

1 **Nell Dale**

2 **April 18, 2006**

3 **Austin, Texas USA**

4 **Interviewer Barbara Boucher Owens**

5
6 **B: This is an interview with Nell Dale from the University of Texas at Austin**
7 **conducted by Barbara Owens, being recorded on April 18th, 2006, in Austin, Texas.**
8 **It is part of the Computing Educators Oral History Project. Did we get everything**
9 **correct?**

10
11 **N: Yes.**

12
13 **B: Good. Let's start way back when. Tell me a little bit about your family, and**
14 **their education and their attitude toward education.**

15
16 **N: Well, my mother was sent away to college several times, and found a way to be**
17 **sent back home again. I think it was measles one time and mumps another. So the family**
18 **decided that that was a lost cause and they sent her on a trip around the world. And the**
19 **first time it didn't take and the second time she met my father in Hawaii. And they were**
20 **married. He was an army officer. And so I grew up moving around a great deal and was**
21 **born in Savannah, Georgia, where my father was stationed, but never lived there more**
22 **than a couple of months. But we were always somewhere in the South. My father had two**
23 **old maid school teachers who ended up marrying in their sixties.**

24
25 **B: What do you mean, "He had old maid teachers?"**

26
27 **N: He had two sisters.**

28
29 **B: Oh, he had two sisters.**

30
31 **N: ... who were old maid school teachers who spent every vacation with us. And one**
32 **of them was a math teacher. And that's how I got interested in math from an early age.**
33 **She made it seem perfectly OK for little girls to like math. So I really I owe a great deal**
34 **for what I later became to that particular aunt.**

35
36 **B: Did your father have a college education?**

37
38 **N: No, my father had none at all. He was enlisted in the Rainbow Division in World**
39 **War I as a ... got a commission, and then eventually stayed in the army all the time**
40 **between World War I and World War II. And ended up a full colonel and never had any**
41 **formal education at all, which I think must have been a testament to his intellect and his**
42 **abilities. He did graduate from the War College, but that of course was a military college,**
43 **and he had no formal education.**

44
45 **B: Did you have siblings?**

47 N: I had one brother.

48

49 **B: And what was his educational path?**

50

51 N: I remember as a child hearing my parents telling my brother who was eight years
52 older than I, "Why can't you be smart like your little sister?" And I always wondered
53 how he managed not to hate me, growing up with that. He was just not into education. It
54 is interesting. I loved moving around all the time as a child, new schools and new,
55 exciting challenges, and he just hated it. He never really recovered. He did graduate from
56 community college, but was not...

57

58 **B: You talked about this love of math that you got from this aunt of yours. Were
59 you a good student, then, in each of these new schools that you went to?**

60

61 N: Yes. No, I had no trouble with schools.

62

63 **B: And did you take lots of courses in math in high school and science?**

64

65 N: Yes, I went to Lamar High School in Houston. And there were two high schools
66 in Texas in those days -- Highland Park in Dallas and Lamar in Houston. And I swear
67 wherever I've been in the world since then, get a group of 50 people together and I'll find
68 someone that graduated from Lamar High School, or Highland Park.

69

70 But I do remember signing up for physics as a senior. And being told that there were not
71 enough students for two classes and there were too many students for one. Roberta and I
72 had signed up as the only two girls. And they suggested that we not take it, and if we did
73 they guaranteed we wouldn't pass. So I was much more passive in those days, and so I
74 didn't take it. Roberta graduated with all A's and one D in that physics class.

75

76 **B: You said your aunt was a shaping influence. Were there other people in those
77 early years that ... teachers, mentors that you remember that may have, other than
78 the physics teacher you didn't have...**

79

80 N: Not really. I've thought about that, because I have thought a lot about mentoring
81 in terms of how it affects women in computer science, and I really didn't have. I had
82 teachers that I liked. I had a civics teacher that I just loved because she let us take over
83 the class and run it. We thought we were doing it on our own, and of course, she sat back
84 and let us do it. And I remember thinking, "That was a good teacher." I didn't realize that
85 at the time. So, no, I would say that I really didn't have.

86

87

88 **B: Without strong mentors in terms of your schooling, how did you go about ...
89 did you go directly to college and how did you choose your college?**

90

91 N: For all the wrong reasons.

92

93 **B: Tell me more.**

94

95 N: Well, I applied to Rice and was accepted. This was in '53. Rice was a fine school.
96 And I ended up going to Baylor because my best friend was going to Baylor. And coasted
97 for two years there on what I had learned in high school. Then I married the first time,
98 had a little girl and was working to put my husband through school. And my mother said
99 that ... (we were in Houston where she was) that she would pay my tuition and baby-sit if
100 I would go back to night school. And I was working at the University of Houston, and so
101 I did. I took a class on my lunch hour, and they let me take a class. And then I took two
102 classes in the evenings. So I got my undergraduate degree at night school. And I did it in
103 math, because that was the quickest. I had always taken it because it was fun. I must have
104 had 10 majors from Spanish to religion to French to geography to social studies. You
105 know, the gamut. But I had always taken math classes. And so when I went back, very
106 calculatedly I asked what's the quickest way for me to get a degree. And it was math.
107 And I had a psychology major, and when I got ready to graduate, they said ... a
108 psychology minor; they said you can't do that. And I said there's nothing in the catalogue
109 that says you can't have a math major and a psychology minor. And they went back and
110 said, well I guess there's nothing that says you can't, so we can't do anything about that
111 but it is very unusual. Of course, today it is not unusual at all.

112

113 **B: Well, we've got you out of school with an undergraduate degree in**
114 **mathematics. You're in Houston?**

115

116 N: I was in Houston at the University of Houston. And I took my first computer class
117 while I was working there.

118

119 **B: {speaks over -}... at the University of Houston.**

120

121 N: At the University of Houston and going to school. And it was an electrical
122 engineering senior level class. And they let me in it because I was a math major. And we
123 learned SOAP on the IBM 650.

124

125 **B: Do you want to tell people who might not know what SOAP is?**

126

127 N: Symbolic optimizing S- O- A- ... {pause}

128

129 **B: Assembly?**

130

131 N: Assembly ...

132

133 **B: Programming?**

134

135 N: Programming. Yes, absolutely, assembly language programming. And I fell in
136 love with it. It was wonderful. I thoroughly enjoyed every bit of it. And I got my
137 undergraduate degree in night school and a divorce at the same time. And decided that I

138 would go to graduate school full time and I applied various places in psychology, clinical
139 psychology, or math. And I got the best offer at the University of Texas at Austin.

140

141 **B: Now I want to stop just a little bit because, I understood at one time you had**
142 **some industry experience. Is that prior to your going to graduate school or after you**
143 **went to graduate school?**

144

145 N: It was after I went to graduate school.

146

147 **B: Sorry to have interrupted.**

148

149 N: Yes, I came up to the University of Texas and worked for the Bureau of Business
150 Research.

151

152 **B: While you were...**

153

154 N: Yes, while I was studying, working part-time at the Bureau of Business Research
155 doing FORTRAN programming, working on a business game—it was a modeling
156 project, and using FORTRAN in the early days of FORTRAN. I remember format
157 statements were the new thing. A colleague and I had a program running over at the
158 computation center and I got a call that said, “You have written two reels of tapes. Should
159 we let it keep going?” Well, since we were writing one line of output, I told them to stop
160 it. And we had two reels of tapes of asterisks. The format statement was in error! [She
161 laughs] Anyway, I was here on campus for a year, and then left not finishing my thesis
162 and went back to Houston, and worked for Shell for two years.

163

164 It was interesting applying for a job then. I was turned down for two jobs specifically
165 because I was female. I didn’t mind so much the one that was the interview and I was
166 told I was perfect for the job except that it was an engineering company and they didn’t
167 think the engineers could cope with it. That wasn’t so bad. The one that really offended
168 me was I had an interview set up and the man discovered that Nell was Nell and not Neil
169 and had his secretary call me and cancel the interview.

170

171 Anyway, Shell gave me a wonderful job. I’d been there for two months when I had a
172 change of supervisor, interestingly enough from a woman to a man who said he had been
173 going over the records and discovered that I had been hired at the same time as Ernie
174 Jones with exactly the same background and was being paid fifty dollars a month less.
175 Now that was a lot of money in the fifties. And I got the raise retroactively. And as a
176 result I have always sent the best students to Shell. It’s a wonderful company.

177

178 **B: You’re in Houston, working for Shell.**

179

180 N: I’m in Houston.

181

182 **B: Haven’t finished your master’s.**

183

184 N: No.

185

186 **B: Clearly something happened in your life.**

187

188 N: The something that happened in my life was that I remarried. And I married
189 someone that I had worked for when I was doing my coursework on my master's degree.
190 So two years after that we were married and I came back to the University and went to
191 work for the Linguistics Research Center. Now the Linguistics Research Center did
192 language translation a fascinating time in that area. You would call it not quite artificial
193 intelligence but boy there were some of the same things that were being used during that
194 period of time. They thought it was going to be easy. Oh, translating one language to
195 another was just going to be the easiest thing and NSF puts lots of money in it and then
196 nothing seemed to happen. We discovered that language was NOT easy and translating it
197 was not easy. And I worked there for two years and finished my master's thesis there on
198 language translation. It was actually a database kind of project, but we didn't call it
199 database at the time. At that time the University formed the Computer Science
200 Department.

201

202 **B: So this master's using linguistics was in math?**

203

204 N: It was in math. It was just the math that I was using there I was able to apply. So
205 when the department formed, I had by that time decided that math wasn't fun and games
206 anymore, and it was computing that I really loved, and so my thesis was really a
207 computing project. So I applied to the PhD program in Computer Science at the
208 University and was accepted. There were three of us that were accepted at the same time.

209

210 **B: Were you the only woman or...?**

211

212 N: Oh, yes. However, one of David Young's students in mathematics actually did a
213 computer science dissertation, so in many she was the first, though her degree was
214 actually in math. So I went back to graduate school, loved it. Finished all my course
215 work. Got bogged down in dissertation. I did have a fellowship, so I was a teaching
216 assistant.

217

218 **B: Was that your first experience teaching?**

219

220 N: Yes, that was my first experience teaching and I found that I loved it. And so it
221 was, I think it was the third semester, that rather than being a teaching assistant, I was
222 actually teaching the intro sections which were called Math 355. They were still math
223 courses in those days because the department, the PhD program, was strictly a PhD
224 program; there was not an undergraduate at all. That was much later. And so the classes
225 were all graduate level classes, but math had a couple of programming classes,
226 FORTRAN based and I was teaching those at the time.

227

228 **B: It seems like a long time in there. How about your dissertation? Did it seem**
229 **to go on forever?**

230

231 N: That's another story for another discussion. But yes.

232

233 **B: So tell me a little bit more: You were teaching. Were you doing research?**

234

235 N: Yes at the same time, but not at the linguistics research center. By this time I was
236 just doing it alone. My major professor was Bob Simmons who came to the University at
237 the same time I enrolled in the PhD program and he had been at the RAND Corporation
238 for a long time, very, very well-known in artificial intelligence and natural language
239 translation which was where I got interested in this sort of thing. And I ended up doing a
240 methodological study in what I think would now be called artificial intelligence. It was
241 the use of words, what would be called semantic nets now. But a lot of the things that I
242 was using they are now using in data mining. It was classification techniques. Once I
243 finished my dissertation I never did anything more in it. By that time we had had two
244 more children. So, when I did finally finish my degree, we left UT for three years.

245

246 **B: Tell me about that.**

247

248 N: Well, my husband was offered...

249

250 **B: {interrupts} Now this husband that we are talking about is Al Dale.**

251

252 N: That's Al Dale, yes. He was offered a United Nations post and he took a leave of
253 absence and so we went to Budapest. And I had just finished my dissertation. I hadn't
254 really started a career yet. So this seemed to be a very good time.

255

256 **B: So this is with three children?**

257

258 N: Well, when we married Al had two children and I had one and then we had two.
259 So there were five of us, but of those that went to Budapest there were three. And then
260 the other two came and visited. And when we got there they had hired a full-time maid
261 and housekeeper. Now we were in an apartment that had probably had 800 square feet
262 and three children and a housekeeper. I didn't have a great deal to do except carpool. Al's
263 role at the UN was bringing in experts to bring their computer science program in
264 Budapest up to speed; they were going to become a center for computer science
265 education for the Third World. So the UN was bringing in people to train the Hungarian
266 staff. Many of the people they brought in, I knew as much or more than they did. But the
267 UN had very strict nepotism rules. So I tried to continue with my research and I
268 discovered that I wasn't very good at it in isolation. I did get one paper written and I
269 discovered bridge again, and I discovered tennis and did an awful lot of carpooling for
270 the first year and a half.

271

272 Then they broke, or found a way around the UN rules and I was able to work part-time
273 for the UN doing training for the Hungarian teaching staff, and that I thoroughly enjoyed.
274 It was a wonderful time. The Hungarians, because we were UN people, did not consider
275 us western diplomats, so we had many Hungarian friends. Now, the diplomatic

276 community considered us western diplomats, so we could have gone to a diplomatic
277 reception every night of the year. So it was a wonderful exciting thing to do as long as
278 you knew it wasn't forever. So, we had a wonderful three years. We came back and the
279 day we got back, I was told there was a class they wanted me to teach.

280

281 **B: At the University of Texas?**

282

283 N: At the University of Texas at Austin and AI ... Now let me interject here that AI
284 was in the computer science department.

285

286 **B: While you were getting your PhD?**

287

288 N: While I was getting my PhD. And this didn't cause any problems because I
289 wasn't studying with him at all. And it worked very well because we could carry on
290 interesting conversations every evening, drive the kids crazy. But there wasn't any
291 problem as far as the university was concerned. Then AI came back and the problems sort
292 of began then in the sense that I was given a position as an assistant instructor for that
293 year and I didn't realize that it was going to be a problem. I think I was very naive about
294 it. And what really concerned me was I was teaching a class I knew nothing about and
295 frantically trying to stay one lecture ahead.

296

297 **B: What were you ...**

298

299 N: Database. And I remember one day thinking I can't do it. I called in sick. I went
300 to bed. I put the covers over my head. Slept for three hours. Got up, used that as a chance
301 to get more than one day ahead and everything was fine from that day on. But I
302 remember the sense of sheer panic. I got through it.

303

304 **B: This was the assistant instructorship. You have had a prolific writing career.
305 When did that start or what precipitated it?**

306

307 N: Let me... That was precipitated by a teaching assistant. Let me come back to that.
308 Let me fill in a little in there. During that time I was simply an instructor. I can't
309 remember the particular year that I was moved from what was the lowest tenure track
310 position to the lecturer side.

311

312 **B: Would you like to explain a little bit about the difference at the University of
313 Texas for the listeners?**

314

315 N: Yes. We have the track path: instructor, and lecturer and senior lecturer, which is
316 non-tenure track. Tenure track is assistant professor, associate professor and professor.
317 You have, of course, a certain number of years to get promoted. You have to get tenure in
318 six years or is it seven? or you must leave. And someone in the administration decided
319 that they didn't want to face the problem of tenure with me for several reasons. 1. My
320 husband was in the department. 2. I got my degree from the University and had never
321 gone away and taught. So they solved the problem by moving me over into the non-

322 tenure position. Now, as I look back on this, thirty years later I see it and view it
323 differently than I did at the time. At the time I didn't think about it one way or the other.
324 As time went on, though, it was a year-to-year appointment. There was never any
325 problem. I was treated exactly as all the rest of the faculty. My salary was never any
326 different than any of the assistant professors. My committee assignments were never any
327 different. And I didn't realize again until much later that there really was a difference in
328 perception from the outside, though there was not any difference in my department. In the
329 early...

330

331 **B: Can I stop? At this period of time were there particular people beside your**
332 **husband whom you talked with at home, were there other people that mentored you**
333 **through the maze of the university, teaching, or were you in isolation? How was the**
334 **collegial set up – male, female?**

335

336 N: Bob Simmons, my supervisor, probably dropped by the house every two weeks to
337 have a drink in the evening and that's where the mentoring that occurred, occurred in a
338 social setting where we would talk about all sorts of things in the department. It was
339 never a formal sort of relationship.

340

341 Raymond Yeh was the chairman at the time. And he gave me a notice of a National
342 Science Foundation program. I had been teaching for about 2 years. No formal mentoring
343 at all. And he showed me where the National Science Foundation had a program for
344 women in science. It was a call for proposals, and it was a program that Congress had
345 passed specifically for women. Very unusual because you're not supposed to have
346 anything that's gender-specific, but this program was set up to try to reach out to women
347 who had degrees in science who were unemployed or underemployed and do something
348 to get them back in the workforce. It was the late '70's when this was being done and the
349 question was "Where are the women scientists??" And he showed me this call for
350 proposal and I got very excited about it. And put in a proposal to bring women back with
351 science degrees and give them an intensive year of computing—to bring them up to the
352 level of undergraduate degrees in computer science. They have science backgrounds; a
353 year of this program should do it. And we got the grant and there was a slight problem of
354 my putting in a major proposal because I was not tenure track, so Al and I did it together.
355 We got the proposal and then the add-ons were in my name only.

356

357 **B: Once you got into the pipeline...**

358

359 N: Yes. {talk over} It was fine. Even the office of sponsored projects stopped asking
360 for special letters from the department. This was a tremendously exciting program and I
361 must have interviewed 500 women that thought this program might be for them. And
362 what interested me most was that it really wasn't for most of them, but those women
363 wanted to talk to somebody. And so the interviews really turned into my being able to
364 mentor someone that had degrees in science and by the second add-on proposal it was
365 social sciences as well. So it was natural sciences and social sciences. And we advertised
366 all over town – in the newspaper and libraries and they would come in and what I really
367 discovered was they just, they wanted something different, they wanted a change in their

368 lives. It gave them a chance to talk about what they might be able to do and we ended up
369 I guess maybe 110, 120 actually going through our program. But many of the others, it
370 was the impetus for them to get started and get back
371

372 **B: Were you the only one teaching? You and Al had started the program. Were**
373 **there other people teaching in the program?**
374

375 N: Yes, Al was not actually teaching in it. I brought in people to teach. Carol Kincaid
376 taught one section. Oh, dear. A senior moment on some of the names ... we brought in
377 four well-known women as well.
378

379 **B: So the teachers were women.**
380

381 N: Yes, the teachers were women. And once this is over I'll go back and find out the
382 names for you.
383

384 **B: That's all right. Were there other women teaching in the department at that**
385 **time?**
386

387 N: When, yes, there were a few. Not many. Actually none when I started out which
388 is why I was on every committee that had to do with OEO [Office of Equal
389 Opportunities] or minorities or anything. I got to know everyone at the college level very
390 well because I represented the department in all of those committees and I think you may
391 find that a thread through these interviews.
392

393 **B: Yes, I am seeing that.**
394

395 N: That was a wonderful program and I still hear about it. I was playing tennis and
396 we had a sub in tennis a couple of weeks ago that turned out when she heard that I had
397 taught in the Computer Science Department she said "The Women in Science Program! I
398 know people who went through that!" And that program was in the early '80's.
399

400 **B: I want to make sure that the listeners of this tape get an idea of the look on**
401 **your face as you are talking about this program. Nell is absolutely glowing and so**
402 **excited and so happy about, thinking about this program. The listeners need to**
403 **know the sheer joy and love that this program ...**
404

405 N: It was absolutely fabulous. It changed lives. And it changed my life. Because I
406 stopped being the (you are not going to believe this, but I really was very shy!). She
407 {referring to the interviewer} is not believing this. [both laugh] You know I was very
408 quiet. I have always spoken my mind, but I was simply teaching and doing my job. This
409 gave me a chance to break out and realize I could do things. And so it really gave me a
410 great deal of self-confidence, to know that I could plan and actually carry through and run
411 this project. Of course, it was never intended to be a permanent project. I think there were
412 17 of these projects the year that we got the grant and over the course of the funding of
413 the programs there were probably 30-35 projects. They were always seed projects, they

414 were research to see what you could do. Oh, we proved it. You could bring these women
415 back and turn them into absolutely wonderful programmers. And out of that group one
416 worked, got her confidence up such that she went back and got her PhD in clinical
417 psychology and she always wanted to do it, but it took proving that she could do
418 something to carry through life. Still hear from them. But when that faded out, that was
419 about the time I started writing, which was where you asked about the books.

420

421 I always taught from overheads. And my overheads were my cheat sheets. They were to
422 remind me of what I wanted to talk about. I always gave copies to the students. And I had
423 a teaching assistant who got the writing bug and he said I'll take your notes, and I've
424 heard you teach enough so I'll write a text book." And so I agreed to do this.

425

426 **B: Was this Chip?**

427

428 N: No this was David Orshalick.

429

430 **B: Oh, OK.**

431

432 N: We signed a contract. At the same time we were doing this, we instituted the self-
433 paced section of our first class. P- S- I. Personalized System of Instruction had become
434 popular a little bit before this. And there were grants. Again, the University of Texas had
435 one in engineering. We required our students to take the circuits course that was done that
436 way. So I got interested in this lecture-less approach, you know the idea you can't teach
437 them something until they are ready to learn it, so you make them go read it and then take
438 mastery tests. So we instituted this program and the text we were using was the book we
439 were writing. And I discovered that David couldn't write. He had a mental block. He
440 couldn't leave a paragraph unless it was perfect and paragraphs are never perfect. And so
441 I discovered I had my name on a contract and if it was going to get done I had to start
442 writing. And I will forever be grateful for David because I discovered it was what I love
443 to do best of all. And so that was how I got started.

444

445 Ran into David a few months back and he wouldn't speak to me. I knew that when the
446 second edition of the book was coming out, we gave him the opportunity to participate
447 and he just didn't produce. And I am sure that he has never forgiven me. The publisher
448 bought him out.

449

450 That text was in Pascal. Do y'all remember Pascal? I've heard recently that some of us
451 would like to go back to it, but I don't think that will happen. I discovered I liked writing
452 so much that I did a follow-on CS2 text with one of the women who had been in the
453 Women in Science program, and that also was very successful. And while I was doing
454 the CS1 text, was about the time that the Advanced Placement Exam in Computer
455 Science came out. And so few people, particularly high school teachers, knew what it
456 was they were going to be teaching. The teachers that knew any computing in the high
457 schools knew BASIC and they were appalled that this language called Pascal was the
458 language they were going to have to use for the Advanced Placement exam. So we got
459 the bright idea of doing this series of videotapes for CS1. And we got someone from ---
460 the "we" meaning my husband and I --- got a producer from the faculty over at [the]

461 Radio, TV, and Film [Department] and did this series of tapes on Pascal. I can't say it
462 was terribly successful. We didn't make any money on it but we certainly had a good
463 time doing it. And during that time PBS had an experiment in video-produced courses
464 and it was called narrowcast. And those tapes were used in a course but the narrowcast
465 project quickly folded—it was before its time. So we put the tapes in the library. We
466 found that the students that were non-native English speakers would go to the library and
467 check them out. That seemed to work very well.

468

469 Back to writing. The good news when you have a successful book is that it is successful.
470 And the bad news is that you get to do another edition—a second edition or another
471 edition. So it's sort of like the little creature that goes around and around in the treadmill.

472

473 **B: She's showing her fingers in a treadmill-looping situation.**

474

475 N: It is sort of hard to get out but I was very fortunate to find very good co-authors along
476 the way and built up a very rich network of friends that I worked with on the books. And
477 after four editions of Pascal, along came C++. And then following that came Java and
478 somewhere in the middle there was a little Visual Basic. From that time on I spent hours
479 in my home office doing what I truly love, which is writing. This continued along with
480 my teaching because I believe you can't write if you don't teach it first. I am very much
481 opposed to publishers commissioning someone to write a new book about a topic that you
482 haven't taught. Because that is what writing a book is – teaching.

483

484 **B: This brings me to a question. I must say that Nell was part of the project that**
485 **initially set up the kinds of questions that we would be asking in this interview series**
486 **and we added a few that Nell doesn't know about One of the things is that she said**
487 **how much, how important it is that people ought to have taught first. Could you**
488 **share something of your teaching philosophy, and as you do that, talk about**
489 **whether your style has changed over the years?**

490

491 N: My teaching philosophy is really case-based. If I had my way everything would
492 begin with a problem, a solution to the problem and then a description of the syntax
493 which does the solution. I started out that way and try to continue it though I have found
494 it more difficult to do as you go along, and I am not sure why it has been more difficult.
495 Maybe it's because that's a different approach to most of the students. The students want
496 the program; they want to see a solution before they really think of the problem solving to
497 get it. I believe in asking questions of the students and that's a very difficult thing to do. I
498 have had a kitchen timer, so that when I ask a question, I'll be sure I give them enough
499 time to answer it, and sit and wait for answers. I think, in a sense that my classroom
500 teaching has been much more of a failure than my writing has been. I want to do all these
501 things in the classroom, but I find it difficult to do. I am always changing, always trying
502 to do something different.

503

504 I think the problem is this --- that those of us that have done well in academia of our
505 generation succeeded because of the lecture system. We did well in the lecture system
506 and for all the good intentions, I find myself falling back into the lecture system.

507

508 Yes, one likes to think about one's successes and not necessarily one's failures. And I
509 think about the teaching evaluations. And they're predominantly very good, but it's those
510 one or two that say, "Why did you hate me; why did you pick me out to criticize?" When
511 you think, I never criticized a soul in class; at least I tried not to. So, are you picking up
512 the ambiguity that I am feeling? And when you are writing you can go back and redo
513 something that's not right. When you are in front of the classroom you can't rewind. So
514 maybe that's why I love writing so much. Now, my interviewer is looking a little blank.

515

516 **B: No, what I noticed is that you are sharing with us your angst. However, I will**
517 **say skipping ahead looking at your vita, that you retired from the University of**
518 **Texas from teaching and that you actually did stop for a period of time, but you are**
519 **back in the classroom this fall. So, how do you feel being back in the classroom that**
520 **things have changed? Has your style changed?**

521

522 N: I think I was much more comfortable this past fall. I was teaching a class that was
523 really different for me. It was the second in a series for non-majors. And I felt a sense of
524 freedom because I chose to come back. And I had great fun. I started out each class on
525 the overheads with a picture of someone in computing and asked them to tell me who it
526 was and of course, they couldn't. They did recognize Steve Jobs and Microsoft's Bill
527 Gates. They recognized them. They didn't recognize Ada Lovelace, "who is that funny
528 lady?" I had actually on the evaluations, one person comment on how much they enjoyed
529 the human faces of the people in computing. But I think the reason I enjoyed going back
530 was because I felt I could do exactly what I wanted to do and I could have a good time in
531 the classroom and I did.

532

533 **B: You mentioned overheads. Was it overheads or Power Point at this point in**
534 **your career?**

535

536 N: Oh, they're Power Points.

537

538 **B: OK.**

539

540 N: Yes, it is Power Points.

541

542 **B: During the break you also mentioned "I haven't talked about SIGCSE. So**
543 **one of the areas that we do like to hear about is what professional organizations**
544 **mean a lot to you and how have they affected your career?**

545

546 N: You asked the question earlier about mentorship. I think in many ways SIGCSE
547 was my mentor. The people that I have met in SIGCSE, the people that I have worked
548 with in SIGCSE have meant a great deal to me.

549

550 **B: If somebody should listen to the tape, they should know that SIGCSE is the**
551 **ACM's (Association of Computing Machinery) Special Interest Group in Computer**
552 **Science Education.**

553

554 N: I got involved with them very early in my career and some of those people that I
555 met thirty years ago, I still see. I have had breakfast with Angela Shifflet at the SIGCSE
556 Technical Symposium for the last 25 years. So it has been a mutual mentoring, and you,
557 Barbara, of course, are one of those. So SIGCSE has meant a great deal to me over the
558 years. It has given me the opportunity to move out from the university, which is a major
559 research university setting, and realize that I probably would have been much better fit in
560 a small liberal arts college than I have been at a major research university. I have been, in
561 a sense, the conscience of the department over the years because its undergraduates were
562 the ones that I cared about. I spent four years as associate chairman of the department for
563 undergraduate affairs. It was unheard of for a senior lecturer then to do that. And I
564 learned something about myself then. I learned that I am not a good manager. I can't tell
565 you how grateful I was when my husband had taken over as chairman so I could resign as
566 associate chair and didn't have to do managerial duties anymore.

567

568 But SIGCSE gave me the sense of professional community that I didn't find within my
569 department at first, but over the years that has changed. There have been more lecturers
570 and commitment to the undergraduate program but for so many years I was the only one.

571

572 When the Women in Science program finished I realized that I had a decision to make. I
573 could continue to work with women's issues but I was being thought of in the department
574 of as the person who was working with women's issues and was taken less seriously as a
575 computer scientist. And so it was at that time that I did deliberately step back somewhat
576 from being involved in women's issues.

577

578 A career is not a chronological issue. As we were talking and I think about SIGCSE, and
579 I think about all the paths that have gone on, I am reminded that the graduate program in
580 computer science education came about sometime in the midst of all this and I became
581 the content expert for the PhD students in that program, which led to one of the most
582 important things in my life, which has been the group of PhD students that I have worked
583 with through the years. They never did get anyone in education that knew anything about
584 computer science and I remember seeing the description of the PhD program and going
585 over to talk to the dean over in education because there was no one over there that knew
586 anything about it, and his comment was "Oh, that is the PhD on the use of computers in
587 education." And I said, "That is not how it reads." And I realized that they didn't know
588 the difference. And so I became very involved with that program and there were some
589 very fine dissertations that were done – Computer Science Education dissertations, not
590 using computers in education.

591

592 **B: Part of this relationship with you and SIGCSE and in Computer Science**
593 **Education has been your focus on Computer Science Education Research. Do you**
594 **want to address some of your frustrations as well as some of your successes in that**
595 **area, and your mentorship, your leadership?**

596

597 N: My frustration is that I didn't get involved in it earlier. It wasn't until this PhD
598 program was put in that I realized what sorts of things one could do in Computer Science

599 Education research. I was always collecting data on what was going on in my classes and
600 then several semesters later throwing it away because I didn't really know what to do
601 with it. And it was the first couple of dissertations that I worked on that taught me what
602 computer science education research was. So my regret is that I didn't get involved in it
603 much, much earlier. But what I learned about it I learned from my students as I was
604 working with them. And I think the successes that I have seen in their work is that they
605 are quantifiable, that we know some things that we didn't know.

606

607 If you remember closed labs – that was the greatest thing since sliced bread. Everyone
608 was going to use closed labs. And no one had determined whether or not it really helped
609 the learning process. I remember reading a paper that said “We had the control group in
610 closed labs and the other group we gave them extra homework and the students in the
611 closed labs did better.” And I couldn't believe that that was published in a journal. Debra
612 Burton did a dissertation in which the other group was with a teaching assistant in a
613 discussion group so that you were comparing a closed lab setting, which is where you are
614 in a lab at a specific time and have someone that is there to answer questions and perhaps
615 leading the lab, and the other group was a discussion group in which you had very
616 specific lessons to do. Now this was comparing things that were comparable. So, those
617 are the successes. And if you look at the number of sessions on computer science
618 education that you now see in SIGCSE, that's a success.

619

620 **B: Some of the probing questions that are kind of funny when I think of you are**
621 **“Have you spent time volunteering in professional services?”**

622

623 N: {talking over and laughing softly} Yeah, yeah. A little. {both laugh} Yes of
624 course, with SIGCSE and with the ACM.

625

626 **B: What kind of things have you done? What has brought you the most joy and**
627 **what do you think has been of the most service to the community?**

628

629 N: Now we are talking professional service, right? Now my love is SIGCSE. I have
630 served on the board, I have served as vice chair, I have served as chair and I have served
631 as a conference chair twice. That's my love.

632

633 ACM -- I worked as an area director at a time when their organizational structure was
634 such that each small group of SIGs had an area representative that was their advocate at
635 the upper level and I enjoyed doing that. First time I was appointed, one of my SIGs were
636 unSIGged – or whatever the word is. SIGFORTH. I'll bet many people have not heard of
637 SIGFORTH, but that was a SIG that had to do with a language that was on top of
638 FORTRAN. But I did that.

639

640 Other volunteer work was – in Texas you have UIL –Interscholastic League and they put
641 in an interscholastic league contest in computing. And I was in the first group that was
642 involved in that, which I thoroughly enjoyed. I am sure there are others, but they sort of
643 fade away over time.

644

645 **B: Were there ... what were the most challenging things about your career?**
646 **Can you think about the most juggling: you had all these children you talked about.**
647 **And they appeared in Budapest, and we haven't heard about them while you're**
648 **juggling them, when you came back to the States. I assume the children were still**
649 **there when you came back. Would you like to share {talking over}**
650

651 N: Sure, I have a word to parents. One of the wonderful things about an academic
652 career is your time is very much your own. You have to have your office hours and you
653 have to be in your classes, but your schedule isn't rigid. So that you can take the kids to
654 school. If they've got something going on at school you can go be there. If your kid is in
655 the band, their group won free ice cream you can run, pick them up to get free ice cream.
656 But when we came back from Budapest, our youngest daughter was in first grade, and I
657 always managed to come home before the school bus did. That was very important. But I
658 must tell you one day she said, "Oh, mother, can't I go to day care at least two days a
659 week so I can see my friends and be like everybody else?"
660

661 But the academic career is wonderful for that issue, as I am sure you know. I remember
662 one year, I had to describe my career to someone and what I thought about was juggling
663 hats. Because that year I assigned all office space in the department, I was on all the
664 college committees for various things, I was working on three books, I was teaching my
665 classes, I think I may have been on the zoning and planning committee for the city of
666 Westlake Hills at the time and my vision was of trying to keep all these hats going on at
667 the same time.
668

669 **B: She is showing with hand motion juggling.**
670

671 N: But I think to be very honest the most important thing is having a supportive
672 family. I don't know how someone can do if you don't have a supportive family. I must
673 give full credit to my husband who has been the most supportive spouse that you could
674 possibly have. And we always had dogs. And there is nothing like having a Labrador dog
675 that comes up and sits on your feet. You know that you are loved.
676

677 **B: One of the other questions as we get down to the end of talking about things**
678 **today, is do you have any strong interests outside computing? And we did hear**
679 **briefly ... we heard about dogs and we also heard about the planning committee.**
680 **But I know you well enough to know you do have many, many strong interests, and**
681 **as you share some of those we might see more sides of Nell Dale than we have seen in**
682 **talking about computing education.**
683

684 N: Well, we have always been very involved in our church. I refused to teach Sunday
685 school. I figured that if I taught for a living I was not going to teach Sunday school. But
686 I've done all sorts of other things in our church.
687

688 We are interested in music. One of the things I did when I retired was have the time to go
689 on the board of the Austin Lyric Opera. I have just finished four years of supporting the

690 opera by being on the board. Symphony, we are very active in the symphony. And I
691 guess if you ask me one thing I wouldn't give up if I didn't have to it would be tennis.

692

693 **B: I was going to say I hadn't heard about tennis yet.**

694

695 N: Oh, it's tennis, it's tennis. I play doubles three times a week and to me that's the most
696 wonderful time to get out there and hit that tennis ball. I'm not a particularly good player
697 but I play with a group that are my age and they are rejects from tennis leagues where
698 people cared too much if you won and we just have a good time. And of course, playing
699 tennis a lot means that I always come home with tennis balls, so the dogs are always very
700 glad to see me come home because they know I've got a tennis ball for them. I don't
701 suppose that that sounds like a terribly full agenda, but it is. I have enjoyed retirement
702 very much.

703

704 You know I taught half time for the first few years, and I had a very bad time the last
705 time I taught, which is why I actually went back and taught last fall. The last time I taught
706 on a regular basis, I was teaching a class that was required for CS majors, and it was
707 second semester sophomore, first semester junior – it's the old CS 7. And the person that
708 taught it the semester before had failed 60% of the students and so I had 50% in my class
709 that had failed it once before and had to pass it. And the hostility was terribly intense. I
710 always had taught that class as a mixture of theory and practice, and it had been taught as
711 a pure theory class the semester before. I had students that couldn't write a program, and
712 I would ask them "How did you get this far?" "Well we worked in groups and I did the
713 documentation for the group." And the net result was that there was just so much anxiety
714 among the students, I just decided I didn't need that. My youngest daughter was getting
715 married and that was a wonderful excuse to retire completely. And as time went by I
716 thought I don't want my last teaching experience to be that, and that's why I particularly
717 asked if I could come back for a semester.

718

719 **B: I see.**

720

721 N: And that is why I loved it so much. It was wonderful. And I'm so glad I did and
722 they asked if I wanted to teach next fall and I said, "Ask me in August."

723

724 **B: I see, I see. Now we're back in the sage part. If you had some advice that you
725 would give to a young woman just starting out in computer science and having an
726 interest in teaching, what would your advice be?**

727

728 N: I think you have to decide if you willing to put in the energy to have it all. If you
729 do, I think you can. I think a woman can have it all. You can have a family, you can have
730 children, you can have pets, you can have an outside life, you can have a rewarding
731 career, but it takes energy, and I think you've got to make that decision up front. And I
732 think if you don't make that decision consciously you are going to be fragmented, and
733 pulled apart. I think that you can't do it halfway. You can't say it'll get better tomorrow,
734 because it's not going to get better tomorrow. It's not going to get easier. It's a thousand
735 percent time to do it all, and I think you have to make a conscious decision to that. So

736 that would be my advice to someone coming along. You can, but it's not going to be
737 easy. To be successful at both you have to make a conscious decision.
738

739 **B: Good advice. If you could change one decision you made along your career**
740 **path, which one would it be? Or maybe you don't want to change any.**
741

742 N: I don't know that I would change anything. But I did have something happen to
743 me that made me rethink and made me think maybe I would have. When I was put on the
744 non-tenure track, as I said I didn't think anything about it, and the department had always
745 been so supportive, and I just ... it never really bothered me particularly. Someone would
746 say, "But you're not a professor," and yeah, I'm not, OK. I was the ... I was awarded the
747 Karlstrom Award, the most wonderful thing that ever happened to me was the award
748 given by the ACM for contributions to computer science education. I can't tell you how
749 much that meant to me. As I said in my acceptance speech, I was the first grandmother to
750 receive it. And, several years later the committee asked if I would serve on that
751 committee and I said, sure. And the appointment went up to ACM and the president of
752 the ACM said, "Oh we can't have her on that committee, she's not a professor." So I
753 couldn't serve on a committee to choose someone for an award I had received because of
754 my title. Now, I will say this --- the members of the committee all resigned in fury. But
755 that's probably the only time that I really questioned my decision to stay here at UT. Talk
756 about having it all. I wanted my family, I wanted it all. It never occurred to me that
757 maybe I could go down the road to San Marcos and apply, or go up the road to
758 Georgetown and apply. This was my home. This is where I felt that I was called to be.
759 Did I make a wrong decision? I don't think I made a conscious decision; so by not
760 making a decision my career went the way it did. So one other bit of advice I would give
761 to women is make decisions consciously. Don't float. Men tend to make career decisions
762 explicitly and women tend not to. It's a vast generalization, I know, and all you hearing
763 me are going to say so, but I think that probably is true.
764

765 **B: Well, thank you Nell. As we wrap up, is there one little story that you'd like**
766 **to be remembered for or that you remember that you just can't wait to get out?**
767 **Perhaps it has something about one of your classes, perhaps any story that would be**
768 **"Wow, I want the world to know this story."**
769

770 N: That is ... you are asking me to think back over forty years and what story? Well,
771 something of interest perhaps --- I've been on the board of the Journal of Computer
772 Science Education for years and someone just pointed out to me that I am listed as Neil
773 N-E-I-L instead of Nell.
774

775 **B: [chuckles] Any other stories?**
776

777 N: I'm sure that once this is over I will remember something that I just have to tell
778 you. In which case I will do so and we can splice it in.
779

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780 **B: Very good. Well, Nell, I have thoroughly enjoyed listening to you this**
781 **afternoon. And I am sure that others that will be listening to this at another time**
782 **will also. Thank you very much.**

783

784 N: Thank you. I must tell you that there is nothing more fun than to talk about
785 yourself for two hours.

786

787 **B: [laughs] All right. Thanks, Nell.**

788

789