader would be appointed sort of in the middle of the year. And then he would go around to the,

particularly the Sciences, to... So Rhodes at that time, Hermanus at that time, Stellenbosch still, Potchefstroom. *Ja*, that is right. *Ja* and Natal. So, Natal, Rhodes, Hermanus, Stellenbosch and Potchefstroom. And basically meet the scientists. But also the idea was that he would get kind of briefed by the Antarctic Research Officer, or whoever was in charge of that Antarctic research program. As to what the objectives of their experiment... their program... what the objectives were and so on. So that hopefully he could appreciate what they were doing and have some understanding of how it kind of fitted into the big picture. So that was the idea. So I met the leader.

Q: Who was he? Can you remember?

A: Evan Morkel.

Q: Evan Morkel?

A: *Ja*. Who... I could tell you lots of stories about him. He was a very interesting character.

Q: Still alive?

A: He is still around as far as I know. He lives in Germany. He was quite eccentric. What he did, in summary, he was a very successful leader in the sense that he united the team against him. So he was very good at uniting the team, but it was kind of at his expense. *Ja*, I think they had tried the previous year with somebody who had been in the military, as the leader. And it hadn't worked. And I think they had decided to go to the other extreme in this case. I mean Evan had studied like education at UCT.

Q: So being team leader was his sole job?

A: That was his job. That was his job at that time. It wasn't like now, where they have someone who has a job and is the leader. Admittedly now the team is a lot smaller. I mean, at that time. I mean, SANAE 16,... there were 15 of us at SANAE and there was still that group at Gr nehogna.

Q: Group of geologists?

A: *Ja*. So 21 altogether.

Q: So Morkel studied education?

A: I think he studied education, *ja*. But he was essentially a social scientist. *Ja*, and he...

Q: That must have been interesting. I mean a social scientist between so many scientists and engineers and mechanics.

A: *Ja*, I think he had done like Educational Psychology and stuff like that. But he was also a, I was going to say rabbit, but that is not quite the word. Qery forceful vegetarian and.... So he had these... And how he survived here in Antarctica...

Q: Even nowadays days I don't know how a vegetarian survives this.

A: So that was a source of endless amusement, as far as the team was concerned. But *ja*, so he kind of lost it a bit during the year. I think he started out kind of taking the jokes and sort of laughing, but I think by the end something kind of got to him. And the team was managing very well without him, in a sense. So it was another experiment that did not quite work, as far as team leader is

concerned. I mean, I think you sometimes find that a group like that, there is a... there might be somebody appointed as the leader. There is a kind of a natural leader that if the group were to decide after a while who the leader should be, you know, that would be the person. I think with us it was probably Steward Lump, the doctor. He is now psychiatrist in Pieter Maritzburg, has been for a long time. He, after he came back from the Antarctic, he was interested in the whole sort of psychology and that...

Q: I wonder how that... Or did that have any roots in Antarctica itself.

A: No, I think so. I think it was. He got interested in, sort of, how the mind works and things, during his year in Antarctica. I think one of the experiences he had, which was quite significant, was there was a guy there, who had done Psychology and something else at Stellenbosch. Who could do hypnosis. And he really could. I mean, it was genuine. It wasn't... And Steward, the doctor, agreed to be hypnotized by this guy. And it was amazing to watch. And I think it had, had quite an effect on him. Quite a profound effect on him. That was one of the things that I think he decided: "Yes, actually, you know, well this is an interesting [picture]."

Q: So you had a hypnotist on the team?

A: *Ja. Ja.* I don't think he told them that in his interview.

Q: I doubt that very much.

A: But I mean, he was a... He had done Psychology initially, I think, and then studied Forestry. Or was it the other way around? Anyway he had done both of those things at Stellenbosch. But he was actually down as a meteorologist. One of the meteorologists. Stephan Bothma. *Ja*, so far as the issue goes, he was the natural guy and certainly the... With the small group that was in Grühneogna, the two geologists, surveyor, radio operator and diesel mechanic. And five. And Richard Otto, who was the surveyor, was both the sort of appointed... Well, he was kind of deputy leader of the team overall, and leader of that group. But he was the natural leader anyway. You know, so that kind of worked out pretty well. And he basically sort of ran that operation. But they were the last group, you know. We were also at the end of an era, in two senses: that they were the last group of geologists to overwinter at Grühneogna. They decided after that, that actually these guys spent more than six months just sitting around. Or rather, spent basically a year in Antarctica in order to do two months' work in the summer. And the rest of the year they were just sitting around. Well, you can't go out and collect rocks in winter. So they decided that was not terribly cost effective, and they actually withdrew the geologists from then, until the SA Agulhas in 1979 or 1980. And then the geologists would go down just for the summer. But up to 1975 they overwintered, sat at Grühneogna, in a basically... in what was kind of a big tent, under the snow. And with virtually no privacy. I mean it was kind of like communal sleeping. And not very pleasant. *Ja*, not very pleasant conditions.

And the other thing was that of course there was a doctor, but he was at SANAE, and these five guys at Grühneogna, 250 kilometres away, which was impossible to reach in winter. Even close to winter. And one of the things that these five guys were advised to do before they went down, was to have your appendix removed. Because if they are there and, you know, their appendix goes... Anyway, the one guy, the diesel mechanic, Sandro [Roshny], Hungarian guy. He said, "No" he is not having his appendix out, if he dies he is dying with his appendix in. You know, something to that effect. So, I think the others sort of followed the advice, and anyway. So we went down, and of

course in the middle of winter, Sandro's appendix started... or something. Or they suspected it had started rumbling, so what they had was, they had one of the... The arrangement was, for that group, that one of them would have done sort of like a first-aid course. So, you know, sort of milder things you could at least handle. And that was one of the geologists, Graham Heineke, who had done this. And he was then, you know, sort of on the radio to Steward at SANAE, saying: "How do I remove this guys' appendix?" Fortunately, maybe it was simply the scariness of actually having it done that, that it kind of subsided. But it was a real scare. *Ja*. It would have been interesting to see if they could pull that off.

Q: The five guys there did they... I mean, one would assume they would undergo some kind of personality or character change. Anything that you guys could notice? Because you probably met and chat to them on the ship at least?

A: *Ja, ja*. No. They obviously came back to SANAE shortly before the ship came back. *Ja*, they obviously were... I mean, they kind of remained a close-knit group. They... You know, five, I think, is small enough that you can't really subdivide. And so certainly they remained a close-knit group. I think, it would be hard to say. I think we all... You know everybody that goes spends a year down there.

Q: *Ja*, you would change, otherwise you're not really human.

A: You change. *Ja*. I don't remember anything specific about them, as a result of their even further isolation, as it were. But I mean it must have been something, because it was more extreme than our isolation.

Q: Did you guys have motorised transport or did you still have dogs?

A: We had motorized transport. That is the other thing where we were the end of an era, we were the last group to have dogs. And they... The last remaining dogs came back with us at the end of the year, beginning of 1976.

Q: That is the team. Andre du Plessis was in your team I think? Was he? I interviewed someone else who was on the last team, to bring back the dogs. I am not sure.

A: *Ja*. No. Was he part of the...

Q: Maybe he was of the team before, or the team after. I can't... Oh well.

A: *Ja* that was actually a very nice thing, to have the dogs there, as a kind of... Look they weren't used as, a kind of, a serious means of transport, in the sense that if we had to do any work or anything, we would take the muskegs, or things like that. Because we had the caterpillars, a lot smaller than the ones they have now, but essentially caterpillars to do the real hard work. And then we had these muskegs, these Canadian sort of similar things, but much smaller, with a cab and a thing. And it was the time when... What was his name? The guy at the Department of Transport. Qan Rensburg. Who was into kind of experimenting with different kinds of vehicles in Antarctica, so he would send like one of these vehicles down, and kind of see what happened. And one of them was sort of being driven from the bukta to SANAE, and it got sort of about 5 kilometres from SANAE and it wouldn't go any further. So it just remained there. That was one experiment that didn't work. And then we had one petrol [muskeg], and a diesel [muskeg], and this. And you know, so they were all kind of... There wasn't much standardization. We were kind of trying out all these

things, to see if it was working... So we had petrol and diesel, and this and that.

Q: So which worked better?

A: Mostly diesel stuff works better. *Ja*, but we didn't have ski-doo's at that time. That only came later, 1980s.

Q: And the dogs? What did you use the dogs for then?

A: Essentially, sort of recreation. I mean in the summer we would... We would get a... There were a group of people who were particularly interested in the... Not everybody is interested in the dogs. A group who were interested, and when sort of agreed, you know, beginning of the year. Qery well, Okay this... You would basically say yes or no, if you are interested. If you are, then what you had to do is to say: Okay you agree to, during the winter, for example, take turns in feeding them and that sort of thing. You know make sure that... So we had a sort of Husky-interest group that did that. You know that looked after them. And fortunately Steward, the doctor, was particularly keen on them, and so he would kind of... Things where they needed particular care, he would see to. I mean, for example, one of the problems that they had was: a Husky would sort of curl up, when the snow blew across, and sometimes, I can't remember how it actually happened, but the one dog got snow that melted and then refroze on his hair, so its ice. And then sort of shook it, and then kind of pulled a whole lot of hair out. So he had a kind of like a bald spot, which, come winter, is not a good thing. So we sort of brought him down and kept him in, not right in the base, but in the ice passage and so on. So with things like that, we had to kind of look after them through the year. And one of the problems was, they were kind of there, but they weren't officially kind of suppose to be there and how they were fed was kind of our problem. So, but at the beginning of the year... Beginning of the year? *Ja*, it must have been. We went out, there was still a... probably an old 303 Rifle or something, some firearm, and this sounds really bad now from an environmental point of view. But we went out and shot a Weddell seal. A Weddell seal. And this was then, you know, cut up into sort of, not quite bite size chunks, but, you know, chunks. And it was just put in the ice and frozen. And then, *ja*, so every couple of days we would just pull out another chunk and sort of throw it to the dogs. And *ja*, that is how they lived.

Q: So you didn't actually bring whale-meat and ...?

A: We didn't bring whale-meat and... And sometimes also for a bit off variety, I think, we used some of the tinned food that people were not going to eat. It had been there for sort of three of four years, and nobody had eaten it. Sort of, mutton curry in particular had been... But they survived.

Q: And then you took the dogs back. Did some of the team-members keep some of the dogs?

A: *Ja, ja, ja*. At the end of the year we decided, you know, who is interested in taking the dogs now? Because we were told they have to come back. That's it. No discussion. No argument. So we decided we have got to find homes for them. So, there were six dogs. That's right six dogs. One guy, who was from Cape Town, took the two older dogs. The old sort of lead-dog in front, and another one. And then Don King, who is from Durban, took one, which was named Frosty, after, his wife's name was Moira Frost. You know her maiden name was Frost. So this was Frosty. Or Frosty II, I think it was. And *ja*, brought one of these dogs back to Durban. I mean, it's amazing how they survived. I mean, you know, these... They are actually amazingly adaptable animals. You know, they can curl up in snow at -40, and you bring them back to Durban, at sort of +30, and they find it hot obviously, but they survive. Whereas, we had a guy visiting, recently a former graduate

of ours. He now works a lot in the Arctic. And he was talking about Polar bears. He said, Polar bears aren't like that, they just overheat. You are not allowed to chase them, because they just overheat and die. But Huskies are amazing animals. So, what we do is, we sort of had this group who were interested in them that fed them and looked after them. And then in the summer we still had a couple of sleds, you know, and the dogs would pull with the harnesses. And, so two or three of us would attempt, and put a few days' provisions and things on the sled, and go off and go camping.

Q: Oh nice. Get yourself a little holiday?

A: *Ja*. So we went... You know, we would go for a sort of little seaside holiday down to the long bukta as much as we could. And that was actually very nice. As a way to travel it's kind of slow, but it's quiet. You don't have these sorts of engines and things like that.

Q: And it's a bit of adventure.

A: It is adventure. This is kind of how it used to be. So certainly it was... you know having the dogs as a kind of an interest, not quite pets, but, you know, still a kind of an interest, you know.

Q: Sort of a kind of companion.

A: *Ja*, a kind of companion. And then, you know, them providing a sort of recreational facility, as it were. And I think, you know, certainly those of us that did that, you didn't actually ride on the sled very much, you tended to kind of run alongside it all the time, a lot of the time. So I think those of us who did that... certainly during the winter one tends to put on weight, you know, because you eat a little more and do less exercise. But those of us who went sledding, sort of lost all that weight again in Summer, and then some probably. So it was very good from that point of view. Sort of providing good exercise and burning up all the calories.

Q: So what did a day in the life of a scientist, in Antarctica, or physicist, specifically... What did you do?

A: Okay. At that time. You know, nowadays, pretty well all the experiments are sort of in the main base or being linked to the main base. At that time because the... partly because the base was down below the snow, you had these, sort of, little huts. Typically say about a 100 meters from the base. And most of them, you had to pretty well go out there every day, or almost every day. Yeah, to check the...

Q: Including the winter?

A: *Ja, ja*. Oh *ja*. You know, check that the equipment was running. We had to go out every couple of days, for example, for someone to change the film and that kind of thing. And, so what you had was you sort of climb up the ladder, open the hatch, climb out and then...

Q: Did nobody ever fall down that ladder?

A: I think, somebody did actually and sort of broke a foot or something. I don't know at one stage there was somebody that...

Q: So, you got out of the hatch and then?

A: Got out of the hatch and then you sort of, you know, if it was clear it was fine, but if it was sort of... if there was a wind blowing, you know, a bit of a blizzard. Then you would look for the power-cable, from the base to the hut. It was kind of raised on poles. So that also provided like the lifeline, sort of to find your way out there. So, if necessary you followed that out to the hut, opened the door of the hut, like a sort of a cold room door kind of thing. And *ja*, went inside to check the equipment, look that everything is okay, perhaps change the recording film, that kind of thing. And then, you know, trudge back. Then perhaps go and develop film, or whatever you had to do. Go into the darkroom, spend a while in the darkroom, then perhaps do some more analysis of data. So you get previous film, and you had to kind of, run it through the thing and extract the readings from that, you know, enter them into the logbook or whatever. Maybe, it was probably once a week, then get the data and type it on the paper tape, that sort of thing. So that was pretty regular. The other... You know, one of the other people, who were doing things like the Natal-guy was doing... was the first guy to do... No, the second I think. Doing direct observations of the aurora, with a sort of TV-camera, low light with a TV-camera. *Ja*, and so of course they sort of waited for something to happen in a way. And so sometimes they would kind of, you know, go to bed early, because nothing was happening, and you couldn't see outside anyway. And then other times they might stay up all night, because there was, you know, exciting things happening in the sky. And we depended on the [geo-mac], we used to call it. We sort of looked at the... to see the magnetic fields. And again these, sort of paper things, with an in... With a pen going like this. And when you saw the pen going like that, then you think: "Aha, there is an aurora", and you would sort of go outside and look. So it depended on that kind of thing. And the interaction between the scientists and the... We each kind of gave a talk to the team, you know, supposedly in layman's terms, on what we were doing. So hopefully so that they had some understanding of what we were doing. We weren't just kind of mad scientists doing some crazy thing. Yeah, there was a purpose to it.

Q: Was there any group formation between the sciences on the one hand and the mechanical support personnel on the other? Or not necessarily anything discernible?

A: Not really like that, I don't think. No. I think, you know, I mean, their attempted to be sort of groupings, but I mean people... They would maybe partly, partly by language, partly by sort of interest, like dogs, you know. I don't think there was any sense of, kind of "we are scientists and those guys are..." Kind of, you know... I mean. Where the sort of possible friction came in was when the leader would say, we got to do this, this and this. Like for instance, bringing in diesel drums. And then we try and say: "You know, look I've got an important experiment to do" or "I was up all night last night watching the aurora", "but we've got to do this to keep the base going". So the logistics, sometimes, was often kind of in conflict, you know, with doing science. And it was supposed to be... You know, this was where the leader was supposed to be, kind of understanding. You know, to insure that, essentially, the science weren't compromised, by the logistics and the requirements of the logistics. But *ja*, I mean, there was a lot more of that to do in those days. I mean, say the fuel, now you got these big sort of bladders essentially, that they filled directly from the ship with fuel, and take along with a sled, and pass up and down. I mean, what we had that time were drums, you know. Diesel drums. *Ja*. But they weren't the big ones. They were hundred litre drums, so they were sort of half the size of the normal big ones. But which made them...

Q: Doesn't really last long, does it?

A: Well, they were much more easily handled. One person could handle them. I think that was the kind of rationale... And so we had hundreds of these, you just have to go, and sometimes of course you had to lay them out, so they get buried and you have got to go dig them up, drag them into the base. It was a lot of work, just those kind of things to keep the base running. And then you'd have like snow-smelting duty, you go and throw snow into the snow-smelter. And then of course, your reward for that was to be able to bath. Once every ten days or something like that. *Ja, ja.*

Q: And English and Afrikaans, were you mostly of both languages there?

A: We were a predominantly English team, which at that time, I think, was unusual. But, I mean, there certainly wasn't friction, in the sense, between the two language groups, as it were. I think everybody really got on pretty well. You know, we were a happy team. There were some that were very unhappy. I would say we all got on pretty well, apart from the leader. But that is the sense in which it worked.

Q: And did you take turns cooking?

A: *Ja.*

Q: Was there anyone that you guys would prefer not to cook? Except the leader.

A: That is a good question. *Ja*, because he would force these strange vegetarian dishes on us. No, I think that sort of went quite well. What we eventually decided to do was, rather than do just sort of one night cooking, was to do three. So you would have a turn of three, you know, do it for three nights. And then, by that time it has kind of exhausted your menu, you know, your repertoire. And then you had a nice long wait until it kind of came back round again. So that kind of worked well. And again we kind of agreed on that, you know, in sort of meetings and stuff, where we said, you know, this is how we are going to do it.

Q: Did you have like a meeting every week? Sort of a team meeting or...

A: Pretty well every week. And movie nights. I mean this is still...

Q: And?

A: 16 mm movies.

Q: Know them all by heart?

A: All off by heart. You've heard all those stories...

Q: No, no, no. I want to know what movie specifically did you enjoy?

A: The couple I remember. There was one called "Brewster McCloud".

Q: So it sounds like a western?

A: Never have heard of it, I am sure. What was the other one? There was one called "Kashmiri Run" ,which was sort of about this group fleeing Tibet when the Chinese invaded or something. And then from the second or third time that we showed it, it became known as "Kashmiri Re-run". So I remember "Kashmiri Re-run" very well. We had these sort of, you know, these... people would sort of quote these things, as it happens. I mean we had... I think we had... How many was it? Maybe 20 movies, if that, for the year. So which one shall we see again tonight? I think it was less than 20, I am sure. *Ja*, so you know we would have that and kind of structure that in a way. It became a fairly regular, like Saturday night movies.

Q: And did you still get a cigarette and alcohol ration from the department?

A: Oh yes, that is right. *Ja, ja*.

Q: And did everybody smoke on the team?

A: No. No, so that was actually a great source of bargaining power, towards the end especially. *Ja* it's... I mean everybody had to kind of, if they were a smoker, work out: "how many cigarettes am I going to need to see me through a year?" Try and estimate that. And there were some who overestimated, there were some who underestimated. And they were in trouble. But at that time I was smoking a pipe. So I took down a whole lot of pipe-tobacco. And I continued that through the time I was there, for a little while afterwards. But *ja*, there was one guy who actually went down smoking and gave up while he was there, which is quite a feat of willpower. *Ja. Ja*. And as I say, there were a couple of people whose ration ran out, and then they can't... You know, became pretty desperate. So you had this sort of bargaining power. "Now what can you give me? What can you do for me?" Trade a couple of skimmy duties for a carton of cigarettes or something. And the same thing with alcohol. You had this ration... I can't remember quite how it was decided that there were so many crates of this and crates of that, so you know. And we kind of put it all out on the tables. Divided it up, and then that was your share. And *ja*, some people used that also to kind of trade.

Q: *Ja*, and some people would use it within 6 months and others would... Who kept the key to the alcohol store? Or did each one actually physically get to keep their own stuff?

A: I think we each kept our own, as I remember it. *Ja*, I think we each kept our own under our bed or something. But *ja*, the doctor was also like the quartermaster, to keep check on the... Gave him something to do.

Q: *Ja*, I suppose being a doctor isn't the most exciting job on Antarctica.

A: *Ja*, Steward was quite good at that, in the sense of looking at what was there at the beginning of the year and say, well, you know, we want to spread what we got out reasonably through the year. So we don't eat all the good stuff at the beginning, and end up eating mutton curry and kidney beans for the last month. *Ja*, so that worked quite well.

Q: Quartermaster... wellbeing... he was not a key...

A: *Ja*, that is right. Was the doctor. I mean, most of the time he did not have much to do. So what they had that time was, the doctor that went down would have a kind of a little research project of some kind. And the one that Steward did was a thing on looking at allergens, and how one kind of reacts to these in a kind of allergen free environment, which Antarctica was. So he had these little things of like cat fur, and this kind of thing. And so he would, every 6 weeks, I think it was, you

know, the people had kind of agreed to this. They would get these little things on their arms and see... and measure their reactions and that. So, you know, and sort of see how they progress through the year. The problem was, the real test would have been to follow it up after they came back, to see if there was any kind of long term effect, from having in an allergen free environment. *Ja*, I think he got something out of it. So there was something to do as well, something interesting to do in that sense.

Q: And how did you guys deal with the three forbidden topics of sex, religion and women? Or politics.

A: Politics, *ja*. Politics, I think we pretty well avoided. I mean the religion thing we kind of dealt with quite a lot. I mean there was the one guy who was the son of a *dominee*, and there was a couple of other guys who were serious...

Q: Sort of Calvin, Dutch Reformed Calvinists.

A: *Ja, ja*. But I think we kind of all respected each other, and could have sort of debates on things, without getting kind of worked up and... Kind of... *Ja*, I think we didn't really have the problem of anybody trying to convert anybody else or anything like that. Or having such a rigid kind of view that they couldn't listen to somebody else. Fortunately. *Ja*, I mean as far as women or the lack thereof... The one guy who was with us, a guy called Tino Ruppung, he was the radio-operator. He was quite a character. He was at the time we went down, it may have changed since, but he was at that time certainly the oldest guy to have gone down for the year. He was forty-five. I mean he had a son, who was about the same age as the other radio-operator. You know. But Tino was one these guys who, you know, well... fancies himself as a womanizer shall we say, I don't know whether of it was true, but he could tell good stories. And he could recite, you know, however many verses there are of Eskimo Nell and all that kind of stuff. You know, dirty stuff. But it was amusing, it was entertaining. So there was that, and then, I had a friend, a woman-friend, who was overseas shortly before we went down to Antarctica. And she sent me a Playboy calendar for the year, but you know it is 1975, so.

Q: So you couldn't buy Playboy in South Africa?

A: *Ja*. And so, I thought that was very thoughtful of her.

Q: [It is]. It is very liberal-minded.

A: And so, what I did was decided, rather than just putting the whole calendar up. What I am going to do is I am going to, on the first of each month, you know, put up that month. And so I did so. You know, sort of February, probably March, April... And then sort of at the end of April, sort of about midnight of the thirtieth of April there was a knock on my door, "Where's Miss May!?"

Q: Where is Miss May?!

A: So that also became a little ritual. Look I am sure you'll see photographs of the base at that time, on the walls there are just naked or half-naked women. And that is kind of what happened.

Q: Well, now there is woman in Antarctica and there are still pictures of half-naked women up...

A: There is still? Are there? Oh, I don't know. There shouldn't be.

Q: *Ja*, I can't say the department is pleased about it, but there is not much they can do.

A: *Ja*. Well, I think there should be limits on what is, kind of, on display in the main... in the sort of public area.

Q: *Ja*. No, that there is.

A: *Ja*, so there was that. Say that kind of... It was mostly kind of light relief.

Q: Did you have... You said you had a couple of engaged men on the team?

A: *Ja, ja, ja*.

Q: And married men? Or no, wasn't that allowed?

A: *Ja, ja*. There was Tino. No, Tino was divorced at that time. He remarried subsequently. There was a guy, one of the... the senior diesel mechanic, Godfrey Knight, who was married with two young kids. And before we left his wife... He was actually from England and his wife was South African. He met her when he was catching the bus from Germiston to go to Pretoria, or so he told us. And she took pity on him, this sort of Englishman and kind of took him home. And anyway, his wife said: "Okay, you're going off to Antarctica to do your thing for a year, this is what I want: I want a flat in Sea Point with a view of the sea, I want this, I want these cupboards, I want this and that and the other thing." So he set her all up in a flat in Sea Point, with the two kids and everything. And of he went to Antarctica.

Q: And got her still in the flat in Sea point when he came back?

A: She was still, and they are still happily married.

Q: Okay, great. But, I mean didn't they miss their loved ones terribly? Or not that you would notice?

A: I think it was hard. I think it was very hard for him, especially with the young kids. I mean they... The one child, the younger child had some learning problems and so on. And that was very difficult to do deal with. You know, we said that, I mean Godfrey was the one guy who really noticeably aged, while we were down there. He went down sort of at a reasonably young-looking 39 and he came back a really old-looking 40. Grey, you know, really gone completely grey. And I think it was particularly hard for him, you know, with the young family. And how? You know, I couldn't do that. Because I mean most of our team, although at that time it was kind of one of the oldest on average. I mean most of the... I think about almost half of us, certainly at the main base, about half of us turned 25 during the year. As I did. So it was about the age. Particularly if you graduated from university and you're tied for a year...

A: You already did a degree and it wasn't the first time away from home kind of atmosphere.

Q: So you know, you were kind of... and at that time it was also part of it. You know, say I wanted to have an adventure, I could do that. You know I was young... I mean I had a girlfriend, but she had to stood in, I was going off for a year and that's...

A: And you were not yet 25, so. Well, in terms of today at least, it's still very young actually. And... But you guys missed conscription that only came later. So none of you were in the military?

Q: No, there were. There were people, who had been in the military. I was not part of that, because I was actually... I grew up in Zimbabwe, Rhodesia. At the time that I went to Antarctica I was a permanent resident in South Africa, but I wasn't a citizen. But there were people who had been in

the army, certainly, *ja*.

Q: And did they speak about their army days, or compare it perhaps to Antarctica?

A: *Ja*, I mean there were a couple who would talk about that. Compared to Antarctica, in terms of the kind of living along with these men...

Q: I don't know, in terms of isolation. Sometimes people do, sometimes they don't. But it's interesting.

A: No. I don't remember it being like that. You know, usually it's kind of stories of what they got up to or something like that. But I...

Q: And that Sergeant-Major and this Sergeant-Major...

A: *Ja*, that sort of stuff. How tough it was. *Ja*, I don't remember anything kind of really relating to...

Q: And when there was tension, what was usually the cause of tension?

A: One of the things I think was kind of when people weren't kind of doing their share or pulling their weight, you got somebody that is kind of slacking. You know it wasn't kind of regimented, but you kind of, you know, expected, look we are all in this together, we've all got to make this work. And I think that was one of the issues, to say that; "Look, we have all got to take turns to do this, we all got to take turns to do that." And yeah, once or twice one or two people tried to sort of skive-off, you know, not fill the snow-smelter or something, and we would run out of water or something. And you know, that kind of thing, that really would get people. That was the one thing. I think we didn't kind of, I say, we didn't get into sort of tense debates over politics. There wasn't kind of direct, as I think there is in some groups. There wasn't kind of direct leadership challenges. That can happen. You get sort of two different groups, each with their kind of leader that then they clash.

Q: *Ja*, and they sit at separate tables and things like that.

A: *Ja*. We certainly didn't have any of that. We had the team, then we had the leader. No, but even so. I mean for most of the time it was kind of joking in a sense, but it eventually, I suppose, it eventually wasn't really a joke. But *ja* look, generally the team worked through the year. Through the winter. We worked together pretty well.

Q: Is winter a tougher time, for the team, than summer?

A: Oh, it is. It is. You know I think the combination of things. One is just the psychological effects of the, whole, not seeing the sun. Because the latitude of SANAE means that the sun disappears at the end of May for about two and a half months. It sort of reappears in July. And so, during that time, around midday you'll see a bit of, you know, sort of twilight on the horizon, but... And I think... *Ja*, as I think studies in Scandinavia showed, it really has an effect, a psychological effect. And so that is the one thing. The other thing kind of related to winter is the fact that it's when you tend to get the worst kind of storms, and the highest wind speeds and that kind of thing. So often you are really stuck inside the base for days, you know, it would be almost impossible to go out.

Q: Not like the modern base today.

- A:** *Ja, ja.* And so you know that sort of cabin fever kind of thing. No look, I mean, you know, you could go to your room. You know...
- Q:** Your little box.
- A:** But it was your own space, you know, even though its small, it is your own space. Or you could go to the communal area. You could go to your... If you're a scientist you could go to your lab, or the radio-operator could go to the radio shack and so on. So, you know, you could choose different spaces, on your own or communal in different ways. So, you know, I think it wasn't quite... I think the guys at Grønehogna had it far worse, I mean they just had one, basically one big space. And how they endured that, I don't know. So the winter... And besides the temperatures and things as well, that when you do go out... I mean the temperature is so much lower, you know, people here say: "Well you go to Antarctica", and they say, "Oh, cold all the time." Yes it is by our standards here. But you realise after you have been there for the year that a summer temperature of -5 is sort of like 30 degrees on Durban beach. In comparison to -40 something, you know. I mean, the lowest temperature that we had during the year was -47. *Ja.*
- Q:** *Ja,* that is the kind of weather where you don't survive if you go outside unprotected.
- A:** Well, that's absolutely. This was also the time... I mean, you also try and think of something to pass the time. You need entertainment to pass the time. That was the era of streaking, I think the previous year or so that some guys had done, they said...
- Q:** Oh, they still do it.
- A:** *Ja.* And what we had was, the length of the base, from the ladder at the end to the ladder at the other, you know where the hatches came out, I think was about a 100 meters, or maybe a bit less. *Ja.* So the idea was kind of to run naked from the one to the other. But now this had to be quite planned, because the problem is you couldn't climb with bare hands and feet down an aluminium ladder, you know, at -30 or something. You would just stick to the... *Ja.* So it had to all be set up. It had to have a pair of boots and a pair of gloves at the other end. And then sort of go into this end and sort of strip of and then run. And we were purists you see, you had to do it barefoot. And it was the feet are you would really feel it, because it's actually in contact with the snow and that is where you lose the heat worst at. There was a group, who first did it at, I think it was -30. So this is -30. So this is now setting a record. Lowest temperature. That was okay. That was fine. But then another group went at -35, and then it got to -40, and a couple of guys said, they were going to go for it. And at least one of them had a bit of a problem on his feet. You know, for a little while afterwards. Then they decided, okay that's it. But *ja,* you know, it's all very silly, but it was kind of to liven up the...
- Q:** Like I say, I think it is something they continue and it's something that isn't necessarily unique to SANAE. What is interesting to me is it is hugely the men. You wouldn't really find the women participating in that. Now and...
- A:** Might. *Ja,* I don't know.
- Q:** *Ja,* and back then. There is just something interesting about men together, liking to streak.
- A:** *Ja, ja.*

Q: But I am not the sociologist.

A: Now, I am sure there would be some interesting studies on that.

Q: There is some interesting studies on that. So apart from the frostbite, was there any other medical emergencies in the... well, except the appendix emergency?

A: No, I think most of what the doctor did during the year was probably dentistry. People's teeth that gave problems.

Q: I wonder why that is?

A: *Ja*, I don't know. It may well be, especially at that time, the kind of, some of the fillings and things we had, would be more affected by the cold. The metal fillings and stuff like that. And I think Steward had a sort of two weeks crash course in Dentistry before he went down. And that is what he ended up doing most of, I think. We didn't have any real broken bones or things that I remember. I mean the one thing that I remember was actually right at the end of the year, I think just before the new team arrived. I was the editor of what you call Sannie's Bos, which is the kind of the yearly magazine or whatever you want to call it. And I had been printing out using the Telex machine. This was interesting. I think we had about five Telex machines in the Radio Shack. And what you could do is, you could get the one to print paper tape, and then take the paper tape from one to the next one, and from that to the next one, and from that to the next one. So you could actually chain them kind of together to print like five copies simultaneously. It was long before photocopiers or even Gestetner machines, or anything like that. So that was how I could use the machines five at a time. I mean I've forgotten how many pages, but it was quite a few pages. Hundred pages or something. Five at a time on these Telex machines. Anyway, I was carrying a whole pile of these print outs, and I think I had just assembled them into a magazine, and I wasn't quite looking where I was going. That time they were due to kind of raise the level of the, something, the roof of the one science hut. I kind of walked into the sort of angle iron thing here, just here, just above the hairline. And I needed five or six stitches. That was the one thing that the doctor was able to do. *Ja*, but he certainly didn't have any real serious emergencies. I mean, I think there have been years when there has been much, you know, been more. When they have made some serious things to do.

Q: But I suppose the doctor just had to hand out some headache pills some mornings?

A: *Ja*, those kinds of things.

Q: *Ja*, so what did you guys do midwinter?

A: We had a variety show. I mean we also had a sort of multi-course dinner. And again Steward was good at planning that, you know, we had a few kinds of luxuries, said, Okay you know, we are going to keep these for midwinter, and so on. *Ja*, and we did a kind of variety show. And you get all these hidden talents coming out. But of course the thing was, when you are going to do sketches, who is going to dress up as the girl? That kind of thing. So that kind of issues, but it is really fun. I mean, I think, you know, it just went on right through the night. You know, by sort of 4 am the last few people are sort of still hanging in there. Last couple of beers.

Q: And did you guys get messages from the other bases at that time?

A: Oh *ja, ja*, there was a lot of... a great sense of... *Ja*, the sort of international nature of Antarctica, and sort of being in it together, you know, here we are. You know, these little isolated spots around us on this vast continent, and we are kind of able to talk to each other, on the radio, but we probably never see each other. But still there was a sudden sense of, sort of, camaraderie. And Steward in particular is, one of his good mates had applied to, I think it was one of the Australian bases... gone down, as a doctor, to one of the Australian bases. So he was sort of in particular communication. And so he had quite a... it was interesting sometimes to talk to these guys. We even tried to talk to the Russians. Just of course that time South Africa...

Q: At the time tried to talk to the Red Danger. Rooi gevaar.

A: The Russians *ja*. And we even set up with them a game of chess.

Q: With the Russians?

A: With the Russians. *Ja, ja*. So we would have a chessboard at SANAE, they would have a chessboard at Novolazarevskaya. And, you know, radio operator would say, you know, pawn to G5 or something, and they would follow the moves and then they would send back another move. So *ja*, we played chess against the Russians, I can't remember who won, they probably did. But that was to be expected. *Ja*, so there really was a sense of this kind camaraderie, amongst the various Antarctic bases.

Q: And on your way to Antarctica did you have a crossing with the Polar-circle ceremony?

A: *Ja, ja*.

Q: On your first trip?

A: On the first trip. I am sure we must have done.

Q: *Ja*, I am trying to figure out when that started. As a South African tradition, because it was certainly not a tradition in the 60s.

A: *Ja, ja*. Actually, did we? No, I know it was[n't] such a big thing when we went down for the takeover in the mid-1980s. But I don't remember it... If it was, it was a minor thing compared to what it became a little bit later.

Q: I think in the 80s, on the Agulhas... It was quite the experience.

A: *Ja, ja*. No, it was. It seemed... You know I managed to avoid it in the 80s, because it was not my first time. But just looking at it from the outside, I thought, well I am actually quite glad I am not participating in this. *Ja*, I certainly don't remember it as being anything like the kind of what went on... You know, what I saw going on in the 1980s. It was certainly, you know it was kind of marked. You know, I mean we kind of, recognized that we were crossing the circle. But we didn't have a big thing, you know, of kind of an initiation almost, you know, what it became. *Ja*, I don't know when that... If that started with the Agulhas or if it started before...

Q: I suppose it sort of started, because they do it on some other Antarctic ships at the moment, like the Polarstern, and so on. But not on all.

A: It probably takes a particular group of people or you know something, who kind of start it. And

then they kind of perpetuate it.

Q: Ja, for instance I can't really imagine, say, the Indians doing that, on a ship. Or something like that. Just before you came back, when you knew the ship would come. What was the atmosphere like? Did you want to come back?

A: That's a very good question. I mean, I think its... There really is mixed feelings, you know, because you think, well yes, I have been away for a year. I am missing the importance of this and that and the other. But on the other hand, you had a good time. Especially if you got on, you know, and not had fights with everybody. It does happen from time to time. You know, if you have had a good experience and think it is an amazing place to be and I may well, you know, not be here again. This is, you know, what you, kind of, want, to kind of, last in a way. So it is really, kind of mixed feelings, because suddenly you realize this here has come to an end. And, you know, this kind of special time. And yes, you want to go back, but no you don't. It's really kind of torn. And I think especially, for some people, depending on how their love life worked out. You know, they also would be kind of reluctant, maybe of reluctant to go back. That was the case with me. I mean, I still had a girlfriend when I went down, but it kind of didn't last. And so, and I got the 'Dear John'-letter coming down on the ship, you see. So you know, so it's time to go back, well, you know, actually I don't want to go back. But, you know, and that happens. I knew another guy who was actually engaged, got back and broke up with his fiancée. It's funny in a way, he somehow during the year, has started talking to some other woman and then on the ship on the way back, somehow he made a radio telephone call, and he thought he was phoning the new girl, but in fact he was calling the old girl, and said: "Hello", whatever her name was. It was sort of chilly. *Ja*, ouch! Anyway, I don't know whether it was just because of that, but I think, you know, there were other [things] as well, that...

Q: I am just going to quickly close the door. The background noise. So when you came back in South Africa, what was the first thing you noticed in South-Africa?

A: How fast everything is. I think that's the thing. Especially, you know, the time we were there travelling with the dogs. And things are slow and you come back to Cape Town, besides the heat, I mean obviously, but just the traffic and the noise and the people and... Everything seemed so crazy, you know. Life was kind of nice and peaceful down there. And suddenly back in this chaos. So dealing with that and dealing with, you know, the kind of disappointments one might come back to and... It really is a major adjustment coming back, I think. I mean going down there, it is all kind of new and exciting, and its adventure and so on. But coming back to the real world is actually very hard. And I really think it takes quite a bit of adjustment again, to get back. You know, whatever one's experience, I think, in Antarctica. It's just a very different environment. And you come back to this... *Ja*, everything is moving all over the place. That was my impression, you know, the sort of first few days in Cape Town. Getting use to all the traffic and stuff.

Q: And what did people ask you most, about Antarctica, when you hear you have been to Antarctica?

A: *Ja, ja, ja*. Besides the "Wasn't it cold?" part.

Q: I don't know why you'd ask that. Like...

A: *Ja*, I think they say, well, you know, what kind of things kind of stand out, you know, that you remember. And also the one thing particularly for me was the field trip that we went on towards the end of the year. As it worked out the surveyor had a sort of a project to do, where he was

going to measure the flow of the glacier. And the previous year they had laid out a line of poles, sort of straight across the glacier, and we went back again to measure how far they had moved during a year, you know, quite a... And the problem was that the vehicle that he was supposed to use, from Grønehogna broke down. So we had to take a vehicle from SANAE to Grønehogna, pick him up there and then go and do this thing with him. So I was actually out on the field on this thing for about two months. About two months, *ja*. So we travelled around from Grønehogna along the Glacier, right down to Gorgen. *Ja*. Passed the old... and there is a depo, which at that time you could still see from the Norwegian-British-Swedish expedition from 1950. You know, there was a can of Shell-paraffin, two shillings or something like that. Just a little depo that they left, you know, a sort of emergency supply depo, kind of thing. You know, sort of shaped like a pyramid, I think it was, on the way down to Gorgen. So *ja*, that to me, that travelling around, that field trip and staying[?] you know two months without a bath. Then when you get back a shower or bath is just a divine.

Q: *Ja*, and you can have one every day.

A: So, I mean, to me that was really one of the [...] things, and just, *ja*, dog-sledding and those kinds of experiences that are just unique. You know, that you're not going to get anywhere else. I think there... And what I always told people was that it was so much, besides the environmental experience, it is as much a human experience. You know, the fact that you have to live with these other 15 guys for a year, you know, you can't sort of bolt out. Like what I think has happened, for example, on the islands, you know, Marion and Gough. Occasionally somebody sort of goes crazy. You know, the ship would sort of come and take them away. I mean that is not an option. And you realize that you have got to make do with what you have. You have got to make it work. You have got to get on with these people. Some, you know you get on... closer with than with others. But nevertheless, you have got to get on with everybody. You know, and... But I think we all realised that and made it work. And so it was very much a, say a human experience as much as an environmental one. And so that's the kind of thing that I would say to people. People don't think so much about that.

Q: I get the idea, as other people have put it. You know, people tell you, they're not introverts. *Ag. Ja*, they don't like people; that's why they went to Antarctica. That's the wrongest thing you could do, when you do not like people.

A: *Ja*, I mean, sure. I think people have different motivations to go down there. I mean some people went to earn some money and not spend it, which is not quite, you know, but never mind. *Ja*, some people went just for the adventure. Some people, like myself, went to do some science and have an adventure. So, you know, there are kind of different motivations to go down. And *ja*, maybe in a way, different expectations. I mean, you know, when I think about the sort of psychological tests and things that we did. You know, went down and we did. I thought, afterwards going through the tests, I thought well how on earth did they decide, on the basis of those tests, whether you are suitable, you know, to... And how they put a team together, you know, people that are compatible. And I would say to people afterwards as well, you know, you have got to kind of take it on trust, the people who have chosen you, have chosen people that you are going to be able to get on with. You know, you have just got to accept that. You trust and you hope that they have done that. And that you can kind of build a compatible team from the people that are available, because often there is not much choice as to... You need somebody who is qualified in such and such a way, and wants to go and spend his year in Antarctica. *Ja*, so there is that aspect

that, you know, you kind of feel okay, you know, with the other people. And I mean one of the great things that was discussed, and of course happened somewhat later, you know, was what about women coming to SANAE? How would it work? You know, this kind of thing. And the always sort of pro and con arguments.

Q: Was it a discussion you guys also had when you were down there?

A: *Ja, ja.* Definitely.

Q: What was the vote?

A: I can't remember, you know, how it went, but it was probably half... No, I don't think it was probably half and half. There was the kind of conservative half, you know, who said: "Well, you know, it can't work for women." I mean sort of arguments like: "What about the toilets", or something like that. *Ja*, you know, ridiculous.

Q: Well, that argument worked until the mid-nineties. So...

A: And the sort of things like... And then they said... Well, and then the other thing about... Well, you know, they are obviously going to have relationships with some of the other people, and there will be jealousies, and this and that. And it will cause so many problems. And the others of us said, you know, that is normal life. And in a way having men and women there, is at least it makes it a little bit more normal. You know, but it can't really be normal anyway. But it is even more abnormal, in a sense, having only men there. And yes, you kind of expose the group to other, you know tensions, possibly. But it certainly makes it more interesting. You know, make it... add another kind of dimension to it. And *ja*, when I... A couple of years after I came back. I gave a talk at a Girls High School. And I got this question: "What about women going down to Antarctica." And of course that was long before they actually went down to SANAE. And I said, you know, "I hope that is going to happen." And then the teacher said something like, something to the effect of: "Well, maybe they need someone to go and cook for them." And I thought, what! I said, "No", And made sure the girls heard this is it, "When a woman goes down it is probably going to be as a scientist, to run a science program." And not, you know somebody to come and serve the men or something. Which was kind of... I was horrified, I mean this is the teacher. Anyway. And in fact that's what happened of course. I mean the first woman to go down was a scientist. So, I mean *ja*, I was part of the progressive half who said... But *ja*, it was a debate.

Q: And labour? I mean in the 1970s, I would imagine people with degrees, from middle-class backgrounds, would have grown up with domestic workers. And now you were 10, 15 guys having to make your own beds and clean your own base. Did you ever wish you had some domestic help?

A: No, I don't think so. I think there were times when we thought, yes, well they should have left a few labourers around, to carry the diesel drums and chunks of snow. But no, I think the one thing we debated a lot, also of course, was whether there should have been a cook? A chef. Because we discovered that most of the other bases had a chef. You know, one of the team members was a chef. And South Africa was one of the few bases, we discovered, that didn't have this, where the team actually cooked for themselves. You know, some people feel that's a good thing. You know, you learn to do these things, you get variety and so on. Others thought it was an imposition that we could do without. But it was just one of the things we debated. I mean our training for that was 3 days at the, those days at the Pretoria Technicon, the Domestic Science Department. No what was it called? I think it is probably still called the Domestic Science... *Ja*, Home Economics or

whatever. So we learnt to make koeksisters. Qery useful.

Q: *Ja*, extremely useful in Antarctica to make koeksisters.

A: No, I mean the challenge there was, with cooking, was to use what there was. You didn't have a... Well, today I want to make so and so, let me go into the shop and I will buy the ingredients. So the trick was to kind of use up what was there. And so the dish that I sort of became known for was bullybeef and bobotie. One very good way to disguise bully beef, was to make it into a bobotie. So this was... I would kind of do regularly. So things like that, that would kind of use up that food, which otherwise might be difficult to do something with. So *ja*, some interesting challenges...

Q: And I suppose, in the 1970s, it was quite unimaginable that black scientists would go down.

A: That was *ja*. That was still some time in the future. *Ja*, we sort of think about [the thing], we are all whites, but I mean that was just South Africa... You know. It was...

Q: So you didn't necessarily notice you were an all-white male team?

A: *Ja, ja*, that's how it was.

Q: And when you came back, I want to move on a bit to your career after Antarctica. Do you think the fact that you spent a year in Antarctica made a difference in the way you administered later on? When you were involved, I don't know to what extent you were involved in science administration, but in the extent that you were, say for instance in supervising students or so, or deciding who to send down. Did that impact the way you did it, do you think?

A: Oh certainly, certainly. You know, it would have been very difficult for someone to deal with, for example: choosing people to send to Antarctica or planning logistics and things like that. It would have been difficult to do that without having had the experience. And, so yes, it certainly helped. I mean things like, I had been involved with... *Ja*, for example, planning what had to go down at the end of the year. So we would have communication from the guy running the program down there. Saying, you know, this needs replacing, this needs replacing. So you compile these kinds of lists of spares and stuff to go down. But *ja*, with keeping the mind to... You know what it is like. And you know that you need to have spares of this, that and the other thing. It's not just, the guy feels like it. You have got to have spares available, because there is no kind of handy-shop around the corner. So yes, very much so. You're aware of what it is like. And also, I think, from the kind of psychological point of view, that the people down there know that you kind of have an idea what it is like. You know, you can sort of relate to them in a way. I think that is good.

Q: And in what way were you involved when you came back? Did you serve on committees, like SASCAR or as Antarctic officer or things like that? Or mostly on a supervisory level?

A: In various ways. I mean I supervised students. People who spend a year down there and come back, and masters. I supervised a few students in the 1980s. I, *ja* sort of assisted, help with like, you know, some of the organisation aspects of the programs. That time mostly in the sort of VLF, the rural TV-programs. I did attend some of the, later on, that's probably late 1980s, early 90s. *Ja*, some of the SASKOM meetings and those kinds of things. Very often just kind of, I may be filling in for Dave Walker, or something, something like that. I mean I was for a long time sort of junior member of... There was this kind of age group that kind of dominated our department for a long time. And although I was sort of advancing in years I was still relatively, [cheap for the department]. But *ja*, I was involved in that sense, and then later on I would prepare the SACAR

applications and things like that.

Q: And when did, I can't... I can remember there was a lot of politics, but more beyond it I cannot remember. Was the physics department always on this campus?

A: No.

Q: No? Was it the Howard campus?

A: Howard College campus, *ja*, it was.

Q: And this was the black university?

A: This was the University of Durban Westville, which was the Indian university.

Q: Oh, the Indian university? I wanted to say, the architecture looks familiar to the [SA] University and Fort Hare and those places.

A: So and I mean, the sort of setting, especially if you drive down from that side. The fact that you have the kind of single roads that you can sort of close of. You could sort of close of the place. And it was designed like that.

Q: *Ja*, it's very much designed like that, I had a friend who lectured there. Sort of, he says, it's designed with security in mind.

A: *Ja*. Absolutely. No, you know, when I say involved that was at the University of Natal. Well, UND as we called it, which was the University of Natal, Durban, which was the Natal college campus. So I mean, there has been this space-physics group at Natal, since... Oh, I don't know, when it really started in the 1960s. Probably with professor [Kareb] studying lightning and stuff. But the first Natal person only went to Antarctica in 1970. So they were actually sort of 9, was it 8 or 9 years, behind Rhodes and Potchefstroom. I mean they were the first. They were the first people to send scientists down.

Q: Wasn't Raymond Adie from Natal?

A: *Ja*.

Q: I should go check it out. But he became involved with [Bergson], in the 1940s.

A: *Ja*.

Q: And not really as a South African, but as a British... And then there was the other meteorologist from Natal. And I cannot find him, or his family. J.A King. That went with the Norwegian-British-Swedish expedition. Yes.

A: Gee, *ja*, that would be interesting.

Q: *Ja*, that would be interesting. I got an indication that he went to Wits after a while.

A: What was his name?

Q: I don't really... J.A, and King. The Weather buro doesn't really know anything more about him. He was definitely English. I am assuming it was John or... John or Jacques. Most likely John. Anyway I

will check that out, I was just throwing it out there, maybe you know of someone who knows or...?

A: No, because I mean that Norwegian-British-Swedish expedition was quite important with naming a lot of the places. I mean a lot of the names were also Norwegian because of that, you know, besides it was Norwegian territory. But one of the books that we had down there, which I have never seen since, about that expedition. I don't know if you have seen it, I think it's called "White dessert".

Q: *Ja*, White dessert.

A: Have you seen it?

Q: *Ja*.

A: Amazing. I mean that... You know some of the stories in that...

Q: It's one of the better-written expedition stories. Definitely better than the book that Fuchs wrote.

A: Oh *ja*, But I mean the one... The thing that really sticks to my mind is this, that Swedish guy that survived that tractor going over into the sea. I mean that was absolutely amazing. I mean that is the sort of survival story, you know, that real life is about. That should be one of the things you see on TV. 'I shouldn't be alive'. *Ja*, I mean that was really, to me, a thing that really made a great impression.

Q: And in terms of students through the years, do you notice a difference in the amount of students interested in studying Antarctica? Or Physics in Antarctica?

A: There was a long lean period. I think we are getting a few more now. *Ja*, I would say in the 1980s we had quite a few students. And then the numbers kind of dwindled. And I think, sort of, *ja*, 1990, there was this period of 3 years between the SANAE III and the SANAE IV. But after that... Well you know there was very little interest. We found it difficult to find students, you know, who were really interested in going to Antarctica. I mean, we would employ, usually, electronic engineers, you know, to kind of run the equipment, but some of them got interested in the science, but those were more people, sort of in the late 1980s. But mostly they would just go down, do the job for a year, come back and off they would go. And there seemed to be very few people that were really interested in doing the science. Somehow the group at Potchefstroom was more successful at keeping a sort of continuous, you know, active group, I think, going. There always seemed to be people coming in and continuing studying there. I mean the Rhodes group essentially folded. And here, I'll say, we went through a very lean period, as far as students are concerned. You know, very few students. And I think it is sort of picking up a bit, again. We are getting more students obviously now. Most of the students are black, most of the students then were white. But, you know, they are students.

Q: And in terms of having to go down to Antarctica themselves, for a year, is it actually necessary for a Masters student to go down?

A: It's not necessary. I mean we would...

Q: But would it benefit their work, would you say?

A: I think we often take it to benefit their work. I mean, for example, Ozilile [...], you know, he did his Masters... completed his Masters with me last year. He has now continued to a PhD, with Dave

and Jeanine... He went down for the takeover, at the beginning of 2009, I think it was. And... Because we had to send quite a number of people to help with putting the new radar antennas up. So, *ja*. You know sort of... So he went down, and I think he would say yes, I mean, he now having actually been there and seen the radar, and seen what it is and how it works. It is not just kind of data, you know, it is much more meaningful. So I think it definitely benefits to see. *Ja*, to see where the data comes from, see what it is actually like there, you know, what it means to actually go there and run this equipment, collect the data and so on. It makes the whole thing much more meaningful. *Ja*.

Q: *Ja*, because I was lucky enough to go down and I think by date we were like five people with degrees, well with post-graduate degrees and the rest were all engineers and admin personnel. Did you then also start to send down engineers, as opposed to physicists?

A: *Ja*. I mean that started actually in the 1980s, and I mean 2 of the first engineers that we sent down are now top space scientists, you know, internationally. And the one guy, Mike Cosh –he was actually here last week, visiting... I mean he was an electronic engineer, trained as an electronic engineer. Saw the advert for expedition member, said, “You know, that is interesting.” And so he spent a year training with us in physics at UND, and kind of got interested in, it was the aurora-study in particular. And came back and decided to do a PhD in physics. Which he did, with Michael [Scorefield]. He then got a post-Doc at Max Planck Institute, lived down in Germany for a couple of years. Then he got some other job with Max Planck Institute, stayed there for three years, and a couple of other places. But he is now professor of Experimental Space Science at the University of Lancaster. Which is one of the top British Universities. So, you know, he actually started out as an engineer, and so has really become a real hard-core scientist. No, really certainly one of the top people in the field. And then the second guy was Ryno Friedel, who was also an electronic engineer, who also went to the Max Planck Institute for a while. I spent a sabbatical there, sort of strong links for a long time. And Ryno is now at Los Alamos labs, US... has been there for some time, working satellites... No, satellite experiments or something like that. *Ja, ja*. They don't build bombs.

Q: I know, I was just joking. Okay, now, last question. Would you like to go back if you had the chance for sort of flying in. And spend a week there?

A: I would like to. I think, you know, for a number of reasons. One, that I haven't seen the new base, and the actual radar. And yes, I would just like to go and see the place again. To... Not just for nostalgia, but I think, just to see how much is the same, see what is different. But yes, I would like to be able to sort of fly down, spend 10 days, and fly back. You know, the prospect of going down in the ship and hanging around, and then offloading the ship, and hanging around some more...

Q: Maybe if it is a multi-million dollar ship.

A: *Ja*, and then sailing back. I mean, in other words being away for 2 months or something. Something that I just can't... Well, that I am not prepared to do. I suppose I could if I really wanted to, you know, set aside 2 months. But no, I am not prepared to do that. But I would really like to be able to go down for, you know, 2 weeks. Maybe, you know. Fly down from Cape Town, two weeks, and fly back.

Q: R80 000 a shot?

A: Well, they can do it for the Minister. Why can't they do it for scientists?

Q: Okay, then... why does Antarctica lean itself so well to scientific experiments... to science and scientific research? As sort of the major activity there. Both on a policy level and on a physically... I know in terms of physics it is actually a very good place to be at.

A: *Ja, ja.* Certainly for all the upper-atmosphere physics stuff, you know, anything around the Auroral region is interesting. Yes I suppose it is from the way, you know, as a sort of legacy of the Antarctic Treaty essentially. You know, that it's... It is a sort of continent for science. You have that feeling that it is not some other country. It is not a place where you got politics and stuff. It's a place where you go and do science. And it is kind of simple. In a way, you know, it makes it very simple. I think the... To what extent the kind of isolation works, you know, in sort of helping one to concentrate on that. That might be debateable, but certainly, you know, the opportunities to do science in a unique environment. And the fact that there is no... Because of the harshness of the environment, there is no, you know, kind of cities and settlements. People are just there for a job, you know. People go there for a purpose, either to actually do a scientific experiment or to maintain the base, to support the [studies]. So it's a kind of purposeful and meaningful spell there. And I think you also have the sense that it is going to be a short time, a year, maybe two years. Some groups spend two years. And then that is it, and you will probably not go there again. Unless you are lucky enough to hang around and the programs... And perhaps get another opportunity to go down for the summer. So I think, it is that, it's the sense that you are kind of aware that it's a continent of science, it's been sort of set up like that. To me anyway, I am absolutely aware of that.

And I like to think that it is this, not a kind of natural laboratory, but *ja*, it is something that is kind of unspoiled by all the other stuff. I mean, the things in our days, you know, the sort of Antarctic tourism and things like that, which are obviously having some impact. That you know, one could base not quite as isolated and removed from the real world, as it was. But still, I mean to a large extent it is. There is very little... It's really just around the fringes that you are getting more human activity. So *ja*, I think it is a combination of those things that... So the obvious thing for the physics is because there are some interesting things to do around the Aurora. And in the Southern Hemisphere you have got to go to Antarctica to get that. *Ja*. I hope that answers the question?

Q: Yes it does, thank you. Thank you so very much.