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Interview with Dr. Jon Graham (JG)

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The University of Montana
Missoula, MT 59812

by

Dan Finch (DF)

DF: Why did you choose to become a faculty member here?

JG: They offered me a job... probably a better question for me would be why did I choose to apply here... I grew up on the East Coast and uh really had no exposure to the West whatsoever...and I guess um summer of '93 I had a practicum at the Idaho National Laboratory in summertime, and I never even considered coming out West, but just thought I'd do it for fun. Came out here and really enjoyed it, and that was the only reason I even applied to Montana, because I thought maybe there was a chance I could live out West, and then I ended up getting two academic job offers and just waited 'til I ended up coming here, and, probably just chose here because the people were friendlier here when I came. People at the other schools all worked at the University, and they frankly didn't seem to care, what I was doing or care that they were even hiring anybody.

DF: Second of all then, was there a most influential person that helped you choose math, and if so how did he or she influence you? Or was it more of a group of people?

JG: Well, a lot of people certainly have influenced where I am now mathematically and probably the two main ones would be my dad. He was a high school math teacher, so I grew up with dad bringing me math problems and giving me puzzles and games, and bringing home a computer to play on. You know, the old powerful 48K's and things like that. So, certainly my dad, and my high school calculus teacher, because Calculus was really the first place in math I really hit a stumbling block, and she's the one who basically lit a fire under my butt, and got me to start working a little harder on mathematics, and she's just arguably the best teacher I've ever had in a mathematics course, so.. .those two primarily would be my main influential people.

DF: Some people are goal oriented, some people aren't, but when you came did you have a list of goals or a goal, maybe? You know off in the distance that you would like to get to, or maybe not even as tangible as that?

JG: Yeah, not really, I'm not a goal oriented person. I don't know; to me the main thing I should be doing at this job is teaching, and so as a general goal, I try to make my teaching as high quality as I possibly can. And I take that as my primary responsibility here, and then I've got, you know, you've got research and service and so forth, are responsibilities as well. But no, I mean, for me, I like mathematics, I like to teach. My general goal in life is to enjoy my family and be a good person. But I don't, I'm not the kind of person who writes down specific goals.

DF: So, since you've been here have you seen some changes to the math department?

JG: Of what nature?

DF: Any sort? Maybe changes as a focus, a direction of the department? Or maybe chemistry wise? Obviously there has been some physical changes or upgrades, things like that, but, maybe an overall attitude of the department?

JG: Well, here I'll get myself in trouble, given the age of the department, it is probably getting more and more cynical in many ways about things. Especially with regard to University administration, just issues related to the university affecting the math department. There is a very cynical view toward how administration views us. In terms of tangible changes, one of the things that was done the second year I was here was they streamlined the undergraduate program, and did away with a number of 400 level courses to try to force students to take courses in a broader, to get a broader background in mathematics. Take courses from more than one area, so it was a major philosophy shift and the whole thing driving that was too many students were focusing so much in one area, that they weren't getting any algebra or any analysis or anything like that. So, certainly efforts in this department have been made towards getting students to get a broader background in mathematics. The other major tangible change I can think of is we have a Math/CS joint degree that just got approved in

the last couple of months by the Board of Regents. And that was kind of a big deal and it took a lot of work to get that done. And beyond that certainly the major losses of the department are retirees. Gloria and Don in particular.

DF: You had mentioned earlier in one of your reasons that you decided to come here was how friendly the department is, and kind of a close knit group, and maybe this will be the same answer but, the department as a whole can you pick just one defining asset of it. Certainly it has many, but.

JG: Well, an easy answer to that is no, I can't. No, I would generally like to think that the faculty of this department are encourage able, for whatever purpose. We don't all agree on everything, we shouldn't all agree on everything. But, people aren't hostile to one another and people listen to each other. And, you know I've been in other departments where I haven't gotten that question, or that attitude. And I think that is something that I've found here that is, is maybe purge ability.

DF: In addition to the content of the undergraduate degrees getting more broad-based, yourself, have you see the way that mathematicians are trying to, you know, incorporate ideas in their teaching or just the courses themselves. Content wise, is there a difference between what was done say at the beginning of your undergraduate degree until now. A lot of people will point to, well, certainly we're using much more technology, but is there anything else that you can think of along those lines?

JG: I tend to think that even in the time from when I first became an undergraduate to what I see now, that, the topics that are covered have gotten watered down, and I don't know if this is just the pendulum swinging but I think it's in the direction now of less mathematical rigor in classes. I think you're just; it's a lot more of a sampling of ideas than a real hard-core study of those ideas. I just, just seems like more survey-type information than serious mathematics in a lot of cases. And I see it, I try to avoid it when I teach, but a lot of times you are forced into that because the students simply aren't as prepared. That's the bottom line, they just, they come into a 300-level math course, and they can't integrate a simple function. And I don't know what has caused it or what's behind it, but it seems like a result of that has been too simply to make the material easier. So, if there were a change, I would say somewhat of a negative change, and I don't know if all this started because of technology, but maybe bringing technology in the classroom had to replace something, and maybe its replaced mathematical rigor. You know.

DF: The example that you gave there was at sort of an undergraduate level, and the base of the students' knowledge itself, and so when it comes to teaching, not as prepared, to go in more detail, do you think part of that might come from mathematics itself being much more broad. Now, we're, I'm thinking of a longer time period than say 20-30 years ago, but I'm not saying that you were aware of what was going on then.

JG: I don't think that's a maj or part of it. I just think that math is being taught differently. It goes to the high schools; it goes to the middle schools; on back. It just seems like there is

this whole movement away from rigorous mathematics, toward, let's appreciate mathematics. Well, that's fine, you know, but it seems like you're not going to appreciate math unless you knew how to do it. And all these same students, they may be getting broader backgrounds, but they're all taking calculus. And, I don't know; they just don't seem to know it quite as well. Maybe I'm just becoming the old cynic.

DF: So, the last question I have for you, it doesn't have to be mathematical at all, but is there something that comes to mind when you think of why you enjoy being here? Montana, or Missoula, or the department itself? I see what you wrote down here in your notes, but, you know..

JG: Yeah, that was a bit different question, yeah on an annual basis; I certainly enjoy the destroying students in sophomore year.

DF: It was a tie last year, but.

JG: Yeah, it was a tie last year. We had a bad year. No, I mean I, for me, I love teaching and that's really what got me into this in the first place. And now that I've been here a few years and I kind of know the level of students, what they're looking for, and what content is to be taught, and the courses I teach it's a lot of fun. You play around a lot more your first couple of years, you really struggle to figure all that out. As a statistician, the thing that's been great is I have has a very full training in statistics, where you design experiments, you lay them out, very neatly and very nicely, and it's more loosely an agricultural background lead to that, because that's was where the school I went to, that was what they did. I came out here and found that, they don't do any of that out here, everything is, let's go out to a forest and observe some data. There's nothing planned or experimented. You don't set things up, so I had to completely change the way that I think about statistics a lot of times when students or whoever come to ask about a problem. So one thing I've really enjoyed is that shift, having to learn about sort of this other type of data collection people do because it's not something I was ever exposed to until I came here. So that's been, and I still see it just every day, and so that's one thing I really enjoy. And that's partly a product of being in Montana, you know, they had some forests back., the forests back there are in somebody's back yard.

DF: Well, thank you Jon. That's all.