

Jinny Nathans: This is Jinny Nathans, AMS archivist, and I am here on June 7th, 2018 in Denver at the WAF/NWP conference and I am speaking with Ligia Bernardet and that was my best take at pronunciation. Now my first question to start off our conversation is how did you become a meteorologist?

Ligia Bernardet: Right, hi. It's good to be here speaking with you. So the pronunciation I use in English is LEE-zhi-ya BARE-nar-day. I grew up and went to school in Brazil and my parents were in the humanities, so I thought I would be a history teacher and then, it was right before my entrance exams, university entrance exams, I wanted to do something completely different. I was looking at cars driving on highways and intersections and busy places, and I got really interested in carflow, flow of small objects, how things move around in space, and I wanted to study traffic, traffic jams. Then I thought well, if I study that, I will always have to live in a busy place full of traffic jams to solve. So why don't I study something related, and I was looking at smokestacks and I was very interested in how smoke dispersed and if I was a certain distance from the source, how much smoke would get to me. That's how I ended up signing up for the meteorology course at the University of Sao Paulo in Brazil, and it turns out I then did not study that much about pollution dispersion, I actually got very interested in weather prediction.

JN: And that started you off, what kind of courses were the first meteorology courses that you took?

LB: Probably the same as other people, you know, introduction to meteorology, dynamical meteorology, planetary boundary layer, oceanography, all of those. Out of university I took my first job in the Weather Prediction Center for a sugarcane plantation, which was actually a state job, I was part of a university consortium that was working with sugarcane. So I was quickly thrown into weather forecasting. This was in the late 1980s. So we had, especially in Brazil which you know is a Third World country, it was hard to forecast. We didn't have enough observations, they didn't come to us fast enough, the methodologies weren't well advanced, we did not have numerical models, so forecasting was by hand, by drawing the synoptic chart and extrapolating.

JN: But you liked the work?

LB: Yes. [laughter] I did not like living in that relatively small town so I moved back to São Paulo and I got a job at the University as a research assistant, and soon started my Masters program with Dr. Maria Silva Dias and started looking at numerical weather prediction for regional forecasting in Southeast Brazil. Through her contacts I got to know some professors at Colorado State University in Fort Collins, Colorado, ended up coming for a summer here, liked it. I liked the RAMS [Regional Atmospheric Modeling System] numerical model, but I also liked being outdoors, hiking, rafting and all that Colorado had to offer. So I ended up applying and coming for my PhD at CSU.

JN: What other mentors did you have along the way?

LB: Back in Brazil, I would have to mention Dr. Pedro Silva Dias. He was one of the professors in our department and Pedro was very interested in what he called the glass door. This is the

glass door between researchers and operational forecasters and how could we do that transition and speak the same language. This image of the glass door and this general concept stayed with me throughout my entire career because to this day, what I do with the job now is I work in a testbed, which is an entity that helps facilitate the transition of research to operations. In my case, numerical weather prediction operations. So he really marked me. And of course my PhD advisor Bill Cotton at CSU, who was one of the main developers of the RAMS prediction model, from whom I learned a lot.

JN: It sounds like you've had an exciting work life. And you've stayed in Colorado ever since?

LB: Mostly. I moved out of Colorado for two years and came back. During those two years I moved back to Brazil and worked at the weather service headquarters in the capital of Brazil, which is Brasília. At that time, which was 1990, the weather service in Brazil was not running any numerical weather prediction model. They were interested in starting running their own instead of just using models run by NCEP and other centers. They had an agreement through the WMO with the German Meteorological Office, DWD, to use their models. I was part of the first group who helped install and deploy those models at the weather service in Brazil and trained forecasters to use those models. And it was very interesting. But then after two years, I don't know, I think Colorado was just calling me back.

JN: So you came back to Colorado, and other career milestones after that?

LB: Since then I took a little break from work as I had a young child, and then re-engaged with the workplace, always working the testbed or Developmental Testbed Center, which is the name of the institution where I work. I work with several numerical models that are used operationally at NCEP, so we did the first tests that led the implementation of the WRF [Weather Research and Forecasting] model at NCEP. A lot of my career I worked with the hurricane WRF model, doing support of this model to the community as well as harvesting some innovations. More recently, I'm stepping out of the regional realm and into the global modeling arena, which is a new thing for me. I now lead the global model testbed using this new model that the weather service has adopted, the FE3 dynamical core, just trying to make them more community-oriented and spread it through universities and laboratories.

JN: Very interesting. How long you been an AMS member?

LB: Oh, I can't remember, a long time. [laughter] Maybe 15 years or probably more than that.

JN: What do you value most about your membership? The meetings or the journals or the volunteer committees?

LB: I haven't been on so many committees, but I have definitely participated in a lot of meetings. They have been valuable to both present my work to others and to learn from others. I remember going a long time ago to an AMS annual meeting and deciding that I would only go to talks that I didn't know anything about, out of my usual area of expertise. Through that method I stumbled upon the Probability and Statistics Conference, and was very interested in what I saw about forecast verification. After that, I definitely tied with that group.

JN: That's a very interesting way to get new knowledge, to go looking for a surprise, it seems like it led you in another direction but a direction that you're enjoying working in.

LB: Yeah.

JN: That's great. Was there any journal article that you recall that made an impression on you, that was significant or made you think of your work in a different way?

LB: I'm thinking of an article but I'm blanking on the author's name right now. It was an article about forecast verification, explaining that forecasts have no value intrinsically, that forecasts only have value once they are used to make decisions, once there is a user of the forecast. And that concept of forecast verification versus value became very important for me.

JN: Interesting. And I have to say I am a librarian so I will try and find the article, but you didn't give me very much information. But the gist of it is interesting and I can obviously relate it to how you talked about your work. Is there anything else that you'd like to bring up?

LB: I remembered the name of the author, Murphy, Ellen Murphy.

JN: Okay.

LB: I don't think so. I think this was an interesting project and I'm very curious about how it's going to turn out.

JN: So am I. [laughter] Well thank you very, very much.