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**OH 412-03**

**Interview with Dr. Don Loftsgaarden (DL)**

Department of Mathematical Sciences  
The University of Montana  
Missoula, MT 59812

**by**

**Dan Finch (DF)**

DF: My first question to you is where and when did you get your degrees? Let's start out with that.

DL: I got my undergraduate degrees, undergraduate degree, and Masters, and Ph.D. from Montana State University.

DF: Okay.

DL: I was trained as a statistician, and I consider myself a statistician.

DF: Okay. Then, since you decided to go into statistics, was there someone that helped you that influenced you? You know, what started your interest in that? And maybe it wasn't a person.

DL: Well, when I was in high school, I liked mathematics a great deal. The school I was in did not have two of the second, third, and fourth years of mathematics. My dad was the superintendent; he helped me get some correspondence courses for my last two years so that I could get the mathematics. Those two years of courses were taken by correspondence from the University of Montana, and the textbooks that I was using were written by Lennes and Merrill. So, that kind of gives a long time connection to this department. However, when I left high school in order to become an engineer, and that went fine when I was a freshman except that I did not like the technical drawing courses. You can go ahead, that's like high school, I did not like that end. Decided it was the mathematics that I really liked. I also found out at that time you couldn't major in mathematics from here, which I had no idea whatsoever. And then as I took courses and got a couple of statistics courses, then I decided that's what I really liked to do.

DF: Well, you just retired last fall, still on part time.

DL: Yeah, July 1, 1999.

DF: Okay, But what originally brought you to be a faculty member here at U of M?

DL: When I got out of school with my Ph.D., I first went to Western Michigan University, in Kalamazoo, Michigan. A position that I enjoyed a great deal. However, being a native Montanan, there was always that desire to see if I could get back in the state. And, had this, there was a position open here, and I applied for the position, interviewed, and got the job and, so I took it. That was going on 33 years ago. Full-time I taught 32 years here. Three years elsewhere.

DF: So, since you've been around the department, have you seen quite a few changes, that are fairly identifiable?

DL: Oh, when I came we didn't have a Ph.D. program here.

DF: Oh, Really?

DL: So that was a substantial change. When I came on campus there were two computers on campus, two mainframe computers. An IBM 360, I believe it was, the administration computer with an IBM 650 which the faculty and students could use, but just two mainframe computers. So, one of the first things I did here was to work on that, so we could get some modern computing in here, and networking several people using the same computer at a time, was just beginning at that time, and shortly sometime, I'm not sure, after I'd been here for two or three years, and we didn't begin to get into modern computing, and of course technology has had a huge impact on things over the years.. .teaching, research, and in all areas. (What was the rest of the question?)

DF: That's alright, just the changes that the department has gone through.

DL: Of course, the department has been involved in a technology shift as well. And we now have two labs of our own. Those, I'm very happy about those labs, we had to put those in during my last term as chair of the department.

DF: Well, along the same lines.

DL: We've also... excuse me...

DF: Go ahead.

DL: Another thing that has happened over the years is many, many more fields require more mathematics and statistics, so that means that the teaching load in the department has increased dramatically, to the point where we are now where we probably have 50 or more people teaching each semester.

DF: Right.

DL: And that has had good and bad effects, but the idea that, of other people making use of mathematics and statistics is very beneficial. And I think that the department has always tried to do a good job of meeting those needs.

DF: So as we're talking about changes, and as you just mentioned, one of them is that so many other areas need math and statistics, but especially in your field of statistics, have you seen how, is there any change in the content of the courses, or do you see it going in some direction, also from here.

DL: I think over the years, particularly in the elementary courses, there has come to be more emphasis on applied statistics. There's been more use of technology in courses, considerably more. There's a lot of statistical techniques and procedures that have been developed in recent years have depended heavily on the availability of high speed computers. And of course as these new techniques have developed, then they've also pushed their way into the curriculum of statistics courses at all levels as well, so. And that probably is the biggest change that has been influenced by computers.

DF: Sure. Well, you mentioned that you were chair of the department, so maybe you'll be biased, but maybe not, we're all pretty proud of the department that we have here. And why do you think that is? That as a whole the department communicates well, and, is there something about the department that people can kind of hang their hat on, kind of say, yeah, that's..

DL: As you know, the department has a sort of a diverse set of groups in the department. In particular we have statistics, we have mathematics education, we have operations research. All of which on some campuses have separate departments. Now I personally like those areas which are closely related to mathematics together in one department. But sometimes,

in other schools, I've seen a lot of this, there's, the people cannot get along together in the department. In fact at times there's almost all out war. Yet, historically we've never had that problem here. There's always minor disagreements between areas, but we've always been able to respect each others' areas and get along together, develop curriculum, et cetera. Taking into account everybody's point of view. And I don't know exactly how that, why that's so. I think a lot of it has to come back to the type of faculty members that we've had at the department. Individuals have been good. And I think that the individuals we've had affect that as much as anything. And of course when we've gone out to hire people, we've gone out to hire strong people, we're going to hire people who are interested in all aspects of a professor's life. We're interested in good teaching, interested in research, interested in (excuse me!). So having hired faculty members that are interested in all aspects of their career, research, teaching, service, and people that would fit in well with the other people. It's just evolved that way; I don't; I have no real explanation. But, having contact with a lot of people over the years, in many departments around the country, I've noticed that we are one of the best in that way.

DF: As far as what you have been interested in statistics Don, is there things that you've been involved with or are currently working on? Everyone has their own interests.

DL: My interest has always been in applies statistics, which is very broad. The specific areas that I've had some work in logistic progression, non-parametric density estimation, these two areas. But I've done consulting, on and off campus for state agencies, federal agencies, and various faculty members, graduate students on campus. And then, beginning in about 1978, I got involved in gathering data for the profession, and since that time I've been involved in two ways. One, the Conference Board of Mathematical Sciences, which is an organization made up of professional organizations in the mathematical sciences, and they do things that are beneficial to the mathematics community. And one of the things they do is have a survey committee. They've done some major study of undergraduate mathematics in departments around the country at the four-year level, at the university, and two-year level every five years. And I went through four of those cycles, three of them I co-authored the final report, and either did myself or supervised the statistical work on those. And then in about 1988, I also became involved in a committee called, which for short is called the Data Committee. And it's sponsored by AMS, American Mathematical Society, Mathematics Association of America, the Institute for Mathematical Statistics (IMS), and the American Statistical Association, ASA, and they gather data on mathematics departments annually. And as well as, considerable data on new Ph.D.'s, and the job market, and what fields they're in, et cetera. And they publish two reports a year in the *Notices of the American Mathematical Society*. And I served four terms on that ending in 2000, then had my arm twisted to stay another 3 years as chair of the committee, which I agreed to do, so that's what I'm doing right now. But, I think that this area or groups is very important, so that people around the country know what's going on, and decision makers of course in Washington D.C. can make decisions, they know when there is a shortage of people, when there is a surplus of people. They know what the job market is, and in doing that I've had the chance to work with a lot of very well-known people who have made their name in various ways but have also been, realized how important it is to do this kind of thing. So

I've had a chance to write reports, co-author reports with the associate director of MAA, Mathematical Association of America, the president of the MAA, the president-elect of MAA, I've done four different things with her, well-known statisticians, and all people in general who are willing to go out in their states and do some hard work because they felt this was beneficial. That I guess is where my major concentrate, in addition to the consulting things. That's where my major effort has gone in recent years. It was kind of a service area as...

DF: Sure; well, I think that's about it. Not too bad.