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I could tell you some things about R.H., papers he has written, how many books, how many students he's had; honors that had come to him: Colloquium Lecturer, President of the American Mathematical Society, member of the National Academy of Sciences. You could read in the American Men of Science that he was married and had four children. You still wouldn't know what kind of a man he was. You need to know what were his hobbies? What did he do with his spare time? Spare time?

The first hobby of R.H.'s that I knew about was dogs. Dogs! While a graduate student at Texas, R.H. raised dogs. Teaching four courses per semester, twelve classroom hours per week, six office hours per week and taking two or three classes of his own, research. On top of all this R.H. raised dogs--cocker spaniels! This had its rough spots. DDT had just been introduced as the magic insecticide (we now know more about it, but then it was magic). And the dogs had fleas (perhaps tics, also). So, R.H. used some DDT. It killed the fleas all right, but the pups got sick. I think R.H. stayed up all one night trying to save the pups, but to no avail.

Another of R.H.'s hobbies was chess. This was after he had his Ph.D. His opponents were Moise and Anderson. This wasn't the usual kind of chess which takes hours. This was something to do in the ten minute break between classes.

Each play was to take less than 20 seconds (maybe 10). You can imagine the concentration this took. I was entirely too slow to play this game but I liked to watch. So did a few others. It was only recently that I learned that R. L. Moore took Bing aside and pointed out that this was using time that the graduate students could more profitably put in on mathematics.

Another game R.H. liked was baseball. I don't know if he was a baseball coach in high school or not but he knew a lot about the game. During the several summers that I taught at Madison, we would frequently drive over to Milwaukee County Stadium to watch the Braves play. Morris Morden would sometimes join us and in the year that we were both at the Institute, we drove down to Philadelphia to attend a big league game. On one occasion we took Goran Björck with us. Björck was interested in the fine points of the game; so, R.H. would explain some of them, like for example: The visiting team always bats first. Björck thought that this would give them the advantage but R.H. pointed out that this advantage was more than offset by the home club getting the last at bat and should they go ahead in the score, the visitors would loose since they would not get another at bat.

Another thing I remember about that game was trying to figure out how to link three simple closed curves (ellipes) together in such a way that while all three were linked no two of them were linked. Mathematics had a way of cropping up no matter what else was going on.

Back in Princeton, R.H. and I wanted to watch the world series. R.H. had bought or rented an old TV which really would not do the job on rabbit ears. So I concocted out of T.V. lead a directional antenna (a sort of horizontal lazy H), and R.H., who was no slouch with carpenter tools, built a mounting to hold it on top of a pole which did the job. I don't remember who was playing, much less who won, but I do remember enjoying the games and especially working with R.H. to win the battle with the T.V. set. (Almost as good as proving a theorem.)

Still yet another hobby was boating. Of course, in Madison with the lakes all around (even out your office window) this interest came naturally. This was one of R.H.'s hobbies I didn't know much about although I had been out with R.H. in the boat on several occasions.

The hobby that took the largest slice of R.H.'s time was giving talks *about mathematics*. I guess you could call it a hobby. R.H. talked to Rotary clubs, high school classes, Kiwanis clubs, even town councils. R.H. used to say he was just a salesman for mathematics. When he was chairman of the mathematics part of the NSF Fellowship Selection Committee, he talked the others, physicists, chemists, geologists, into giving mathematics some of their money. I recall that Frame (of Michigan State) asked Bing in my presence if he would give a talk to a club meeting (I think over at Michigan State). I wondered what R.H. would do. I probably would have said "no" thinking of better ways to spend my time. But not R.H. He accepted

immediately. It just gave him another place to sell mathematics.

He didn't need a large audience either. Once he and Saunders MacLane were riding on the same seat on a train either to or from a meeting. Saunders was interested in topology in the early part of his career, in fact, he had a Ph.D. student in topology. They fell into discussion about the plane, plane continua in particular. R.H. asked Saunders if he knew what a pseudo-arc was. When Saunders said "no," R.H. pointed out that he didn't know much about continua because almost all continua were pseudo-arcs. I imagine R.H. then told Saunders about continua.

Whether as a result of these many talks or not, R.H. was fond of certain sayings, e.g., "publish or perish." R.H. would explain that this academic policy was not referring only to economics but if you didn't publish your teaching would shrivel up and perish. On the economic side, it was a great day for all of us when the Madison newspaper published the University salaries and R.H. was making more than the football coach. Like so many of us R.H. never forgot his humble beginnings. "In those days," he would remark, "we were poor and didn't know it."

In 1955 R.H. was the director of the AMS four weeks Summer Research Institute. Lots of people were there: the Whyburns, the Wilders, Deane Montgomery, the Rudins, and many young people including graduate students. After that, something similar went on about every summer in Madison. I taught there three different summers and visited a week

or two during many others. The number of people whom R.H. encouraged to visit Madison at one time or another must be rather substantial. Most all of my students, for example. R.H. was, to say the least, a most generous personal and mathematical friend. And he made the visits fun. Typical was how lunch went. Four or five of us would collect shortly after noon, go down to the cafeteria, get something to eat and gather around a table. This was sort of R.H.'s problem session. But anyone could pose a rpoblem, hopefully one that could be solved during the lunch hour. These were fairly mind stretching, enough so that lunch for me was fairly standardized on a quarter of a head of lettuce and a glass of orange juice.

Let me be personal for a moment. After two and a half years away from mathematics, I returned to Texas to begin working on mathematics all over again. You can imagine that while trying to think about mathematics, you would find yourself thinking about something else. R.H. would frequently come by my office and talk about what he was doing. I remember one thing he wanted to do required that he assume the continuum to be locally connected at some point but this seemed a rather strong assumption. I suggested he assume that it was aposyndetic instead. He came by a few days later to tell me that was enough but that now he wasn't sure he needed to assume that much because all of his examples seemed to have that property. So I began to try to solve this puzzle. About a week later while I was carrying one of the children around in the middle of the

night, I saw how to do it. This was the first cut point theorem. Later another came, followed by about three or four papers and an invitation to give an hour address at the AMS summer meeting. I'll bet if you had asked R.H. he would have said that I had helped him out when it was really R.H. who had helped me out--to get me going on mathematics again. If it hadn't been for R.H. I could easily have wound up on the trash heap.

R.H. had that slow way of talking. In a seminar, particularly when some young person was giving a proof, R.H. would ask about some phase of the proof adding: "Some of us are not as fast as we once were." More than once it made me think of a remark someone made about a new, sleek, streamlined sports car that seemed to be going sixty miles per hour while standing at the curb. R.H. was just the other way around: he would be going sixty miles per hour when it looked like he was just standing at the curb.

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