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A Dual Teaching Career: An Oral History with UC Santa Cruz Professor Frank Andrews

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**Abstract:**

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Deeply interested throughout his career in pedagogical challenges and innovations, Andrews won numerous teaching awards, both on campus and from outside organizations. He also spearheaded the publication of *Teacher on the Hill*, a campus newsletter of "faculty conversations about teaching and learning at UCSC," which appeared in fifteen issues between May 1977 and January 1981.

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*A Dual Teaching Career: An Oral History with  
UC Santa Cruz Professor Frank Andrews*

Interviewed and Edited by Sarah Rabkin

Santa Cruz  
University of California, Santa Cruz  
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2014

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## **Interview History**

Theoretical chemist Frank Andrews was hired with tenure in 1967 by UCSC's chemistry board, where he was employed for four decades before retiring in 2006. When this oral history was recorded eight years after his retirement, he was still offering two courses annually: not for chemistry, but for Crown and Merrill Colleges, focusing on the psychology of personal growth—a field he began cultivating shortly after arriving in Santa Cruz. Notwithstanding his enthusiasm for the discipline in which he was originally trained, it is this area of inquiry that ultimately became Andrews's primary passion as a teacher and a learner, and it is perhaps the one for which he was most widely beloved by students.

Deeply interested throughout his career in pedagogical challenges and innovations, Andrews won numerous teaching awards, both on campus and from outside organizations. He also spearheaded the publication of *Teacher on the Hill*, a campus newsletter of "faculty conversations about teaching and learning at UCSC," which appeared in fifteen issues between May 1977 and January 1981. He discusses this endeavor briefly in the interview; a complete set of the newsletters is available through Special Collections in the UCSC Library, and would richly complement the reading of his oral history.

Over the course of nearly thirty years on the UCSC faculty, I had heard a great deal about Andrews—mostly from undergraduate students we happened to share, who emphatically praised his teaching in both chemistry courses and college-based seminars. Though he and I had not been formally introduced prior to our collaboration on the oral history, we had occasionally exchanged collegial

emails—trading teaching materials; discussing the work of students whose independent studies and individual majors we jointly supervised.

I interviewed Andrews for a total of four hours over the course of three sessions in late August and early September 2014. After an initial, unrecorded meeting at his home on the west side of Santa Cruz, we conducted the interviews in the office he maintained as an emeritus professor—a small, well-lit space in the Physical Sciences Building, decorated with original art and dominated by a large, comfortable, well-worn couch.

The oral history begins with Andrews's childhood in Manhattan, Kansas, where his father was on the Kansas State University chemistry faculty, and moves through his undergraduate years at KSU, his graduate work at Harvard, and various pre- and post-doctoral research appointments. Andrews devotes some time to his formative experiences as a special agent in the US Army Counter-Intelligence Corps (1955-57), and briefly discusses the subsequent six years he spent as an assistant professor of chemistry at the University of Wisconsin, Madison.

Upon arriving at UCSC, Andrews and his wife, Jeanie, took up a post as residential preceptors in Rutherford House, a Crown College dorm, where he became intrigued by the personal struggles of his student charges: "Here were these brilliant, powerful kids, and yet they didn't seem to be able to enjoy their lives very well, and they didn't seem to be fulfilling their intellectual potential."

Drawing on a prior fascination with the ideas of psychologist Albert Ellis, Andrews began to think about ways of teaching "skills of better living." "I'm convinced," he says, "for...all of us, there could be more to this life than we are

making of it, no matter what we're making of it. ...It's a skill. And we can cultivate it, and it's worth cultivating."

At the same time, Andrews found himself at odds with some of the more competitive and performance-oriented aspects of academic life: "I try to shun things that feel...shallow, like they're trying to impress, and that's...at heart responsible for my ultimate[ly] leaving my research in chemistry and going over to focusing on personal empowerment and psychological unblocking."

A substantial portion of the oral history is devoted to a discussion of the courses Andrews taught on these subjects, and of *Teaching Science in the University*, a small upper-division seminar he developed to complement his general chemistry lectures. Seminar students served as "group leaders" for the larger course, doing the work that might otherwise have been conducted by graduate teaching assistants. Andrews found these highly motivated upper-division undergraduates to be superb teachers. In some ten years of running the large chemistry course in this fashion, he never received a complaint from a student. The worst group leader he ever had, he told me, was "significantly better in that job than some of the poorer graduate students TAs that I had."

Andrews frequently expresses gratitude for the unique teaching opportunities afforded to him by UCSC, and particularly by the college system. "I know of no other place than UCSC where I could do what I've done here," he says. "You want to teach a course outside of your discipline? Well, we've got colleges that'll do that."

The transcript was returned to Andrews, who reviewed it for accuracy of transcription. We thank him for his dedication to this project. Thanks also to Mim Eisenberg, who transcribed this volume. Copies of this oral history are on deposit in Special Collections and in the circulating stacks at the UCSC Library, as well as on the library's website. The Regional History Project is supported administratively by Elisabeth Remak-Honnef, Head of Special Collections and Archives, and University Librarian, Elizabeth Cowell.

— Sarah Rabkin, Interviewer

Soquel, California, December 2014

## Early Life

**Rabkin:** This is Sarah Rabkin and it is August 25<sup>th</sup>, 2014. I am with Frank Andrews in his office in the Physical Sciences Building at UCSC and we are beginning our first oral history interview. So, Frank, I will begin with the question that opens all of these interviews: When and where were you born?

**Andrews:** I was born in Manhattan, Kansas, May 29<sup>th</sup>, 1932. My father was on the faculty at Kansas State University, which is located in Manhattan. My mother was a very bright woman, but she was a woman, so she had to be a housewife. She was born left-handed. They made her write right-handed and thus she had a tremor, a life-long tremor. It was appalling.

**Rabkin:** So there was a time when that was standard practice in elementary schools?

**Andrews:** Yeah. The word is “sinister.” It’s all sinister, sinister, being left-handed.

I was an only child. My folks wanted to have more kids but they never did. I was very well raised. My parents were supportive, caring. I was an only child, and there is a huge difference there because you don’t have any immediate colleague roughly your age in the home. I was an intellectual—well, you’re going to ask

more questions. So that's where I was born, and I went to school there: grade school, high school, and I graduated from Kansas State also.

**Rabkin:** What do you know about your family ancestry, if anything?

**Andrews:** My dad grew up in northern Wisconsin, in a little town. Nobody in that town had college degrees. My dad was born in 1900. But his father was the founder/owner/editor of a weekly newspaper in Bloomer, Wisconsin. What do I want to say about my dad? All families up there were religious. But his mother got a terminal disease, and every so often, all too often, according to Dad, the minister would come over and pray over her when she was dying. And it so turned him off, he remained turned off to organized religion the rest of his life.

My mother was born in the same year, 1900, in a little town in Wisconsin. She had three brothers. They were boys. They were orphaned pretty young and Mother had to take care of the sick parents, grandparents. The boys got picked up by uncles and educated and went to college, and Mother, who was smarter than they all were put together, could get no more than a high school education at that time. So she taught a one-room country school in Wisconsin for a couple of years and then got a job working in a company through which she ultimately met my dad.

They got married and he went down to Kansas State. He always said to her, "You're smarter than anybody I know and as soon as our child or children start

going to nursery school, you're going to go to college and get a college degree," which she did, a degree in math. Got a straight-A average except for one course, in which the instructor said that she did the best in the class but she wasn't giving any A's that semester. [Laughs.]

It was a very stable life.

**Rabkin:** Did your mom end up getting a job outside the home?

**Andrews:** She did only during World War II. She taught math, or something similar to math, up on the campus for people who were in training programs inside the military.

**Rabkin:** Tell me a little about growing up in Manhattan, Kansas.

**Andrews:** Well, it was kind of a paradise. Lived five blocks from the grade school and one mile from the junior and senior high school. Walked both ways practically every day unless it was pouring down rain.

Friendships were very stable because the kids that I grew up with—their parents were going to be staying in Manhattan until they died. My best long-term friend, who I still see every summer, I met in kindergarten.

**Rabkin:** Wow. Is this a friend who was in your barbershop quartet later on? I know we're getting ahead of ourselves.

**Andrews:** Yeah, that's the one. I love to sing, and I was in every kind of choir I could be in in high school and junior high and met some other people through that. I was shy around women. Did I give you a piece of writing I wrote about my date with Judy and not being able to kiss her?

**Rabkin:** You said something to me about it in an earlier conversation.

**Andrews:** But I never gave it to you. Okay. Yeah, I was intimidated by girls that I was attracted to. I had a couple of dates with this girl named Judy. And then it was May Day. May Day in Kansas the kids make fancy May baskets, put candy in them, take them to their friends' house, ring the bell or knock, set it down. The friend comes out and chases them and if they catch them, they kiss them. So I went over to Judy's house, kind of trembling, with mine, and there was nobody home. I remember vividly waiting in our house for Judy to come. She came, rang the bell; I went out and we started chasing. She obviously expected to be caught. I didn't have the guts to catch her. We were almost twelve years old. She finally tired of that and went on home and I never had the courage to kiss a woman until I was almost twenty-six years old.

In those days, the women would have to sit by the phone and wait. Could never make the overture to call up, I know it. And then they'd sit there, saying, *What's*

*wrong with me? He doesn't call back. He doesn't like me. I got a zit on my nose or I'm not attractive. And, oh, gosh! And the only reason it ever happened in my life then is a girl I had been dating started crying one night. I said, "Why are you crying?" and she said, "You won't kiss me." So I had to kiss her. [Laughter.] Almost twenty-six years!*

**Rabkin:** Wow.

**Andrews:** God! I don't know, does that answer your question about how Manhattan was to grow up in? [Laughs.]

**Rabkin:** So music was an outlet for you and a way to meet people.

**Andrews:** Yeah. Music and being in plays. I was in a lot of plays. When I graduated from college, the theater director said, "I can get you a position in summer stock." But the thought of becoming a professional actor turned me off.

**Rabkin:** Why was that?

**Andrews:** Because I love ideas. I'm an idea person. I try to shun things that feel like they're shallow, like they're to impress. That's, I think, at heart responsible for my ultimate leaving my research in chemistry and going over to focusing on personal empowerment and psychological unblocking, that kind of thing.

**Rabkin:** So anything that smacked of performance, primarily, was unappealing to you, compared to engagement with ideas and with other people.

**Andrews:** Yeah. Now, I wouldn't have thought about that, but it just—I was in an awful lot of plays in college, and yet I took small parts, and I don't know quite why I was participating in them.

**Rabkin:** Going back to childhood and adolescence before we go on to college, did you have any jobs in town when you were growing up?

**Andrews:** Oh, yeah. My first job was with the college drugstore.

**Rabkin:** Like a soda fountain?

**Andrews:** Soda fountain, all kinds of products, a pharmacy, all together in one room, and it was right at the base of the campus. I worked there on weekends. Learned a lot, a lot about collaboration, especially when Kansas State had either a football game or a basketball game. After the games were over, the mobs descended and everybody who worked as a soda jerk was there working at those busy times. The teamwork was amazing, everybody thinking what the other people needed, wanted, handing them something before they even asked for it. That was remarkable and I don't think I've ever seen it quite that good or that impressive.

**Rabkin:** So this is like the improv choreography behind the soda fountain counter.

**Andrews:** Yeah, when they're busy.

**Rabkin:** Interesting. So that made a lasting impression.

**Andrews:** Yes. That mutual support, collegueship, cooperation I have always seen as a model, which goes in the face of the way we get raised here, which is individual, comparing, trying to be better than, giving points or dollars, or some measurable quantity as a reward, no thought that satisfaction and making a difference to others could be a reward. So we lose what I think is a basic humanity and we gain a kind of a cold inhumanity. The students are really seeing it now, the students we get at UCSC.

**Rabkin:** I look forward to—

**Andrews:** Talking about that! [Laughs.]

**Rabkin:** —more, yes. I'm thinking about your comment about being an idea person and wondering whether there were any particular ideas or subjects that you caught fire with while you were still in high school.

**Andrews:** Well, I was very attracted to ideas in math and physics and chemistry. These models of molecules and so on and their power to explain and predict struck me as very impressive. That continued in college. And interestingly, the course I disliked the most in college was *General Psychology*, the only psych course I took in college. And the next most disliked were two courses in philosophy. I think the reason was that they were the same damn thing: intellectual history. “This is Jung, and this is Freud, and oh my God, everything they do is so wonderful,” and “This is some philosopher, and you gotta remember that this philosopher thought that.” It’s just—ugh! Can you take the spirit out of psychology? And philosophy—can you just take all the spirit out and turn it into a memorization game? But that’s what it was then.

**Rabkin:** How did you end up choosing to go to Kansas State University?

**Andrews:** Well, it’s cheaper than paying for a dorm.

**Rabkin:** Because you could live at home.

**Andrews:** I liked it. I had high regards for it. We lived five blocks from the campus. These little, amazing, paths of life diverge over the tiniest of events. In high school, I took a course in woodworking—woodworking/shop. I made a set of chessmen, thirty-two chessmen. Maple for the light ones and walnut for the dark ones. Turned them on a lathe, carved the horses’ heads for the knights, felted them, finished them. They were just gorgeous at the end of the semester.

The instructor, D. C. Marshall, looked at them and said, "Oh, these are gorgeous." He said, "I wish I could give you an A, but I have a policy that if a person doesn't do more than one project, the best I can give them is a B." [Laughs.] I thought, this is thirty-two projects! But I got a B.

I found out later, a couple of years after that that I was a candidate for an all-expenses-paid scholarship at the University of Kansas. Had I gone down there, I would have lived in a dorm, my folks wouldn't have been right there, I wouldn't have had their influence, my dad's advice. And I would have been totally different. I wouldn't have gone, I don't believe, into chemistry. I have no idea what I would have gone into. But I got a B in woodworking [chuckles], and that's very interesting, the way our lives can diverge, and I'm grateful, very grateful. I could not have asked for better experiences in college than the ones I got and the education I got. Amazing people.

**Rabkin:** And had you gone to the University of Kansas, you probably would have made that into the right path.

**Andrews:** Quite possibly, sure. You never know.

**Rabkin:** That's so interesting. So you suggested that it was the influence of your father, and especially continuing to live at home that led you to study chemistry.

**Andrews:** I think that was just what tipped the scale. I liked the chemistry class. I'd seen Dad think about all this stuff forever and I liked the ideas. I was struck, not by the experimental aspect of it, because I never particularly liked mixing foul-smelling, toxic chemicals, [but] I liked the theory, especially the mathematical theory.

### **Kansas State University**

**Rabkin:** Tell me more about your time at KSU. What stands out in your memory from that time?

**Andrews:** Singing.

**Rabkin:** Singing.

**Andrews:** All four years, I was in the a cappella choir, which was a very select group. We sang in all kinds of places throughout Kansas all four years. I made really good friends with everybody in there. That was the big one.

**Rabkin:** Was it in college also that you began that barbershop quartet singing?

**Andrews:** It was our senior year. I don't know who came up with the idea that we get a barbershop quartet going. Three of us were seniors and very good friends, and one was a sophomore, and he lived half a block from my good

friend and four blocks from me. His dad was a professor also. And then the other one was from western Kansas. We needed a bass and he was a great guy, a brilliant guy. Oh, my God! The guy has made so much out of his life! Woof! And we still have barbershop reunions every summer in Colorado.

**Rabkin:** Same foursome.

**Andrews:** Same foursome. Well, it's down to a threesome now.

**Rabkin:** And did you also perform in that group all over the place?

**Andrews:** In our senior year, we sang fifty concerts.

**Rabkin:** Wow!

**Andrews:** We were good. The K-Staters.

**Rabkin:** The K-Staters. Were there any other experiences that stand out in your memory from college time, influential teachers or mentors or peers, experiences?

**Andrews:** Well, there were a lot of people I really liked, a lot of teachers I liked, a lot of women teachers I liked.

**Rabkin:** So there were a fair number of female faculty.

**Andrews:** Yes. And by that time, they were hiring Jews. I don't think Kansas State had ever interviewed a Jewish person for any position until after World War II. Can you imagine a university [laughs] that has no Jewish people on it?

**Rabkin:** Do you know if they had an explicit policy?

**Andrews:** I don't imagine they did. I think it just comes naturally, like any kind of prejudice, racial prejudice or whatever.

**Rabkin:** Interesting.

**Andrews:** Sexual prejudice, for a long time.

**Rabkin:** At some point, KSU gave you an Outstanding Alumnus Award, the chemistry department there.

**Andrews:** Yeah.

**Rabkin:** Tell me about that.

**Andrews:** Well, I don't know much about that. It didn't seem to me like it meant much. I had gone off and gotten a PhD at Harvard, after a bachelor's degree there [at Kansas State], and had written a few books on statistical mechanics and thermodynamics, and I guess somebody suggested that they do that. So Jeanie

and I flew back there, and they had this evening thing, and they gave me the award, and I flew back here. It didn't mean a hell of a lot to me. It was nice.  
[Laughs.]

**Rabkin:** And then you had a Fulbright fellowship in 1954-55?

**Andrews:** Yes.

**Rabkin:** Tell me about that.

**Andrews:** Well, when I graduated—see, the draft was floating around back there—and to take the Fulbright, I had to postpone getting drafted. I went to the University of Hull. Then it was called the Free University of Hull. It's now just the University of Hull.

**Rabkin:** In England.

**Andrews:** In England, yeah, northern England. It was an interesting place. I had some outstanding female teachers in mathematics there, one outstanding one in particular, and made some friends and got a much better background in physics and math, which I lacked because I was a chemistry major and couldn't take much. Then I got drafted.

### **Army Counter Intelligence Corps**

**Rabkin:** Let's talk about that. Well, tell me about your experience in ROTC and then in the Army Counter Intelligence Corps.

**Andrews:** Okay. Well, we had mandatory ROTC for male students at Kansas State, Reserve Officers' Training Corps. All four years, you participate rather richly in the program, and at the end, no doubt, after another little so-many-week-program, you would be commissioned as a second lieutenant. I was in air force ROTC. I was preparing to be an administrative officer in the air force. When I finished my first two years, they declared that because my feet were flat, I could not be a reserve officer in the air force, so I wasn't allowed into advanced ROTC.

**Rabkin:** Not even to be an administrative officer.

**Andrews:** No. No, no, not at all. So I ended up being drafted into the infantry.

**Rabkin:** Which was okay, with your flat feet.

**Andrews:** Apparently so.

**Rabkin:** [Laughs.]

**Andrews:** I mean, you're just cannon fodder there, I guess, and they don't care whether your feet get you killed. Yeah, the military—full of stories that leave you shaking your head.

I was drafted in the fall of 1955. The Korean War had pretty well wound down by then. I did my basic training in Arkansas. I was then chosen to be trained to be a Special Agent in the army's Counterintelligence Corp or CIC. There were thirty of us in my class, which was held in Baltimore. We were mainly trained to interview people who had been acquainted with people now in the army who were being considered for positions involving top secret material.

In about the third or fourth week of classes, we were given a questionnaire. It's a fifteen-week program, I think. And about the third week in or fourth week in, we were given a questionnaire: Did we want to go abroad or stay in the States after we did our basic training. The Korean War had pretty well wound down and I'd spent a year in England and liked Europe and thought we'd probably go to Germany. About half of my fellow students, I think fifteen exactly, asked to go abroad, like me, and the other half asked to stay in the States.

A week or two later we got our assignments, and it was the exact opposite of what we'd asked for. All I can think of is that some drunken corporal one evening had gone into the office, seen those on the desk and decided he would "fix 'em." [Laughs.] And he fixed 'em. [Laughs.] So—

**Rabkin:** Just on a drunken whim.

**Andrews:** Well, that's my guess. It's the only explanation I have. Maybe they could have just said, "Well, we're gonna deliberately do this as an act of policy," but that seems a little harsh.

So fifteen people who wanted to stay in the States went abroad; the other fifteen of us stayed in the States. I had three outstanding, interesting assignments. The first two were short, a few months each, and the last one was in Houston, Texas. I was interviewing people about folks who were being considered for top-secret clearance.

**Rabkin:** So this was like background interviews to get information about candidates for top-secret clearance.

**Andrews:** Yes, background interviews. I had civilian clothes, an army car, lived in an air-conditioned apartment with a swimming pool. I sang in a choir. In one day I could interview the president of the Texas A&M system and a black person who, for a living, picks feathers off chickens. I mean, all kinds of different people. And it was very interesting, very interesting.

**Rabkin:** So, in a sense, you ended up seeing the world, perhaps, in a way—

**Andrews:** Yes.

**Rabkin:** —maybe even more deeply than you might have had you gone abroad.

**Andrews:** Oh, my gosh! And developing some interpersonal skills with all kinds of people. I don't know as I ever got turned down for information.

**Rabkin:** Were you nervous at first about approaching all these people?

**Andrews:** Not really. I had to learn some secrets. I think in the black part of Houston, the people were used to—when a white man in a suit or a tie comes to the door, you don't want to go there. They're going to come and say you're overdrawn on some account or something like that. So I could go up and ring, and they could look and see who it was, and—a big silence. And then I learned: Ring again. Then I learned: Ring a third time. And then you hear this voice way in the back, "Who day-uh?" [Laughs.] You say, "Frank Andrews, ma'am, with the United States Counter Intelligence Corps"—[Laughs.]—"here to interview you about a person who's being considered for a very responsible position in the army." [Laughs.]

**Rabkin:** And then they let you in.

**Andrews:** Sure. "Oh, him." Some of them—usually it wasn't their fellow community of African Americans—sometimes I'd go to the schools and interview teachers or a principal, and I'd say, "So-and-so is being considered for a position of trust with the army," and they'd say, "So-and-so?! Oh, my God!"

None of these people had questionable allegiance to the United States. Some of them were lousy students. But the skills that it took to work in cryptography in those days were not the skills that would lead you to good grades. And so often an African-American guy would be seen by the army as ideal for giving one of these positions to. But their teachers in the school system didn't see it that way. [Chuckles.]

**Rabkin:** Interesting.

**Andrews:** Very interesting. Yeah, that was a good experience, a *very* good experience.

**Rabkin:** So you spent the majority of your time in the military doing that.

**Andrews:** Yes. My CIC service was in 1955-57, but the story of it didn't end until about 1969. I was here at UCSC and was participating in a meeting of the statewide UC Educational Policy Committee. A man came up to me having recognized me as one of the people in our CIC class years earlier. He asked me if I had ever heard what happened to the fifteen people who were sent abroad. I said no. He said, "Well, they were shipped to Korea, where their jobs were to recruit espionage agents who were North Koreans. Of the fifteen who went there, they knew that at least thirteen of them were captured by the North Koreans and tortured to death.

This man is someone who knows what he talks about! He subsequently becomes the president of the whole University of California system, a position he held for some years. So I have had the experience of knowing that a simple coin-toss led to my living a wonderful life as a professor here in Santa Cruz, instead of being captured and tortured to death. Hard to imagine.

### **Graduate Study at Harvard University**

**Rabkin:** And then you did your graduate study at Harvard.

**Andrews:** Yeah.

**Rabkin:** What would you like to say about your time at Harvard?

**Andrews:** Wonderful, and I was naïve, so I made it too short. I lived in a graduate dorm on the third floor. I had a roommate and a friend across the hall. We got to know each other very, very well. When I first got to Harvard, I had to talk to my adviser about my education so far and what courses to take. And I misrepresented—mistakenly, just out of ignorance—misrepresented what I had studied in Hull in my mathematics and such. So I was enrolled in four courses that I didn't have the prerequisite to the prerequisites for.

Stunningly taught. Oh, my God, the teaching there was outstanding. One of the people had a Nobel Prize. I had a year of math from a man that was just brilliant,

just amazing. But I would have had a lot of trouble going through it academically. But my best friend was a guy across the hall and he was a year ahead of me. He was a theoretical physics graduate student. He tutored me every evening from about eleven to one, before we went to bed. Every evening, he tutored me for a couple of hours. It did it. This guy is brilliant. He went on to an amazing career as a physics professor, which he is still pursuing full time. Just an incredible, incredible human being. Brilliant, kind. I also counseled him about some psychological challenges he was facing. So I had the experience of making a difference as a counselor, and I think that influenced me later in life. I know it did.

What else do I remember about those two years? Harvard was a wonderful place. And I was there much too short a time. I should have been there one or two more years.

**Rabkin:** You had said to me earlier that you thought the purpose was just to get through and get the degree, and it didn't really register that it should have more to do with education.

**Andrews:** Right.

**Rabkin:** Had you realized that, you would have spent more time?

**Andrews:** I think so, because it would have been pretty obvious. In certain cultural situations, you have a purpose, and you never sit back to hold a bigger context, look at your life and the situation and inquire: Is this the purpose I want? You just have it. It's just like, you know, you're left-handed or you're—whatever it is. And that seemed that way to me.

**Rabkin:** In the course of your graduate education, you spent some time in Brussels doing dissertation research.

**Andrews:** Well, yeah. I got all my preparatory education done in two years. Then I had to do a thesis and the question was where?

**Rabkin:** So it was assumed that you would do your thesis research at a different institution?

**Andrews:** Not necessarily, but there was nobody at Harvard at that time who was doing theoretical physical chemistry of the type that I was interested in. But there was a professor named Ilya Prigogine in Brussels, who subsequently won a Nobel Prize, who was doing that. I asked and they said, "You can do your research with anybody anywhere on the planet." So I contacted Prigogine and he said, "Sure." I went over there and lived in Brussels for nine months, again rushing like crazy to get enough research done to leave Brussels.

Unwise, but I was unhappy. I was lonely, most likely because I was working so hard. People understood English—in fact, in the lab the sort of default language was English. Belgium is a funny country linguistically because parts of it speak French and parts speak German. So everybody in the university spoke some English. I really poured myself into research and got quite a bit done.

So, yeah, that's basically it. I sang in a choir and everything else was research.

**Rabkin:** Mm-hm.

**Andrews:** Then it was clear I would want to do a year or two of postdocing. I had gotten to know a guy at Harvard who was just a little ahead of me, a graduate student, Dudley [R.] Herschbach, who subsequently got a Nobel Prize. He was teaching at the University of California at Berkeley. I went to Berkeley for a year, lived in a little apartment by myself and was officially part of Dudley's research group.

I sang in a great choir there, a great choir, a Berkeley choir.

**Rabkin:** At UC?

**Andrews:** I think it was closely tied but I think people [not part of UC Berkeley] could sing in it—if they were really going to contribute a lot. I learned something there. [We performed] Bach's oratorio on Jesus, the *St. Matthew Passion*. We were

rehearsing with the San Francisco Symphony in Symphony Hall, and we were singing the last piece in it, which is a lullaby to the crucified Jesus. And I looked down the riser that I was standing on, and it was all women, and two of them had tears running down their face. I kind of did a double-take. I thought, you know, there could be more to this music than I make of it! That was a lesson. I'm convinced, for any of us, all of us, there could be more to this life at any moment than we are making of it, no matter what we're making of it.

**Rabkin:** Mm-hm.

**Andrews:** It's a skill, one of what I call the skills of living.

**Rabkin:** Mmm.

**Andrews:** And we can cultivate it, and it's worth cultivating.

**Rabkin:** Did you interpret their tears as a response to the religious content of the words or as an emotional response to the music?

**Andrews:** I think the words *and* the music. "Hear, yet, awhile, Lord, thou art sleeping / Hearts turn to thee." There's a lot of potential emotion there, with parenthood, childhood, and a brutal public execution.

**Rabkin:** And was that an emotional reaction that you, yourself, had *not* been having at the time?

**Andrews:** That's right. Yeah, with any song I just usually sing away, and here I learned that I could look at it like a poet might, or a group of people who have coped with some of life's most intense and challenging situations.

**Rabkin:** Mm-hm, mm-hm. Something about that moment, seeing those two women respond in that deeply emotional way opened your eyes somehow.

**Andrews:** Yes, and it's surprising how some of these little things can make a huge difference.

**Rabkin:** Yeah.

**Andrews:** Yeah.

**Rabkin:** Anything else about your time at Berkeley?

Okay, now, any more about Berkeley? I think not.

## Teaching at the University of Wisconsin, Madison

**Rabkin:** Well, let's move on then to—the next chapter really was at Wisconsin, yes?

**Andrews:** Yeah, mm-hm.

**Rabkin:** So you were on the chemistry faculty at Madison from '61 to '66? Something like that?

**Andrews:** Yes, there were five years at Wisconsin.

**Rabkin:** Tell me about that.

**Andrews:** Well, I taught *Physical Chemistry* and *General Chemistry* and *Thermodynamics* and this kind of stuff. I enjoyed teaching. I was publishing papers. And the teaching—it was typical university teaching. I was laying out ideas about chemistry, and they were studying them because they had to learn them because they were going to have an exam on them. I was pretty effective at communicating and expressing it because I liked the ideas and I liked to see them in contexts and so on. So that was fun.

**Rabkin:** Were these large lecture courses?

**Andrews:** Some—most of them were. Almost all of them, I think. I don't have memories of any small classes at Wisconsin. It seems, in retrospect, like a factory. But this place [UC Santa Cruz now] looks like a factory to me. It's a campus of the University of California. It's a research university. Step Six full professor has one criterion and only one, to get Step Six full professor: International fame in your discipline. Fame.

**Rabkin:** There are no requirements about pedagogy or teaching?

**Andrews:** You can be a lousy teacher. They may hold it against you. We might hear of somebody who's really a lousy teacher. But only one criterion. [Chuckles.] And that's it.

**Rabkin:** How about your colleagues at Madison?

**Andrews:** I was there five years. The first three years, I lived with some colleagues in a rental place. I loved the people. I loved the interactions. One of the guys was just unbelievable. He was so brilliant and such a good teacher and such an amazing character. He was Bob Bird, a chemical engineering professor, whose work I was already familiar with. The year I got to Hull, I was in London before I went up to Hull, and I happened to be in the biggest bookstore in downtown London. I went to the Physical Chemistry [section], and I found Bob Bird's book, [*The Molecular Theory of Gases and Liquids* by] [Joseph O.] Hirschfelder, [Charles Francis] Curtiss and [Robert Byron] Bird. It was on

statistical mechanics, which is what I was passionate about—so I bought it there and read it, which took some doing. That turned me on to statistical mechanics, that book.

Well, Bob Bird was one of my housemates when I got to Wisconsin. I had met him when I was at Berkeley. We accidentally ran into each other in a line for lunch at the faculty dining place. He was just amazing, this guy.

**Rabkin:** How so?

**Andrews:** Well, he—besides writing book after book on this kind of stuff, and paper after paper, and teaching everything, he wrote three books on Japanese and a book on Dutch. He loved languages. And when we had a new snowfall, typically when he came out to get in his car, on the way he would stop to pee kanji into the snow. [Laughter.]

**Rabkin:** Did he translate it for you? [Laughs.]

**Andrews:** [Laughs.] He's still alive at ninety. Amazing person.

**Rabkin:** So he was one of the colleagues you lived with the first few years at Madison?

**Andrews:** Mm-hm, mm-hm. Now, the last two years, I was married, so that changed things. But we haven't got to that and probably won't until later.

What else is there to say about Madison? One of the great blessings of my life was that I didn't get tenure there.

**Rabkin:** Why do you say that?

**Andrews:** Because if I had gotten tenure there, I would never have come here. I would have been teaching these big-ish classes, with the expectation that I would be writing these papers, no alternative to that insight, and I would do it until I burned out. Ah! It's inconceivable.

I know of no other place than UCSC where I could do what I've done here. The good fortune of that is just amazing! Just truly amazing! "You want to teach a course outside of your discipline? Well, we've got colleges that'll do that." So I've taught roughly 110 of such courses in my time here.

### **Discovering a New Field of Exploration**

**Rabkin:** It sounds like you really found your passion after you didn't get tenure at Madison and ended up coming here.

**Andrews:** Here. Yeah.

**Rabkin:** And that has to do, it sounds like, with your discovering personal growth and cognitive psychology as fields of exploration.

**Andrews:** Yeah.

**Rabkin:** How did that happen? How did you first become interested in those subjects?

**Andrews:** Okay, the worst course I had in college was psych.

**Rabkin:** Right.

**Andrews:** Second worst were two courses in philosophy. So I become a philosophical psychologist—

**Rabkin:** [Chuckles.]

**Andrews:** —and I married the daughter of the psych professor. [laughs]

**Rabkin:** The psych course that you hated?

**Andrews:** Yeah.

**Rabkin:** Your wife is the daughter of that professor.

**Andrews:** Uh-huh, yeah.

**Rabkin:** Wonderful. [Both chuckle.]

**Andrews:** I have huge respect for him. He didn't like the course either, but he didn't have any choice. "There's the textbook. Use it."

Well, we were in Oxford. I could have gone back to Madison for a seventh year but I didn't want to because the negative decision already had been made. So I went back to the States over Thanksgiving. I interviewed at Southern Illinois [University], the University of Missouri, and UCSC. I vividly remember the interview here. One of the biggest mistakes I made was not bringing Jeanie with me. Left her in Oxford.

**Rabkin:** How so?

**Andrews:** By herself. I thought it was *my* interview, and it costs money. You're going across the ocean and back. I don't think either one of us ever thought about bringing her along. But it wasn't just my life, but her life too.

But when I was [interviewing] at Southern Illinois, I ended up somehow in a bookstore downtown and was browsing. And here was a book—I think it was being remaindered—by Albert Ellis, who is not very fondly remembered by academic psychologists. And I can see why. He was quite arrogant or quite

outspoken. But he brought to Western psychotherapy some old ideas that became cognitive therapy. The way I put it is every human being goes through life in a hypnotic trance. Hypnotism is powerful! And [the] hypnotist is the voice in our heads that we call “my thoughts.” We usually think things based on our beliefs and habits. We just have developed beliefs and habits in the past and now we think things that confirm those.

So we come to talk about our lives with the word “is.” *It is* this way, rather than I’m hypnotizing myself to see it this way. But the latter has enormous power for changing, for growth. Whereas if you say—humans are at the effect of their nature and nurture, that is, their genes, their body and the story of their life from birth till now—that’s what it is. It’s just that. That determines the way we are. That totally ignores any role for choice, because choice is a messy thing. It’s hard to understand. Science can’t cope with it. Social science can cope with it statistically. In psych, we just kind of ignore it, and we just teach, “Yes, you’re a product of your nature and your nurture. Your nature is your genes and your body, and your nurture is the story of your life up till now. And that’s the way it is, and you can’t change either one. Sorry.” That’s a help?

Here came [Ellis’s] ideas. We live our life in a hypnotic trance. (That’s my words. That’s not the way it was presented.) The hypnotist is this voice and we can change that. I mean, look at coaching, coaching of any kind. What is the coach doing? Half the time they’re focused on what you’re telling yourself when you perform or when you do this. Here is somebody who confronts the world’s

record pole vault. The bar is at a world's record height. They pick up their pole, and they start running, and they say, "Oh, my God, it's the highest I've ever been! Nobody can do this." Well, of course you're hypnotizing yourself to miss it. And you do.

So if you want to gain expertise, one place everybody has to focus is how are you hypnotizing yourself as you perform? And we are pathetic at it. Pathetic! The room for improvement is unbelievable. Even some of the happiest people just—uhh!

### **Preceptors at Crown College in the 1960s**

So I got those ideas from Albert Ellis in that book and then I came over here [to UC Santa Cruz], and we moved into the dorm. We spent five years in Crown College in Rutherford House as dorm parents. Jeanie is really good at that and she cooks wonderful stuff. We always had a breakfast for everybody in our dorm, with their guests, every Sunday morning—because the cafeteria didn't serve breakfast on Sunday morning—

**Rabkin:** Not just for everybody in Rutherford House.

**Andrews:** Well, anybody who came.

**Rabkin:** Anybody who came by.

**Andrews:** Anybody who came. I mean, they could have overwhelmed us and we would have had to draw some lines, but usually there were people—we were in a girls' dorm, so we had all of them and their boyfriends and occasionally friends and stuff like that.

**Rabkin:** So the dorms were sex-segregated then.

**Andrews:** Yes, the Upper Quad was boys; the Lower Quad, down by the Crown provost's house, was all girls. Now, we did have some intervisitation.

**Rabkin:** [Chuckles.] Really!

**Andrews:** [Laughs.] And a lot of marijuana smoke. [Laughs.]

**Rabkin:** What year did you come to UCSC?

### **Personal Empowerment Courses**

**Andrews:** Sixty-seven. It was the year that Crown started. I fell in love with the students. I was puzzled, concerned. Here were these brilliant, powerful kids and yet they didn't seem to be able to enjoy their lives very well and they didn't seem to be fulfilling their intellectual potential.

**Rabkin:** Hmm.

**Andrews:** And as I got to know them and was looking at it through the eyes of somebody who had read a lot of Albert Ellis, I could see it was what they were saying. A girl gets ready to go out with a guy, out to a movie or something, and she looks in the mirror and all she can see is the zit on her nose. "Oh, my God! There's a zit on my nose!" She doesn't see this glowing, smiling, radiant person. I mean, you couldn't care less about the zit on her nose. [Chuckles.] But *she* does. And this kind of thing is just—and that just did it for me, now. Because I had, now, ideas that could help. I mean, sure, kids are going to bed starving to death all over the planet. Tragic. But it's not my thing. I can't help that. I could contribute some money to a charity if I want.

But here's something I could do! Because we talk about this right in the dorm. I could teach courses in Crown so I started— And that's the nice thing about these kinds of courses. You don't have to know how to do it. You don't even have to be an expert in any kind of therapy or anything. You can just care and follow some simple procedures and it's almost certain to work. Almost certain.

**Rabkin:** So tell me a bit about how you set up those early courses.

**Andrews:** Well, what I did mainly was to pick, oh, I don't know, three or four books, three books, maybe, that I liked a lot. They could be on anything. I'm still doing that in *Personal Empowerment*. I have a book on writing that's just a stunning book.

**Rabkin:** Which one is that?

**Andrews:** *Writing Down the Bones* by Natalie Goldberg. And then my *Loving* book [*The Art and Practice of Loving*], and then a book on death and dying, *Meetings at the Edge* by Stephen Levine, who dedicated his life to coaching people around death. I can rely on those. They're always in print and the students really respect them. We have a schedule. We read so many pages by this time and that time and so forth. We don't really address the book, though sometimes I'll start and we'll go around and make any comments we want to about the book, but I want personal comments about my life and how *it* is affected by this. And then pretty soon we've got three people crying.

To me, one of the most remarkable stories about that is—this must have been twenty years ago, at least—we were discussing rape because a number of girls had been violated in one way or another. This one girl was really suffering from post-rape [traumatic stress syndrome]. Then, after we talked about that for a while, this guy said, “Well, I hate to say it, but I raped a girl, and I'm having trouble with it. I'm guilty, feel terrible.” It wasn't a violent rape; she was drunk. Okay, so then discussion went on, and then after class, this woman made a beeline for him and said, “Let's get together and talk.” They must have had at least ten talks, maybe averaging an hour apiece. At the end of the quarter, they both said, “It's all cleared up for me now. I'm no longer”—

Well, that kind of thing that looks kind of miraculous is pretty damned important. It's teachable, and it's learnable. The skills of better living can be learned and taught and practiced, improved on. People say, "Oh, no, this is just the way I am." They have come through a line of thinking that has them [to be] convinced: "This is just the way we are. I was raised by a lousy parent and so I'm scarred. You know, it's a scar, like in your arm. And the notion that you can gain skill at the aspects of living, learn skill at getting along with somebody, at coping with people doing things you don't like, of recognizing you, yourself, have done something you wish you hadn't done. The skills of coping with that—they're not skills! "It's just the way it is! So don't come around to me and tell me I can change." Why? Because if I have any responsibility, what that means is when it's negatively judged by anybody, I'm blamed, shamed, and guilty."

Blame, shame, and guilt, the hammers we whack on anybody who admits that—who is stuck sharing responsibility for something that somebody doesn't like. So the last thing you want to do is be responsible. "Don't look at me. I didn't do it."

**Rabkin:** So for something to happen like what you described in that class, where the woman student was forthcoming about her history of rape and the male student was honest about his having raped somebody, and then their having been willing to talk with each other and move through a healing process with each other—in order for that to happen, it seems to me that students have to feel a profound degree of safety and comfort in that setting. I'm curious about what you did to help create that sense of safety.

**Andrews:** Okay. Well, generally I set it up so that at the beginning we go fairly quickly around and introduce ourselves and tell just a little bit about ourselves, so people can put a name to a face and have a little bit—that this person’s a biology major and wants to be a doctor or something. Then—and it all depends on how many students there are and how the class meets and so on—but then I like to go around and have each person talk for about ten minutes, whether we call it life stories or what. The focus is on these issues: quality of life; what do I think is blocking me from joy and happiness and success; and where do I think I’m being blocked?

We emphasize being honest and being vulnerable because we’re going to be honest and vulnerable all quarter, and this is the style; let’s get it started. When someone speaks, either in the middle when they pause or at the end, there’s a short time, usually in the beginning here, for questions or comments or something like that. So you’ll get people saying, “Oh, I resonated with what you said so strongly. It’s just the same thing with my father. And, of course, it’s your mother but my father.” Yeah. That works.

**Rabkin:** Did you have ground rules? For example, “Nothing that gets said inside this classroom goes outside”?

**Andrews:** Absolutely, yeah. Confidentiality is a ground rule. It gets violated from time to time. I only know of one serious violation, where somebody was really hurt by the violation, and that was a long time ago. Yeah, that’s hard,

because I would like people to be able to just meet somebody for lunch and be able to share the fact that they're in a lot of distress now about a relationship that isn't working out or something like that, rather than have to keep it secret because it's so personal.

**Rabkin:** Did anything about the confidentiality within the class prevent students from the class from talking with each other outside of class?

**Andrews:** I don't know, because they don't talk about it in the class. [Laughs.] My suspicion is, my belief is that people who are in the class together do talk about it.

**Rabkin:** But you ask them not to speak about other students from the class, outside.

**Andrews:** Yes, outside.

**Rabkin:** Yeah. So you were deeply informed by Albert Ellis's thinking in this work.

**Andrews:** Mm-hm.

**Rabkin:** Were there other psychological or philosophical thinkers who also influenced you?

**Andrews:** Well, as it went along, I've probably read a thousand books on these subjects. I'm sure I have. Eastern spiritual teachers, lots of them. Pop psych. There's a lot of wisdom in pop psych. I mean, it's easy to disparage it, but try some of it on for a while and you'll find there's a lot of wisdom there. If the books are selling, there must be a lot of wisdom. I mean, for example, this was all stuff that I knew, but I kind of love the way she presents it: Byron Katie. Are you familiar with her?

**Rabkin:** [nodding.]

**Andrews:** Her books are all just compilations of her workshops. She goes to a place and she has particular people who tell their issue, and then she does her procedure of six steps of whatever it is, and then she goes on to the next one. Her books are just collections of those. Any of her books are good, but they're just more Albert Ellis, more of the same there. I like the writings or the talkings of Bhagwan Shree Rajneesh. He's not—there's some problems there.

**Rabkin:** The Rolls-Royces and whatnot.

**Andrews:** [Chuckles.] Yeah. Yeah. He had, I think, feet of clay, but they were a little more clay-y than some of these guys have.

**Rabkin:** [Laughs.]

**Andrews:** Sri Nisargadatta Maharaj. Are you familiar with him?

**Rabkin:** No.

**Andrews:** Yeah, there's not a lot of money been made off of him. He lived in a major city in India, Calcutta or one of those major cities in India. He was married and had a couple of kids, and he supported himself in his home by making cigarettes. He was a cigarette maker at home. He was a Hindu. They have this theory that the first collection of years in your life, you're growing up. Second, you're having a family, raising kids. Third, it's time for you to increase the depth of your spiritual whatever. And then the last is leaving. He was, I suspect, about forty or so. One evening his good friend came in and said, "I'm going off to hear my teacher. My guru is coming to town. Come with me. Let's go hear him." So he went. And he was impressed. Moved by it. So he kept making cigarettes but he started studying like hell, and within three years he was totally enlightened. The guy was amazing, just amazing. He kept meeting people in his home. Never did do anything different. In the evenings, after supper, there'd be twenty, thirty, forty, fifty people sitting around in a circle in his home, and he would respond to questions and work with them. And the books that have been made—there aren't very many—are collections of tape recordings of these. But the wisdom is unbelievable.

I have a copy of his book. The copy I somehow bought or acquired was printed in India; it was before it ever was printed in the United States, and I have read it

probably from cover to cover—and it's long—at least five times. I always underline books. And it is falling apart. It is just falling apart because I never read any other book nearly as much as I read that.

But it doesn't hang on any particular teacher. It started off with Albert Ellis, whom I got to know.

**Rabkin:** Personally.

**Andrews:** Mm-hm. He's hard to get along with, to put it mildly.

**Rabkin:** How so?

**Andrews:** I sent him a copy of my *Loving* book when it came out, and [chuckles] he wrote this letter saying something like he supposed that it would become popular, "but I hope not." [Laughs.]

**Rabkin:** Oh, my goodness.

**Andrews:** I was surprised because my book doesn't—I thought that its religion would be more intellectual and abstract and it wouldn't piss him off because he doesn't like faith-based stuff. He really sees a lot of suffering and evils coming from People. Who. Know. The. Truth.

**Rabkin:** He saw that in *your* book?

**Andrews:** Well, I was surprised.

**Rabkin:** I would be, too, having read your book.

**Andrews:** Mm-hm.

**Rabkin:** Yeah. Were you disappointed?

**Andrews:** Oh, a little bit, but not much. I was a little surprised. Kept the letter in some file.

**Rabkin:** These courses you were teaching—at some point we'll talk about your chemistry courses.

**Andrews:** Yeah, sure.

**Rabkin:** But the *Personal Empowerment* classes and all the various iterations you taught of them—they have been, continue to be extremely popular.

**Andrews:** They are, yes. [Pause.] I don't know. The enthusiasm for what I'm doing I sense is weaker now than it was ten or twenty years ago. I find that in the last few years, couple of years, I'll invite people in my class that I think would

like—and they're not graduating seniors—to join my Wednesday night group. Either they don't come or they come once and then don't come. It's like they're not finding what they want there. Or they're too busy. A lot of them are very busy. If you spend as many hours a day as they spend punching little buttons on a little device in your hand or looking at computer screens, you don't have much time left.

### **Psycho-spiritual Growth and Support Groups**

I'm not sure that's the reason, but the percentage of people who used to take my classes, and then wanted to take the other class, and then wanted to be in group and then wanted to go off to a graduate program in therapy or this or that or something seems not there. Not there very much anymore. The group has got mainly townspeople, or alumni, perhaps, or something. But it's very small. The group has maybe seven, eight people on a Wednesday night instead of fifteen. And attendance is pretty pathetic. I don't know what's going on.

**Rabkin:** Since you're talking about that group, why don't we get into how that started and what that's all about before we finish today's interview?

**Andrews:** Okay. It started around thirty years ago, something like that. I taught a course in *Personal Empowerment* or something like that in the spring quarter.

**Rabkin:** This was a Crown College course?

**Andrews:** Crown, less likely; Merrill, more likely. Then we had something back in the Midwest that we were going to go to right after classes were over. We were living in our house at the base of campus, where we are now, and we wanted somebody to stay in the house. So somebody from the class was doing it.

When we came back, we found that for the last two, let's say Wednesdays, the two Wednesdays we were gone, for some reason the people in that class didn't scatter at the end of the term but were still around, and they were communicating, and she said, "Let's have a meeting, a class meeting here." What nights and when, and so they did it, and they did it Wednesday and did it the next Wednesday. And they were goin'!

**Rabkin:** So this was while this former student was housesitting for you.

**Andrews:** Mm-hm.

**Rabkin:** They brought the class together to continue at your house while you were away.

**Andrews:** Yeah, yeah, yeah. That was that. So we just kept going. I, for a while, thought that it was something that should be created after every class about the class, but then pretty soon I was running two nightly groups each week and didn't particularly want to run a third. So we combined them and it became one.

**Rabkin:** And did you continue to admit new people to this group?

**Andrews:** Oh, sure, because others were leaving town.

**Rabkin:** And how did the group define itself? What was its purpose?

**Andrews:** To continue doing what they were doing in class. [Laughs.]

**Rabkin:** So how does it work?

**Andrews:** I would say a psycho-spiritual growth and support group.

**Rabkin:** And are you a kind of mentor figure in that group, or is it more—

**Andrews:** My role in the meetings can be moderately big, but often I don't have to say it; people in the group will say it. Sometimes I summarize or put a little different slant on it or something. But if you ask somebody after they got out of a meeting, what do they most vividly remember, most of the time it would be something somebody else said. Which I like. There's a satisfaction in saying something and having it mean something real to somebody else.

**Rabkin:** Yes. And in creating the space in which that can happen.

**Andrews:** Mm-hm.

**Rabkin:** What's the structure of the group meetings?

**Andrews:** Oh, typically we go around—now, therapy groups and lots of other groups typically go around and have what they call a check-in. A check-in usually means, “Report on what's sucking in your life at the moment.”

**Rabkin:** [Laughs.]

**Andrews:** You know that you're going to have to check in Wednesday night and so you scan your life for what sucks—

**Rabkin:** [Chuckles softly.]

**Andrews:** —and you find something and maybe a couple of somethings, and you talk about that one. So when we go around, we share either a triumph or a gratitude or two. So you're scanning for what's positive as you go through life. That's the first thing.

Typically in the groups now, people have an opportunity, if they wish, to commit publicly in the group to something that they're going to do during the next week. They write it down on a three-by-five card, if they want. Those are kept in an envelope. So then at this point, everybody who filled one of those out last week is asked how it's going. You can say, “Oh, I didn't keep it and I don't intend to.” And, “Do you have anything you want to say about that?” Sometimes

no, sometimes yes. “Do you want to recommit?”—this kind of thing. A little support there.

Then we typically ask if anybody wants some time, time for any issue you care to put on the table. Then people respond to what you put on the table and it goes along and goes along. There will be anywhere from one or two people taking time, to a fair number of people taking time. That seems to work.

It doesn't require an expert in this kind of thing to bring these together and to make it happen. It can happen almost by itself. Because we're talking about compassion and support. We're talking about honesty, sincerity. We're talking about events that are so common that most everybody, if you haven't had it personally, you are personally involved with people who have. Being human together. I think I have a couple of purposes. One is for us to learn that we are human; two, that it's okay to be human, and three, it's okay to be human in public.

**Rabkin:** [Laughs.] Would that be a good place to stop for today?

**Andrews:** Fine.

### **Coming to UC Santa Cruz**

**Rabkin:** Okay, so today is August 28<sup>th</sup>, 2014 and once again this is Sarah Rabkin in Frank Andrews's office. We are about to commence our second oral history interview.

So, Frank, I'd like to start this time by backing up a little bit to ask you about the beginning of your job at UC Santa Cruz, and first to ask how you learned about the job possibility here and what, if anything, did you know about this place before you came out to interview?

**Andrews:** I just heard about it through random chance. They may have published an ad somewhere, but even then, when I knew I wasn't going to get tenure at Wisconsin, I didn't read those kinds of ads. I [figured I] could go back to Madison for a year after I left Oxford and hunt for a job then if I hadn't found anything. So I don't know how I found out. Just an accident, I would say. I interviewed at three places: Southern Illinois, the University of Missouri, and UC Santa Cruz.

**Rabkin:** Did you know anything about UCSC?

**Andrews:** I doubt it. I might have heard that it was experimental but I don't remember hearing anything about it.

**Rabkin:** You'd been at Berkeley.

**Andrews:** Yes. And I had been over here, over the hill once, I think.

**Rabkin:** Were you excited about the prospect of California?

**Andrews:** California, as such? Not particularly. When I got here and found out about the place and how experimental it was and what it seemed to be up to, that turned me on. I remember just a couple of things about the interview. One is I was by myself, I'd finished a day here, probably the first full day, but it was still light, and I was over on the road below the Stevenson [College] provost house, looking off at the valley and the mountains and so on, and I remember having the thought that, Wow, would I like to spend the rest of my life here. And I can now walk home by that route, so I get to look at that [laughs] frequently.

I have a memory of my interview. I gave a seminar. It was on some statistical mechanics stuff, but it was very story-ish; how all these molecules acting together do these remarkable things. I remember coming out of the room over in Thimann after the seminar, and Terrell [L.] Hill, who was on our faculty at that time, who was a very senior, very distinguished chemical physicist in the same line that I was following was on the faculty here at that time. And as they came out, Joe Bunnett, who was chair I think, kind of looked at him with a quizzical look, and Terrell gave a smile indicating he liked it—

**Rabkin:** Thumbs up.

**Andrews:** —gave me a thumbs up. I remember seeing that and feeling quite nice about it. It was a surprise to me when we got a letter informing me—we were in Oxford—that they were offering me tenure. So I couldn't get tenure at the University of Wisconsin but I could get it at a campus of the University of California, which was interesting. But I'm so grateful I didn't stay at Wisconsin. Oh, my God!

**Rabkin:** Had you asked UCSC for tenure?

**Andrews:** No, they just proffered it.

**Andrews:** Yeah.

**Rabkin:** So you arrived with tenure in your pocket.

**Andrews:** Yeah. So they were stuck with me.

**Rabkin:** [Laughs.]

So you just mentioned your interview with the chemistry board. Were you also interviewed by a college?

**Andrews:** No. I don't think anybody was at that time. I don't know as they are now.

**Rabkin:** I have heard from faculty who came in the early years that they had interviews with colleges as well as boards.

**Andrews:** It's possible. I just don't remember.

**Rabkin:** And when you came, did you have a college affiliation to start out with?

**Andrews:** Yeah, it was Crown because Crown was opening that year, so they needed some faculty.

**Rabkin:** So tell me about your early impressions of the campus once you arrived.

**Andrews:** Well, beautiful beyond belief. What it seemed up to that was different from other places was perhaps more focus on teaching. They weren't going to just teach the way everybody teaches. They were really going to think about it. They were going to pour some extra concerns into it.

**Rabkin:** So, distinct from the kind of teaching you described that was going on at Wisconsin at the time.

**Andrews:** Yeah. [Different from the] stereotype: lectures, seminars, the professor talking about facts all the time, students not having a chance to say or think or anything for themselves.

**Rabkin:** That's the model you'd been accustomed to.

**Andrews:** That's the model that has been dominant in [laughs]—in the United States, and it's a model that we are probably returning to, mainly returning to here [at UCSC].

### **The Narrative Evaluation System**

After I was here, I think one year, then I became chair of the Committee on Educational Policy of the Academic Senate and had that job for three years, something like that. Those were interesting years because we were putting into place or solidifying some of the extraordinary stuff. We had to get the permission of the statewide Academic Senate and of the Board of Regents to have our grading system, and I was the one who got to present the grading system to those two groups.

**Rabkin:** So what had the campus done in the couple of years before you arrived?

**Andrews:** Well, they were getting the stuff started but apparently they were acting on temporary approvals.

**Rabkin:** I see.

**Andrews:** "See how it goes. Come back to us when you think you can have some sense of how it's going."

**Rabkin:** I see. So when you were on CEP, you were formalizing and institutionalizing that.

**Andrews:** Yes.

**Rabkin:** And did you start heading up CEP shortly after you arrived here?

**Andrews:** It was the second or third year.

**Rabkin:** Wow! [Chuckles.] I guess in the early days, they didn't waste any time. Everybody was pretty new.

**Andrews:** Yeah, and I was obviously zealous for this stuff and pretty articulate, so—

**Rabkin:** Mm-hm. Tell me your thinking about narrative evaluations and letter grades.

**Andrews:** Well, it's complicated. I can see why a university, as it got bigger and bigger, would be inclined to see narrative evaluations as more of a pain in the ass than a benefit. When I taught *General Chemistry*, we had two or three midterms and a final. That's the only information I had on 450 students.

**Rabkin:** Were there sections?

**Andrews:** There were sections, but they were question-and-answer sessions. The students really never had a chance to stand out. A few of them did. You can program a computer to say Excellent for A and Very Good for B and so on, but you're not getting any benefit out of that, except you're taking the grades out of the GPA, out of the grade point average. Because if you just have a mess of Excellents and Very Goods as grades, without evaluations, you're not going to know a hell of a lot about somebody. But if you got a 3.275 grade point average, you think, ah, this is better than a 2.5, but it's worse than a 4 point. So you're comparing people. You're seeing academic work as a numerical property. How many facts did you learn? How well did you do on these objective exams. So in the absence of evaluations, all you gain is another entry into a grade point average, by which we can compare one person with another, by which competition—there's a bottom line. The bottom line is the grade. As a nation, as a culture, we are screwing over enormous numbers of young people by doing it

this way. If you do poorly in grades or don't compete with the people you're concerned about, then you're stupid. Sometimes you can win high grades but you become antisocial. Some people can get 4-point averages and still beat themselves up. Grades are a little like money. They can be measured, and since they can be measured, they will be measured. Bottom line: It's efficient, quick, and I think it changes the whole nature of what people go to college for.

**Rabkin:** Say more about that.

**Andrews:** There are a few experimental colleges getting going. There are a few ways that people are using to teach these days in big classes, even, that get around this. [But] the moment you can attach a number to it and the number seems to be the payoff, people work for numbers and they compare themselves with other people's numbers and they set their goals in terms of numbers.

So how are the numbers determined? Well, they're determined by, frequently, multiple-choice tests. If they're determined by papers that people write, then that's at least better. But if you're writing a paper and you're going to get a B-plus and you're hoping for an A-minus, some of the spirit goes out of that paper. And too much of your motivation is—it's just like a salary raise; it's just like that's your motivation: I want a higher number so I compare better. The jobs are out there for—which is not necessarily true at all—the jobs are out there for the people with the best grades. [But] people who are the happiest may often manage to get the best jobs because they're fun to be around and people have

learned that people who are happy and fun are creative; they think beyond the bottom line.

But we have all these large classes. People are busy. How can a campus of the University of California evaluate faculty members in teaching when we're part of the UC system? So when you go off to a conference of UC people—people in your discipline in Los Angeles—somebody says, "Which campus are you from?" And you say, "Santa Cruz," and they look at you and sneer, and they say, "Oh, you're the ones who don't have any grades, right?" Or, "You're the ones where research is not important." It has never been true here that research was not important. We have, amazingly for such a young campus, developed an international reputation for research. It may be that we just get more interesting, creative faculty, thanks to the way we began.

**Rabkin:** We've moved from evaluating student performance to evaluating faculty achievement. And that's fine. If I could, just to make sure I understood the several points that you made about grades versus not grades, it seemed like there were two particularly important points that you emphasized, and one is that as soon as you quantify performance assessment, especially if you can take it to the second or third decimal place—

**Andrews:** [Chuckles.]

**Rabkin:** —you create a false sense of comparison between people.

**Andrews:** Mm-hm.

**Rabkin:** You create this assumption that you can compare one person to another in terms of their performance by a decimal point here or there.

**Andrews:** Mm-hm.

**Rabkin:** And you begin to create a hierarchy of excellence that is perhaps inaccurate.

**Andrews:** Well, it's accurate for grades. But grades have proved to be fairly poor predictors.

**Rabkin:** Of?

**Andrews:** [There have been] countless experiments, countless studies of grades as prediction of success by any definition of success that you can come up with.

**Rabkin:** Thank you. And then, turning it around, the other liability that I think I heard you emphasizing is that for a student, when letter grades are in place and when they know they're going to have a GPA, it becomes disproportionately important to them, or it can, what grade they get in a course, and whether it's a B-plus or an A-minus. And their attention and focus and concern ends up

emphasizing that to the detriment of their relationship to the learning process. Is that a fair summary?

**Andrews:** Yes.

**Rabkin:** You said at the last interview that you don't feel you could have had the career that you wanted at any institution but Santa Cruz.

**Andrews:** Well, yeah. I might have found a way to be creative with science or chemistry or something, reaching out to people who wouldn't normally—whatever. But the fact that we had departments for the primary discipline and colleges for anything else gave me a place to offer courses that weren't [in my field]—as long as I was willing to teach them as an overload, and I was, starting with the very first year I was here. I had an idea for a course while we were still in Oxford, where we would read, write, and talk at about the same pace, a couple or three books that I found particularly useful and good and thought-provoking. We'd sit around in our living room and talk about them one evening a week. It worked well. And it started out my eagerness to learn more about people and workshops for what I now call psycho-spiritual growth.

I took a couple of thousand hours of workshops, sponsored a lot by—if I dare say this because people have a habit of throwing up when they hear it—sponsored by what was then called EST and is now called Landmark Education. I found their workshops to be very professional and very thought provoking. Two

thousand hours is a lot. And I have read probably a thousand books and have gone to a bunch of other workshops and taught a bunch of stuff. I managed to incorporate some of this kind of teaching in chemistry classes.

### *Teaching Science in the University*

**Rabkin:** Did you?

**Andrews:** There were two great courses. The first one was, every time I taught a large introductory class, I simultaneously taught an upper-division science class called *Teaching Science in the University*. I'd get maybe fifteen, as many as twenty students, [from] all disciplines. They were going to be teaching, working with students on the ideas in the *General Chem* course. So all the students in the big class were divided into study groups, or you could call them sections. But they were a hell of a lot more than sections because the group leaders did all the testing, all the evaluating, all the grading, and all the evaluation writing.

**Rabkin:** And these were upper-division undergraduates.

**Andrews:** They were upper-division—not necessarily chemistry majors.

**Rabkin:** Did they have to have taken the course for which they were serving as—

**Andrews:** Oh, sure, sure. It was *General Chemistry*, so all these people had taken *General Chemistry*. And then they may have gone on into earth sciences or biology or whatever.

**Rabkin:** So you were teaching them to be teachers.

**Andrews:** And to engage themselves in these ideas. And it worked. These kids said over and over and over again how much it meant to them, that it was the only class they ever had where there were any people involved. They could make a difference in people's education and people's lives, even, sometimes. This went on for quite a while. I have no idea how long. It could have been ten years. And then, with no word given to me, or discussion of reasons, the course was cancelled. And that was it!

**Rabkin:** The *Teaching Science in the University* class?

**Andrews:** Yeah. No reasons given why, and nobody asked me what we were doing—what were the benefits, how did *I* perceive it. Nothing!

**Rabkin:** And you had, as I recall, published not only your campus extension, but your home telephone number as well.

**Andrews:** Oh, absolutely.

**Rabkin:** And did you ever find out what the reason was?

**Andrews:** No, but I'll bet you it was: We cannot have people teaching *General Chemistry* who may have just barely taken it. Well, they should read what the students had to say about those—I mean, I gave lectures. These kids were getting a small-group, four-hour-a-week tutorial.

**Rabkin:** Did you ever get complaints from the students in *General Chemistry* about the quality of teaching in the sections?

**Andrews:** Never. I must have done this for about ten years, and sometimes twice in a year. And the worst group leader that I think that I ever had, and I can't remember who it was, but at the time, I thought he was significantly better in that job than some of the poorer graduate student TAs that I had had. And he was the worst.

**Rabkin:** Why was that? Why do you think the quality was so high among these undergraduate teachers?

**Andrews:** Because the thought of going in and teaching something that you don't like and don't understand very well would scare the heck out of them.

**Rabkin:** So you only got people who were highly motivated.

**Andrews:** That's right.

**Rabkin:** And they certainly weren't doing it for a graduate stipend because they weren't getting anything for it.

**Andrews:** No. No, no.

**Rabkin:** They were just getting credit for your teaching course.

**Andrews:** Yeah. They were getting something they could talk about in their job interviews.

**Rabkin:** Do you happen to know whether any of those undergraduates got turned on to teaching and ended up going into education?

**Andrews:** Oh, I'm sure they did. Sure they did, because so many of our kids here did that.

**Rabkin:** And this decision that came down from the Curriculum Committee—this was a *fait accompli*? You weren't able to—

**Andrews:** The department just voted for it.

**Rabkin:** And that was the end of that.

**Andrews:** Mm-hm. And that one, I couldn't start up again.

### *Science and Human Values*

**Andrews:** Yes. The other course—and the timing was pretty good. I think it happened just about the end of my teaching the teaching class—I went to a department meeting, and the chair said, “The dean has asked us to teach at least one course that meets a couple of, one or two of the breadth requirements. We need a W course for writing, and we need a Science “T” —

**Rabkin:** Topical—

**Andrews:** —to give you breadth— You know, breadth and depth is college education.

**Rabkin:** So these would be courses for non-majors.

**Andrews:** Mm-hm. And I heard it, and I thought, oh, wow. I can do some of my kind of stuff in a course for this. So I said, “I'll do it. I'll give you a Science T and a W, and I'll need some TAs to do the reading as we go along if we get many students.” The course was called *Science and Human Values*. I learned a lot. I put together some, in my opinion, dynamite lectures that everybody should be exposed to.

**Rabkin:** What texts did you draw on?

**Andrews:** None.

**Rabkin:** No texts.

**Andrews:** No texts, no. There were fairly extensive handouts that had excerpts from various things. But it forced me to really look at values: where do values come from. Philosophical psychology, which I love now. And the student body built up pretty quickly in there to about 120 students. We had several TAs each quarter to read all those papers. I think that was where I initiated having a freewrite at the end of every lecture. Quit lecturing ten minutes early and have everybody do a freewrite. I loved that. I mean, you're not sitting there thinking, will I understand this enough to get an A? [Chuckles.] You're thinking, how can I engage with this so I can write something useful and meaningful about it?

**Rabkin:** So the purpose of that ten minutes was for people to begin processing what they'd been hearing.

**Andrews:** That's right. And they could tell about how they didn't understand it, or they can get excited about understanding it, or they can—anything they want to do. How does it hit home in their life? Because when you come to values and choice-making, you're talking about where it's really at. So that went very well. It

kept growing. It reached about 120. And then, again, one day they just cancelled it.

**Rabkin:** Any explanation?

**Andrews:** No. Now, fortunately, because I was at Santa Cruz, I went over to Crown because Crown had a theme that was sort of like that and it was a piece of cake to have it picked up over there. Joel [Crown provost F. Joel Ferguson] was a great backer of me, and [most of the] provosts of Merrill were also great backers of me.

**Rabkin:** Can I ask you a little bit more about *Science and Human Values*?

**Andrews:** Yes.

**Rabkin:** How did you relate values to the scientific enterprise in that course?

**Andrews:** Well, I'd start off saying, "A lot of people have always talked about value-free science. I want you to know that it's impossible to have a group of people who agree on what's good science, what's bad science, all this kind of stuff. They have to share common values. And science has one. It's quite specific, and it works great. And it is prediction and control in the physical realm." Prediction and control are its values. And if an idea gives you more prediction and control, they accept it. They may call it the truth, but in fact it's useful, it

works very well. I say that nobody knows what the truth is, unless they are talking about defined quantities, such as numbers.

**Rabkin:** Did you use case studies or narratives about particular episodes in science?

**Andrews:** Probably certain particular things that I thought it might be worth their while to have heard about.

**Rabkin:** You said earlier that you carried your college courses as a teaching overload.

**Andrews:** Mm-hm.

**Rabkin:** Was that the only way it was possible to do what you were doing?

**Andrews:** I believe so, yes.

**Rabkin:** So you were teaching more hours. You were teaching more than you were required to do.

**Andrews:** Eventually I retired, so I didn't have to teach chemistry and could just teach these other courses. That's been about eight years now, I think, or more, maybe.

**Rabkin:** And so, as an emeritus professor, you have been returning to teach a couple of these courses still every year?

**Andrews:** Two. Two every year, yeah.

### **A Dual Teaching Career**

**Rabkin:** So you talked about how working with the college courses enabled you to enrich your teaching in chemistry in two very specific ways. I'm curious about other fallout or effects of this unusual career you've had, of moving back and forth between what seem at first blush like two very different kinds of teaching: the courses that you taught for chemistry and the courses that were based in the colleges. I'm wondering what it's been like for you leading this sort of dual teaching career.

**Andrews:** Well, it's been wonderful. I'm an idea person. I love ideas. And I love the ideas in science and the ideas in my own specialty in science. They're quite mathematical there, so it's more abstract. I love the ideas. I hated [the ideas in psychology] when I got them when I was an undergraduate because they were so deadly deterministic and futile. Nature and nurture, we are determined by. You have been programmed from birth until now to live exactly the way you're living and it's all set in stone.

**Rabkin:** This is back to the psych and philosophy courses that you hated in college.

**Andrews:** Yeah. People are still doing that! It's understandable. If you're a brain scientist, you study the electrons firing in brains and how that correlates to experience. It's natural to hold that the things we understand are the right way to understand, the true way, and everybody else is wrong.

**Rabkin:** Isn't a great deal of that neurological inquiry these days, though, focused on the plasticity and potential of the human mind/brain?

**Andrews:** Well, you'd think it would, but [laughs] there's an awful lot of determinism in it.

**Rabkin:** Is there anything else you'd like to say about this fairly distinctive teaching career you've had, that's involved moving back and forth between chemistry and the psycho-spiritual growth kind of classes. Did the relationship go the other way? For example, were there ways in which your work as a chemist and teaching in chemistry influenced or affected your work in that other realm?

**Andrews:** Yeah, scientists are human, too. Maybe when you become a science professor it gets more challenging.

**Rabkin:** To be human.

**Andrews:** Yeah. [Laughs.] I was a major professor for one graduate student, whom I got to know very, very well. His father nicknamed him Dumbshit at the age of two and never called him anything else.

**Rabkin:** Oh, my goodness.

**Andrews:** Wouldn't drive over the hills to Santa Cruz to see him get married.

**Rabkin:** Mmm!

**Andrews:** So I—oh, I'm a Universal Life Minister—did I tell you that?

**Rabkin:** You mentioned this.

**Andrews:** Oh, okay.

**Rabkin:** No, not in our last interview, but earlier.

**Andrews:** This student in our—well, not in our dorm because it was a he, but we were down there in the Quad—and this was a student, and I knew him pretty well. Universal Life [Church] had an office in Santa Cruz, kind of an administrative office, and he was going out to give them five dollars and get his

ministerial license. And he never said a word about me. When he came back, he had signed *me* up!

**Rabkin:** [Laughs.]

**Andrews:** So I was a Universal Life Minister, and I've married, I don't know, eight people, eight couples or so.

**Rabkin:** Including this graduate student?

**Andrews:** Yeah, I just put down "Universal Life Minister," and they can't challenge it. [Laughs.] Never even knew I was going to be one until I found out I was one.

**Rabkin:** So it sounds like you had an important relationship with this one student.

**Andrews:** That's not unusual. College students are often in—well, anybody is, I guess—intense periods of emotional stuff, lots of negative stuff. A woman who's living in our house right now in one of the rooms spent the last two nights crying all night long. And it's just—it's hard.

**Jean Andrews**

And Jeanie. I mean, all of this—I've been talking like this is all me. Couldn't have done it at all without Jeanie. We should talk about her for a while sometime else.

**Rabkin:** Yeah.

**Andrews:** And the kids and all that stuff.

**Rabkin:** This would be a fine time if you want to dive in there. And maybe a place to start with that would be something you said last time, which was that you sort of made a mistake in not bringing Jeanie out with you for the interview.

**Andrews:** Yeah.

**Rabkin:** It only occurred to both of you afterwards that, wow, this is going to be her life, too. So I'm curious about how that all went. Was she happy to embrace this life alongside you?

**Andrews:** Oh, yeah. Oh, very. It's worked very, very well for her. A lot of good fortune, a lot of her determination. She's being a housewife. And she's very bright and very capable and could easily have done other stuff, but she likes most of what she does.

**Rabkin:** So tell me how your family has been an essential part of your career here.

**Andrews:** Okay. Well, Jeanie's twelve and a half years younger than I am. Her father was a professor at Kansas State. When she was about twelve, I had gotten to know her family because I was an ethnic folksinger, played the guitar and sang and was invited, through common friends, one night to go over to her folks' place. They were having an event and I sang and played. She sat on the floor. She was twelve and a half. Looked at me with kind of worshipful, I thought, eyes.

**Rabkin:** And you were about twenty-five.

**Andrews:** Twenty-four, twenty-five, yeah. So about a year and a half or two years, probably later. I came home for Christmas break and saw in the paper that there was going to be a square dance at the community building. I loved to square dance. I'd square danced all the time in graduate school and it had kept me sane. I thought, you know, I should have a partner. I should take somebody. Who do I know who square dances? Ah, Jeanie square dances.

So I called her mother, because she was so young, and, "Would it be all right if I asked Jeanie to go?" Her mother said yes. It clicked with her mother: I'm gonna check this guy out but this guy may be the one for Jeanie. So she checked me out [laughs], and I *was*. [Laughs.] She was a powerful woman, and Jeanie had no choice in the matter. [Laughs.] Amazing. Amazing woman.

The lifestyle that we've had here—it started off with five years in the dorm—this constant opening of our house to students, student groups, meetings, all that kind of stuff. She's a very social person. She loves people, and it's been, I think, really great for her. I think she could have, as a paid employee, been a great asset to most anything she would have been part of, but what she's been an asset to is facilitating *my* career, and getting to know many of my students, and being another force for good energy and care and love.

**Rabkin:** So you've really been a team.

**Andrews:** Yeah.

**Rabkin:** And then *you* started having kids.

**Andrews:** Right. Jeanie and I got married while I had two more years still to go at Wisconsin. Then we went to Oxford. Then we came here. We had our first kid, Karen at the beginning of our second year here. She grew up, for the first four years in the dorm. But when we were going to have our second kid, we decided the dorm wasn't the place for that. So we moved out.

We had Karen and Elizabeth. They were both easy to raise. Very different. Karen is much more intuitive than Elizabeth. I'm a chemical physicist. Karen's calling is in shamanic healing and she's damned good at it, really good at it. The story she tells about the spirit world—it's another place where empiricism tells *me* this

world is not just the way it appears here. There's a whole lot more in different realms.

Elizabeth's a powerhouse, intellectually, personality-wise. Karen's more reserved. They're both very bright. Both have master's degrees and both are deeply engaged. And they never moved away. They went away for college, but one of them lives a fifteen-minute walk from us and the other one lives about a forty-five-minute walk from us, which is really amazing and wonderful, wonderful.

And the grandchildren. [They had two girls], Elizabeth and Chris. Chris—you know Chris. I had Chris [as a student] when he was a freshman.

**Rabkin:** This is Chris Lay who is now the director of the soon-to-exist Kenneth S. Norris Center for Natural History.

**Andrews:** Yeah. I remember once he was in my office in his freshman year, and I had this thought, which I never had with any other man: God, this guy would make a good son-in-law! [Laughter.]

**Rabkin:** History repeats itself! [Laughs.]

**Andrews:** Oh, geez.

***Teacher on the Hill***

**Rabkin:** I'd love you to tell me about the publication *Teacher on the Hill*, and your role in producing it.

**Andrews:** Okay. It was a good idea.

**Rabkin:** What was this publication? What was its purpose?

**Andrews:** We were to have some meetings—I forget how often, maybe every month or something, I don't know—and a publication in which people wrote about teaching experiments, how they improved their teaching, how they coped with problems in teaching, all that kind of stuff.

**Rabkin:** And was this a group of faculty?

**Andrews:** It was the faculty, anybody from the faculty. Anybody teaching here was welcome to the meetings and to write for it. I had a little assistance from a woman who typed and recorded things and all that kind of stuff. It never turned people on. We ran it for three or four years. I've got files in there of all the journals—have you seen them?

**Rabkin:** I have seen a few issues, which is why I was so curious about it, because I have found what I've read there to be very useful.

**Andrews:** I can give you a whole set of them, if you'd like.

**Rabkin:** I'd love that, actually. We don't have to do it now, but—

**Andrews:** Okay. Well, before you leave, remind me.

**Rabkin:** How many issues did you publish a year?

**Andrews:** I don't know, but it was several. It just didn't take. It didn't grab people.

**Rabkin:** Do you remember whether it generated some useful discussions about teaching?

**Andrews:** Oh, I think it did for the people who were there. I see people doing similar things now, trying to get up some interest in living with nature, with the environment, or in peace. Good ideas. How do we engage people beyond the just bottom-line stuff? A lot of exciting stuff is going on, especially among students. Not a hell of a lot among faculty, but there are these particular regions of focus, like the environmental studies program, where people can teach there and participate in that, and there is the same thing with other intellectual focus groups that aren't the typical discipline.

But that *Teacher on the Hill* thing was a good idea, and it was worth trying. I just felt kind of supported by two or three other people who were similar in values to me, and there just didn't seem to be anything else, and none of us came up with any ideas that would turn people on very much.

### **Mentoring Individual Majors and Independent Studies**

**Rabkin:** One of the ways in which you did a fair amount of teaching, separate from your courses, was that you, over the course of your career, sponsored a great number of independent studies and individual majors.

**Andrews:** Yes.

**Rabkin:** I wonder what you'd like to say about the work that you did with students in that kind of relationship, and how you saw your role as a mentor or facilitator in those contexts.

**Andrews:** I think that every student should have to devise their own major and choose every course they're going to take. They should have access to conventional majors and [know] what graduate programs expect from chemistry students or biology students or whatever. But every course should be chosen. It makes a huge, huge difference. The way it is now, people can just come, look around, plug into something, take a few electives and fulfill the requirement.

**Rabkin:** And what's the difference for the student's experience, do you think? Why is it so important that students make their own choices about curriculum?

**Andrews:** Well, the same student can do it either way and can get a lot out of it. But knowing that I am here because what we're doing here is something I decided was important enough for me to be here, is very different from knowing I am here because in order to get my degree in such-and-such, I have to pass this course. But the faculty and the campus just keep throwing out, throwing away—

For example, not very many years ago, the CEP and the faculty looked at the W, the writing requirement for general ed. And they decided that the W was to be given to courses that taught students how professionals in this discipline write in their discipline. Now, over 80 percent of American college graduates end up in careers that have nothing to do with their discipline. And to force people—like, you're taking psych, and you're going to learn how the American Psychological Association, in its scientific journals, wants them written—that's just—it's just more of the same. It's more of this, "We can't trust anybody to be responsible for their own education. We have to detail the requirements for everybody." I think: let people have the experience of choosing it, not the experience of plugging into it. They've done enough of that.

**Rabkin:** So you ended up working with quite a few students who were doing just that because they were taking advantage of the option to create an individual major.

**Andrews:** Right.

**Rabkin:** And what were those experiences like?

**Andrews:** Oh, my God. All kinds of things. All kinds of things. Lots of field studies. Lots of people, in many cases, starting up some kind of enterprise. Like, the girl that's been crying in our bedroom started a whole student group on campus which is concerned about getting along with each other and living with nature, and climate, and how do you live responsibly and in community and so on. Poured herself into it and got it going, got it going pretty well. Now she graduated and she's going to stay on another whole year so she can work on it. She created her own major. There are just—people create their own majors, and you can just take them. You can be proud that somebody did this.

Sometimes people do it in biology, in healing, in medicine, where they can find venues for them that are appropriate for somebody with their background. Some people just put together two pieces that aren't normally seen as linked. Instead of having a double major which requires they take everything for this and everything for that, they take them both and then they can take some linkage things. Like, you're linking psychology and something else, and you might want to link in a couple of soc classes.

**Rabkin:** I remember personally being on several oversight committees for students who were doing individual majors and seeing your name as one of the other faculty members.

**Andrews:** I'm usually chair. (laughs)

**Rabkin:** It just strikes me that you probably ended up doing a disproportionate number of those.

**Andrews:** Well, yeah, because I'm willing to chair, and the chair is the one who has to work, because even though we're supposed to call meetings, we never call meetings. The [students] who go to all the work—that have the urge and go to the work to do it, I'm not sure I've ever had one of them that I felt needed more attention, more something. I brainstorm with them, raise issues with them and so on. But my God, they're normally exceptional students that get way more honors and high honors than just regular people. Because they *care* so much.

### **More on Teaching**

**Rabkin:** And they have a certain amount of initiative and oversight in order to put something like this together.

Are there any other of your specific courses you'd like to talk about? I'm looking at a list right now of both the college-based and the chemistry department

courses. And one of the courses I see in the first category that we haven't talked about is *UCSC and American Higher Education*.

**Andrews:** Yeah, that didn't last very long. We looked at education, the educational system, the ways in which UCSC planned to be different. It was quite an introspective course of people's own experiences with education and with the effect of going through the formal educational system that we have. And this was at a time—I forget when that was, but it was quite a long time ago, when the campus was still experimental.

**Rabkin:** There's also a Merrill course: *Merrill College Community Development*.

**Andrews:** Oh, that one's less important. The Merrill course of importance is *Personal Empowerment*, which I've been teaching for a long, long time.

**Rabkin:** And is that the same as the *Problem Solving* class?

**Andrews:** *Problem Solving* was an unfortunate title, I think, but I felt obliged to make it sound like a chemist could be teaching it. So, "Oh, sure, we have chemistry problems," when, in fact, my definition of "problem" was a personal issue. [Laughs.]

**Rabkin:** So you must have drawn some students initially who were there for reasons that didn't quite fit.

**Andrews:** Well, I made it very clear. Enrolling in one of these courses is not a piece of cake. It used to be, before we did so much electronically, you had to come to the office, pick up a course syllabus, which could be nine single-spaced pages long, read the Contract of Agreements in there, write a letter of application, come for an interview, and if I pick you, which I sometimes don't—

**Rabkin:** So you were very careful to screen out students who were there for the wrong reasons.

**Andrews:** Yeah. Now, *Personal Empowerment* is in many ways a collection of practices. I see a skill as consisting of a pattern of beliefs and habits, and that we can change our beliefs and habits and become more skillful. Here is a collection of practices, things you can do that I have found have a lot of potential, a lot of power. I look for things that work. I'm an empiricist. I look for things that work.

So you take this course, you're always going to have assignments or whatever. An example: Have a meaningful experience with someone you wouldn't normally have one with. I picked that one because I have probably gained more from that one than anybody else, because I'm not a person who's particularly sociable. I tend to be quiet. So when I go for a walk, which I do every day, if I see somebody out in their yard doing whatever they're doing, I invariably, almost invariably, start to talk to them because I've got to seize on every opportunity to have a meaningful interaction with somebody I wouldn't normally have one

with. I've become much more open, much more confident, much more fluent, enjoy being with people way more than I did before, because I've practiced that.

**Rabkin:** Speaking of the plasticity of human behavior—

**Andrews:** Uh-huh.

**Rabkin:** —and tendencies.

**Andrews:** In these two classes that I'm teaching now—both of them, we quit ten minutes early, do a freewrite for ten minutes. We have a weekly paper, and the weekly papers are very introspective and can be very personal, and I'm asking people all the time to read what they wrote. People read it, and they start crying or somebody starts crying—

**Rabkin:** I have several pages here of quotations from student testimonials. Actually, this is not about the *Personal Empowerment* class, but the *Science and Human Values* class from Crown. And student after student here talks about how these classes changed their lives.

“Provides an important space for students that isn't found in many places on campus or within the university system.”

“Sharing excerpts from the book Frank is writing was a great way for us to learn healthy ways to live our lives.”

“He challenged me to become a better person in my life.”

“I learned what I want out of life. There’s nothing I would want more from a course than that.”

So it sounds like these classes really became watersheds for students who took them.

**Andrews:** I think so.

### *The Art and Practice of Loving*

**Rabkin:** And several of the students refer to your book. Maybe this would be a good time to talk about that a bit. Tell me about the book that you published that’s been around now for more than twenty years.

**Andrews:** Well, this was the first non-science book that I wrote. I wrote three books on statistical mechanics and thermodynamics because I love the ideas so much. Then there was a big gap in there. Then I wrote this book. It took a long time to write because I just kind of accumulated handouts, and gave longer and

longer handouts to students, and finally took some of those handouts and put them together and made a book out of it.

**Rabkin:** So the book emerged from your teaching over the years.

**Andrews:** Yeah, definitely. It was a struggle to get it published. I wanted a particular publisher. I had psyched them out of all of them as the one that I felt was most akin to it. Submitted the book twice to them. They turned it down both times. I paid to go to a seminar on book publishing and stuff over in San Jose. The guy liked my ideas and he said, "I'm a personal friend of the guy who runs" the book publishing place that had rejected it twice. So he took it, gave it to the publisher, and thus it got published. So I played an old boys' network.

**Rabkin:** Same manuscript.

**Andrews:** Same manuscript.

**Rabkin:** Just hand-delivered by somebody who had had an in.

**Andrews:** Yeah, sure. Yeah, it's just an old boys' network. But that's how—everybody wants books published, and so you just set up a wall. You got to get through the wall and often that's a friend.

**Rabkin:** What was the publishing company, by the way?

**Andrews:** They merged. It's now Putnam.

*The Art and Practice of Loving*. I would not have picked that title. I think I would have picked *Loving Your Way through Life*. But I didn't have a say-so. The publisher [chuckles] picked the title, which kind of surprised me. Publishing was—I can look at it triumphantly. It was a struggle at times because the publishing company did things strangely. When they got the book ready to market, they wrote a press release on it and sent it out to all kinds of radio [stations] and newspapers and whatnot and they sent me a copy. And I could have picked a student in my class at random and they would have written a better paper by far than that [press release] was. It was really, *really* disappointing. But, you know, that's bureaucracy.

There were six foreign editions at that time, and then there was a Korean edition just a couple of years ago.

**Rabkin:** Wow.

**Andrews:** Because Korea has always been, apparently, a very sort of negative country, where people tend to be negative. I think some religions in Korea are trying to get more empathy, more care, more compassion, the kind of thing that Dalai Lama talks about so much.

**Rabkin:** So the book must have done quite well if it's been printed in so many languages.

**Andrews:** Yeah, seven languages now. Yeah, it did all right. It did quite well. You never know.

**Rabkin:** What was your hope in publishing the book? What was your vision for it?

**Andrews:** Well, I saw the ideas as so powerful and I knew that they could change people's lives. There's so much negativity in so many lives. And my definition of loving is the experience of a heartfelt yes. So basically what I'm talking about are techniques for introducing more experience of yes, moment by moment in our lives, and I knew that these ideas work. So I was hoping that more and more people could learn to use them. But there're a lot of self-help books in the world. And there's a lot of wisdom in those self-help books. So it was satisfactory.

**Rabkin:** What kind of feedback do you get about the book? Like, the letter you showed me that you just received from someone in Holland—

**Andrews:** Yeah.

**Rabkin:** —who read the book in Dutch—

**Andrews:** Yeah.

**Rabkin:** —and wrote to say that it changed her life and she's using it to help change other people's lives.

**Andrews:** Yes.

**Rabkin:** So that sort of thing happens from time to time.

**Andrews:** It does. I am not an author who goes out and gives all kinds of talks because I got a job here and a family here.

The book I'm writing now is probably a little more philosophical psychology, even, than the *Loving* book. What I say is Socrates published an advertisement for the book I'm writing [laughs] two thousand years ago when he said, "The unexamined life is not worth living."

**Rabkin:** So the book you're working on now is a guide to the examined life?

**Andrews:** Yes, following Socrates's suggestion. He would like it if he were around.

**Rabkin:** And is this one coming out of your teaching as well?

**Andrews:** Oh, yeah, very much so.

**Rabkin:** Are there other aspects of your teaching of specific courses, or specific exercises you've done with students that you'd like to touch on? How about jumping, for the moment, to the courses that you taught for chemistry. Anything you'd like to say about the experience of teaching those chemistry courses?

### **The Mystery of Chemistry**

**Andrews:** I find it amazing that essentially just an unfathomable number of little tiny particles that kind of attract each other at close range and repel each other at a little closer [range] can, in the presence of transfer of energy from a high-temperature source to a cold source—in that process of energy flowing downhill that way in temperature—that these atoms and molecules organize themselves into things like trees, animals, and us.

**Rabkin:** [Chuckles.]

**Andrews:** [Laughs.] It's rather remarkable! In fact, just some of the simple things they do are rather remarkable, like fires, and all kinds of stuff.

**Rabkin:** Mmm. Say more.

**Andrews:** Well, it's easy—as we learn more and more and repeat it more often, about the mechanics of the world at the level of molecules and atoms—to then just say, well, that mechanical picture of what underlies all this takes all the mystery out of it. It's just the happenstance of  $10^{23}$  molecules jostling around, running into each other, some of them with quite a bit of energy and most of them without that much.

**Rabkin:** They're following the laws of physics.

**Andrews:** That's one way of looking at it. But tell me how the jostling of mechanical particles can lead to me looking at that picture on the wall and being moved by it. Experience isn't part of matter. You can say, well, if an electron flows from here to there, it is correlated with experience. Well, okay, correlated, but experience is totally different from matter. And experience is all we have. All the rest of it is a model we built. This could all be a movie that we're playing someplace. I mean, we build a model based on our experience and it includes other people and all this kind of stuff.

So here, at almost the most mechanical level of it, we're looking at molecules and atoms and how they interact with each other. To me, it's very interesting. And, at a little higher level, the upper-division or graduate level, the mathematics of it is very interesting. When I see a lot of derivations, "this follows mathematically that, which follows from that," I like to look at it and see what it means. Stepping back, what are we really doing here when we're setting up a line of reasoning

that purportedly *explains* something? How do we tell these stories and what's really going on? Sometimes it's pretty interesting.

For example, in what I'm doing with people, there's a lot of complaint, objection, that science has "proved" that people don't have freedom to choose, that it's what they call an epiphenomenon. It just happens to go along with a bunch of complicated chemical reactions. Just happens to. Doesn't mean anything. Doesn't play any role.

**Rabkin:** What doesn't have any role?

**Andrews:** Experience doesn't have any role.

**Rabkin:** Experience is just an artifact of chemical interactions guided by the laws of physics?

**Andrews:** That's right, yeah, that's what they say.

**Rabkin:** This is the deterministic way of looking at it.

**Andrews:** Yeah. And the word is *epiphenomenon*. It's a phenomenon that occurs, but it has no use, no utility, no value, no importance.

**Rabkin:** How does this relate to freedom of choice?

**Andrews:** Well, we *act* like we're free to choose. Like, I can assess whether I'm going to call this girl and ask her for a date, or not call her and ask her for a date. I think about it, and then I get clear, and I will it and it happens. So that experience of will, intentionality made real in the world, that moment that that happens, I experience it as a choice. These people will say, no, it's just an artifact. It was in your nature and the nurture and all that stuff. The molecules were all built up to make that choice instead of the other choice. Well, that's just an example of an idea that I get so plugged into. Sometimes I can have experiences that clarify it for me, anyway, and then I want to share them with others and jump up and say, "Ain't this great?" [Chuckles.]

**Rabkin:** So I'm thinking how this relationship to the world is an echo of the dual career we were talking about earlier: that you teach in the chemistry department and you teach these college-based courses on psycho-spiritual growth and experience. And you are, on the one hand, as a researcher, a writer, and a thinker, you're interested in the behavior of matter and all that that entails and enables, just on a sheerly physical, material basis.

**Andrews:** Mm-hm.

**Rabkin:** And then you are also interested in questions of spirit and experience that, if I'm understanding you right, seem to entail a certain amount of mystery that is not generated necessarily by all of those material interactions.

**Andrews:** Right. And for a long time, those two interests overlapped, and I did them both here. Then when I retired, I stepped away from the chemistry. Intellectually, I had stepped away long before.

**Rabkin:** And how does your scientific thinking now, your relationship with and deep knowledge of chemistry—how does that fit with your interest in the more sort of mysterious and nonmaterial aspects of the universe and of human experience specifically?

**Andrews:** I'm not sure it does. It doesn't conflict. In the absence of the particular material stuff, we wouldn't have had any life or there would be no sentience. Once you get sentient animals with experience, then the whole world of experience opens up: vision, sound, pain, ecstasy, agony. There has to be a good-bad axis. There has to be an intrinsic good-bad axis. This is an argument for freedom, we have the freedom needed to choose, that I've never read anywhere before. But if an animal is going to evolve in experience, we know that in evolution it has to evolve a little bit that way and then that way has to help it in its survival and reproduction. Now, suppose an animal had a little inkling of evolution toward experience. What would it take for that to have positive effect on its survival and reproduction? Well, first of all, it would have to have a good-bad axis. It would have to be able to assess that this is good and that's bad. Well, that's the quality of life axis that as far as we know all sentient creatures have. It is good to feel good and it is bad to feel bad, and that's the only place good and

bad enter in the world, intrinsically. There is also good and bad by authority and there's good and bad by utility, but those are different meanings.

So choosing—which is this experience that there is more than one path, each one has a certain assessment of good-bad—I choose this one over that one—a moment comes when I make that choice and that affects the world. My body, my intentions and I make a difference that way. That experience, I think, cannot be denied. Anyway, that's going to be early in my book that I'm writing now because I really like that. I think it's kind of conclusive—it won't put down the brain scientists that want to say it's all determined, but I like it.

[End 8/28/14 interview. Begin 9/1/14 interview, File 3A.]

**Rabkin:** Today is September 1<sup>st</sup>, Labor Day, 2014, and this is Sarah Rabkin. I'm with Frank Andrews once again in his office. This is our third oral history interview. And, by the way, we are sitting on a very comfortable couch in your office, Frank. Can you tell me where this couch came from? Does it have a history?

**Andrews:** Yeah, it does. Tony Fink was a professor of chemistry here, who died not too long ago. They were, I don't know, renovating their house or something a long time ago, long time ago, and they decided they didn't want this couch, and they were going to put it out, and somebody could take it. I don't know how I heard about it because I wasn't especially close to the Finks, but I heard about it

and liked it. It's so much better for talking to students. Because this formal—I'm sitting over here in my chair and they're sitting at someplace— This is comfortable, and it invites people in, and lots of students express that they're kind of amazed that anybody has one and they like it.

**Rabkin:** It changes the hierarchical relationship, it seems to me, when you're both sitting together on a couch.

**Andrews:** Yeah.

**Rabkin:** Thank you. It's fun to think about this couch—

**Andrews:** Many years ago I was invited to do a study, to go and visit a chemistry department in a small public college up in San Jose. So I was doing the chemistry department, and when I went into the first office of a faculty member—they were quite small. There was room for a desk and a couple of chairs, but there was no chair for the student, and that was true with all the offices for the faculty in chemistry in that college, that there was a seat for the professor and a desk and room for a chair but no chair.

**Rabkin:** Did these professors hold office hours?

**Andrews:** I don't know. Probably, but you wouldn't want to stay very long.  
[Laughs.]

**Rabkin:** By design, perhaps.

**Andrews:** I mentioned that as I thought it was a problem. [Chuckles.] I have no idea whether they got chairs for their students after that.

**Rabkin:** So we wanted to go back and pick up a thread from an earlier interview, which we never really finished out to its end, and that had to do with your time in the military and that fateful moment when you were assigned to domestic duty rather than being sent abroad. There was half of your cohort that was indeed sent abroad and we didn't talk about the ultimate outcome for them.

**Andrews:** Okay. I didn't know anything about what happened to them until I'd been here at Santa Cruz for some time. Well, not too long because it was in that first decade. I was going to a meeting of a statewide Academic Senate committee and there was a guy there who recognized my name and then me. Came over and introduced himself. He was a professor at UCLA. He had been in my class for the CIC, for the Counter Intelligence Corps. This is a guy who subsequently became the president of the whole UC system, so this was nobody who just spread foolishness.

He said, "Did you ever hear what happened to the people who went abroad, who'd asked to stay in the States and were sent abroad?" I said no. And he said, "Well, they were sent to Korea, and they were given an assignment"—and the assignment just appalled me—"to recruit espionage agents in North Korea."

These kids were white, English-only-speaking, just-out-of-college-guys. And he said, “As far as we can tell, of the fifteen who went there, at least thirteen were caught and tortured to death.” It’s the kind of information that can wake you up: Maybe I’d better really grab ahold of this life and live it because I’ve got that chance and they didn’t.

**Rabkin:** And you very nearly did not.

**Andrews:** [Laughs.] I asked for “not”! But—

**Rabkin:** That’s quite a story. Thank you.

**Andrews:** Mm-hm.

### **More on *Teacher on the Hill***

**Rabkin:** I also wanted to follow up from our last interview on the issues of *Teacher on the Hill* that you sent me home with. I’ve been reading them and in some cases rereading them, and I am so impressed by the richness of the material there. Among other things, it turns out there was a regular poetry feature in that publication. Usually David Swanger had a poem.

**Andrews:** Mm-hm.

**Rabkin:** There were quotations from all over the place and I was also impressed by the production values. It's a very handsome little publication. You had mentioned that there was some kind of clerical/editorial support for the publication.

**Andrews:** There was. The campus hired Lee Jones to be supportive, so I could talk to her and turn things over to her and she would produce each issue.

**Rabkin:** I also noticed lovely graphics in the publication, and in particular the masthead or the heading, the title graphic, is a very amusing little picture of a professor on a mound on the hill, looking across at another mound, from which a ground squirrel is poking up.

**Andrews:** [Laughs.]

**Rabkin:** Do you remember who did that artwork?

**Andrews:** I don't know.

**Rabkin:** It's very whimsical. So anyway, thank you very much for that, and we will make a note about *Teacher on the Hill* in the transcript.

### **More on College-Based Courses**

I would also love to hear you talk in a bit more detail about your college-based courses, specifically some of invitations and exercises that you offered to the students. We talked last time about one where you had everybody engaged in an encounter with somebody they otherwise would never have made contact with.

**Andrews:** “Have a meaningful interaction with somebody that you wouldn’t normally have a meaningful interaction with.”

**Rabkin:** Thank you.

**Andrews:** Yeah. “Encounter” makes it sound a little argumentative.

**Rabkin:** Mm-hm.

**Andrews:** If you do that routinely, you can change your basic life from kind of shy and a little retiring, to walking with confidence into a new interaction with somebody because you’ve done it so many times.

**Rabkin:** And you’re speaking from experience.

**Andrews:** You bet. Because, boy, I don’t believe in giving assignments to people that I don’t do myself.

**Rabkin:** Can you tell me about another assignment?

**Andrews:** Well, one thing I want to say, just to start with, and this is not an unusual assignment. It's a very standard one and it's so powerful and has so much potential that I want to talk about it. Because if somebody's looking for a way to start meetings, like a little support group or something like that, and doesn't feel confident that *they* know a whole lot of psychology— What I've always been able to rely on as kind of a basis for any of these courses is not these exercises but having people read one or more books that I have found work for this kind of thing—there are so many great books out there in this business. As they read them, they write about them, very personal writings, and read the writings and talk about them in class. What does it mean to *me*; how does this impact *my* life? We talk about that, get the level of safety up to a point where people can cry their heart out and be supported by the other people in the group and have it not appear to be a bunch of psychotics. It's just normal neurotic people, sometimes unhappy people who are blocked from fulfillment, frustrated, not knowing how to cope with the challenges of life. And we can support each other. And that, I think, is not a specific kind of exercise.

A specific one that comes to mind: write about a block, a problem area of yours that causes you distress or stress, and you feel blocked there or something. Write about it (and I give a few details), but be sure to give how you feel and what you're thinking. Then the people pair up outside of wherever it is and they have fairly long meetings together and they take turns. One person will read this—it's

not too long, one page, maybe—they'll read it, with the other person listening to it, and then they read it again, and then they read it again, and they read it again, and they read it again.

**Rabkin:** Over and over.

**Andrews:** And people find that instead of amplifying the emotions, the emotions begin to trivialize a little bit, and they begin to fade away in their importance. Nice. It works. It often works. Do this at least sixty minutes, preferably ninety. When the first person has completed, it's the other person's turn.

Here's a commitment: At least three times each week, have a great day. Pick a day in advance, and make it into a great one. That's the assignment.

**Rabkin:** [Chuckles.]

**Andrews:** No help told on how to do that, but people can then share. It changes the life from passively receiving what comes, to playing a role, stepping out there and playing a role in what my life will be.

Ask a favor of someone you would not normally ask for one. And if that's at all hard for you, do it often, several times a week, even.

**Rabkin:** What's the thinking behind that one?

**Andrews:** So many people are so scared, who assert they're going to do it wrong, they don't deserve to have what they want, they're going to be put down, it's not appropriate, they're a woman, they're stupid, they're whatever it may be. The other side of this assignment is to decline someone's request of a favor. Some people feel like if someone asks me for a favor, I have to give it to him; otherwise I'm a shit.

[rustling through old course syllabi] Oh: When you loan something to somebody and you haven't got it back, get it back. [Laughs.] And return anything that you have of somebody you borrowed [from].

**Rabkin:** So returning things you've borrowed, getting back things you've lent is about completing unfinished business, tying up loose ends, taking responsibility for your ongoing life.

**Andrews:** Yeah. I call it listening to your voices, the voices in your head. And each person has a week, at least, to prepare for this. So you're going to find an area of your life where you would like to make real progress. Then come up and write out a specific commitment you could make that would represent real progress. Then come up with three or four voices, statements, that come up as soon as they hear your commitment, "You can't do that because," something like that. "You're too this" or "It's impossible," whatever. Write them down—let's say four of them.

Then what we do is we make groups of about five people. And in the group people are going to take turns, and one person will explain briefly their problem area, the commitment that they're going to make. Then that person assigns one of the voices to each of the other four people. Then you get in a huddle and the person makes their assertion. And when they finish making their assertion, all the voices start talking at once.

**Rabkin:** So this would be the critic, the shaming voice—

**Andrews:** Mm-hm. The “You’re too dumb” voice, some voice from your mother from when you were a little kid: “You never do anything right.” You know, “You’re too fat,” “You’ve got zits on your nose,” “You’ve got”—oh, God.

**Rabkin:** So the person making the commitment assigns these voices to the other people in the group and tells them a little bit about what they should be saying.

**Andrews:** That’s right. So they don’t have to repeat it word for word. They can be a little creative. And all the voices are going at the same time. So then the “it person” just listens to all this. Then we’re going to spend at least ten minutes on this, maybe twelve minutes, something like that. I don’t know. I give warning and call it when the time is up.

And then the person—all four voices are still going. You come up to the first voice and rebut it while it just keeps going, and everything else keeps going. And

then you go on to the second and listen to theirs; rebut it. Listen to this, rebut it. Listen to this, rebut it. Come back, listen to the whole thing for a little bit, and then go around and stick your head in between each pair of shoulders because you get a different take on these voices from the different vantage points around the circle. And then come back and thank the voices and make another firm commitment and thank the voices again and move on to the next person.

**Rabkin:** So it's as if you're sort of defusing them.

**Andrews:** Mm-hm.

**Rabkin:** You let them have their say, and then you go on about your business.

**Andrews:** Right. And this practice has a lot of power. Serving as a voice is useful because it's a role that you're consciously playing, and you're consciously playing it to cause suffering and blockage in somebody else, and yet you do it with yourself. So it's a good way to have that experience.

**Rabkin:** So it teaches you something about your own self-undermining tendencies.

**Andrews:** Yeah.

**Rabkin:** And for the person who's listening to those voices, it's useful because?

**Andrews:** There's that voice, rattling away again. I don't have to listen to it. I don't have to take it seriously. I can just put it out of my consciousness.

**Rabkin:** Take some of the power from it.

**Andrews:** Yeah, right. God! Come on. I've lived with this ever since I was fourteen, and, man, I'm ready to quit. That one works really well.

**Rabkin:** Anything else about how you run or shape or organize the groups to make them feel safe? For example, you started out by saying, well, a very powerful key is just to have people reading texts and then talking about them together. Well, many, many classes do that, but they don't always end up developing a sense of deep safety with each other.

**Andrews:** Mm-hm.

**Rabkin:** So I'm thinking maybe there's something else going on.

**Andrews:** Well, people know that the course is designed for folks to bring up the issues that are causing them trouble, talk about them. They've read all this and they know what these practices are going to be. And they're in there by choice. So the people I get represent a very carefully self-selected group who see themselves as going to benefit from this kind of activity.

Now, there're a lot of students who I think if these kinds of things were available, they would end up taking advantage of them. You wouldn't have to get credit for it. Whatever.

**Rabkin:** Do you end up with any students who think they're just going to have an easy time of it and get credit for it?

**Andrews:** Pretty rare, because it's a ten-page syllabus with virtually everything laid, spelled out. In a group of fifteen, there's usually one or two who don't really engage, but a lot more than that who really engage.

**Rabkin:** You also served as the administrator for Merrill College in charge of dorms and dorm life for several years, which was another opportunity for interaction with students. I wonder if you want to tell any stories about that position.

**Andrews:** Well, you know, we'd lived in a dorm for five years and had a sense of the kinds of issues that come up. And they came up. Mainly it's listening to people and seeing if something *can* be done to alleviate an issue, and often it can, very easily. You know, some noise is bothering me, or whatever. The Merrill bell rings all night long. [Laughs.]

**Rabkin:** Tell me about that.

**Andrews:** Well, we were living in Rutherford House of Crown when our first child, Karen, was born in early September. The night we brought her back from the hospital—and our room was right next to Merrill College, where the clock tower was and they had just installed this clock with a loud noisy bell. And while we were bringing her home, they got it going, and its bell was going off after every hour. They didn't know how to turn it off. So twenty minutes after every hour it went off loudly. The weather was warm, and we had the windows open, of course. God! And that went on—they couldn't figure out how to turn that off for months. [Laughter.] They may not have tried very hard.

**Rabkin:** I imagine there were a lot of irritated students.

**Andrews:** Yeah, the students eventually stole the bell and hid it, and refused to tell the administration where it was until they were promised it would be turned off.

**Rabkin:** In addition to the new parents.

Wasn't there also some incident with a student protest at Merrill in the early days?

**Andrews:** Oh, yeah. Noel King was in authority at Merrill at the time. Something happened on campus and the campus didn't do what some students wanted them to do, whatever it was. It was some great cause. So they were

having a strike or a sit-in all over the campus. And some Merrill students decided to pitch tents and bring blankets and stuff up in the Merrill courtyard, the quad, or whatever. After this had gone on a day or so, I think the administration put out some statement about it and sent it down to the colleges. So Noel came out with a loudspeaker, and he said, "Attention! Attention! It has been brought to my attention that it is contrary to the regulations to have an erection on campus! And all erections must come down and stay down!"

**Rabkin:** [Laughs.]

**Andrews:** That caused considerable amusement.

**Rabkin:** (laughs) You think it was deliberate on his part.

**Andrews:** I think it was, knowing Noel King and his wonderful British humor.

**Rabkin:** One way to defuse tension.

**Andrews:** Uh-huh.

**Rabkin:** Well, you've worked with so many students over the many decades of your career and I'd like to ask you about whether you've observed the trajectories of any of their post-college careers and anything you'd like to say about that.

**Andrews:** They often keep me well informed. I am not a good correspondent after people leave the campus. I think my excuse is that I put in enough time with students who are actually here that I just don't follow up much. Sometimes they follow up with Jeanie, my wife. But there's Mike Morgan, this schoolteacher down in southern California that wins all these prizes and hardly six months goes by that some of his students have not won some prize for something and he get prizes for educating them. My God! Nationwide competitions and all that stuff. Turn anything into a competition. But he sure loves it and his students seem to.

**Rabkin:** This was a chemistry student?

**Andrews:** Yeah, Mike was a chemistry student, and he teaches high school chemistry, although he took all my non-chemistry courses.

**Rabkin:** And what has he said about his experience after college? Has he talked to you about how he's succeeded?

**Andrews:** Oh, yeah, and he's very effusive about how it's all my teaching and so on.

And there's a girl right now finishing up a master's in religion at Harvard, who—I don't want to talk about the details—but she needed some parenting by a man because her male father figure was, shall we say, well, horrifying. [Laughs.]

Yeah. There's a lot of this. And a lot of my classes continue in e-mail communication for, oh, a decade or more after they graduate.

**Rabkin:** With each other.

**Andrews:** Yeah, with each other.

**Rabkin:** So you set up a list for them to keep in touch with each other.

**Andrews:** Oh, they all have that immediately. When they go into the class, they all have that because I send out communications to them, the whole group of students. They can push the button and it zips into their To box.

**Rabkin:** And do they copy you on their correspondence with each other?

**Andrews:** Sometimes, but they know that I'm not into this kind of thing, and I'm not curious. I figure if I get to doing something that they don't like, I'll hear about it.

**Rabkin:** Frank, we have not talked about your research. Would you like to say anything about that?

**Andrews:** The statistical mechanics of fluids, compressed fluids, liquids and stuff—I love the ideas. I love the math. I love the fact that all these little

molecules made of atoms can—you know,  $10^{23}$  of them; that's a lot of them—they can do such amazing things as everything around us, all this life and everything. I like the math. I am more of a pedagogue than a researcher. If you took a collection of the copies of the various publications that I've written, I think they're not going to turn you on wildly. I'm more interested in niceties of explanation than creating something.

Once I got out of using my time on science and brought it over to personal empowerment and psychological unblocking, my theories—I'm now a philosophical psychologist, and there have been a lot of good ideas. And it's not a competition to see who comes up with more right answers.

I have been busting my ass for ways to explain, to relatively simply understand the challenges of living. I think I've done some worthwhile stuff. The book on loving—I think just the fact that it addressed the word *love* or *loving*—because that word is used in so many ways, and so many of those ways—it doesn't help people; it hinders people instead. We'll find people saying to their therapist, "I don't know if this is real love. If it is, then I'll have to stay in the relationship, but if it isn't, the fact that he treats me like shit is a reason I would leave," and oh, my God! If you just can decide is it real love, flip yes; if it's not real love, flip no. That's a horrible way to make decisions. [Chuckles.] But in some cultures, that's the way you make them.

So I've grabbed ideas, tied them together, grabbed them from all sorts of places, presented them to students. I'm writing another book, which I'm very excited about, which, again, picks certain aspects of understanding how we live, picks them over others, because with them, I have found, people can get useful control over their lives. It gets them leverage rather than just an understanding, like "Oh, my God, yes, that's what it is."

And psychology, I like cognitive behavioral psychotherapy, positive psychology, that kind of stuff. You could say that what I'm doing is positive psychology. If you say it that way, it seems to fit a university. "Positive psychology"—oh, sure, that's a— If you say "psychological unblocking," that's a little more questionable. If you say "psycho-spiritual growth"—oh, my God, this is superstitious nonsense.

**Rabkin:** Mmm.

**Andrews:** But I spend a lot of time figuring out how to understand some basic stuff of living in a way that makes me feel like: Ah, I now understand it, and I have some control over it.

**Rabkin:** Have you made connections over the decades with other faculty members at UCSC who are interested in these kinds of questions?

**Andrews:** Yes, a number of them and I think they've all decided it wasn't worth their while. I'm not quite sure. None of them has talked to me about why.

**Rabkin:** So you had some collegial connections around these questions and these subjects that at some point fell away.

**Andrews:** Yeah.

**Rabkin:** Uh-huh.

Well, it's occurred to me that you have been at UCSC almost as long as UCSC has been around. Not quite.

**Andrews:** Missing two years.

**Rabkin:** Coming close to half a century now.

**Andrews:** Mm-hm.

**Rabkin:** You've seen a lot of changes in the way teaching gets done and in the way the institution organizes itself and I wonder what observations you might like to share about those changes as UCSC goes forward.

**Andrews:** I don't know what of this I have said to you previously. When a young professor comes, takes a job at UCSC, which is part of the University of California system, the University of California is a research university. And if a professor came here turned on by the unique opportunities to teach in ways and teach subject matter that they never thought they'd be able to do, there's likely to grow up a respect for that because everybody knows from the students what's going on in the various classes.

But the University of California has one criterion for Step 6 full professor, only one, and that is international fame in the discipline. So it's fame, and it's international, and it's in the discipline, an academic discipline. And when you go off to meetings, UC meetings from all the campuses or other things, and talk to people at the University of Wisconsin or wherever, the push is always toward fame, toward your image, your reputation as a researcher.

The teaching? The kids come in saturated with learning facts, learning facts so they can take standardized tests. A lot of them recognize that they don't like it, that there is something missing. The five reasons why this— But it's the pressures to have some general agreement on academic standards: What's the difference between very creative and freedom-filled teaching, and incompetent teaching? How can we tell one from the other if we don't particularly want to?

And the people who make the decisions are usually older faculty. They have proven that they have the values of faculty. I was chosen to be chair of the

Committee on Educational Policy for, I don't know, three straight years or something like that, starting back in about the second year I was here. And I would work because there were a lot of people in the founding campus that believed in the same thing I believed in, and we agreed on that. We made it work, we were happy for it, and we attracted students who wanted it. But when push comes to shove: how much research grant money did you bring in last year, especially if you're in the sciences.

We could not sustain it. We're going to have some little subgroups within the campus always, I think, so that it won't go away. But it will be quite different from what it was. If you're teaching a class of twenty and contemplate writing a narrative evaluation for each one, well, you can remember specifics. If you take down some notes about their writing and about what they do in class, all that kind of stuff, you can make a very meaningful and rich narrative evaluation. But if you got 150 people, it's three midterms and a final and that's it.

**Rabkin:** So you see a change in attitudes toward pedagogy or a less exploratory relationship with pedagogy than in the early years of the campus?

**Andrews:** Definitely I see that. Now, it could be that—I mean, we always had some very conventional teaching going on. I may have exaggerated the unconventional teaching because it was what we were talking about the most.

**Rabkin:** Are there other changes on the campus that you have strong reactions to?

**Andrews:** Well, what do we have, 20,000 students now? “College” probably doesn’t mean a hell of a lot except it might be a dining hall. Maybe that’s okay. I don’t know how we can create a continuing atmosphere of caring, of appreciating, of collaborating, openness, honesty. [pause] I don’t want to get too negative.

**Rabkin:** Mm-hm.

**Andrews:** It’s possible to get very negative.

**Rabkin:** Well, those are useful questions, I think, a useful note to end on, to be raising those questions.

**Andrews:** Yeah.

### **Final Thoughts**

**Rabkin:** Frank, is there anything else you’d like to say about your career as you look back on it and your time at UCSC? Not that it’s over yet.

**Andrews:** [Chuckles.] I was fortunate beyond belief—every aspect of my life, the way it ended up, ended up wonderfully for me. Sometimes little things that

didn't appear to make any difference at all led to something wonderful. If it had been a tiny bit different, I would not have been here. I would have been someplace else. I think this is probably the only place in the country that I know of that I could have done what I've done.

I'm very grateful. I have, in the last few years, cultivated a practice of gratitude, where I'm speaking gratitudes silently in my head, and it works. It's incredible. I think it's just amazing. It goes one beyond having a positive attitude or appreciating. Gratitude is much more powerful. It acknowledges that there's something there that can be appreciated but then it goes further and expresses gratitude for it being in your life.

Psychotherapists have found that for many people, really the most powerful assignment they can give is to keep a daily gratitude journal and every day write down something that you're grateful for. It changes your approach. It's a different context for living when you can say "thank you" or "thank you, God" or whatever it is you want to say. And when you say it over and over again, not only do you perceive the world, life differently, but my experience and a number of other people that I know who are doing this is that doors open that wouldn't have opened otherwise. It's like the world gets behind you and gives you a boost.

That is one of the most important things I've learned about personal empowerment. The other, and probably most important thing, is that all human

beings go through life hypnotized. And that's a very powerful subservience to the hypnotist, which is the voice in their head that they call "my thoughts." This realization came into Western psychology about fifty years ago, and it's made a huge, huge difference in the effectiveness of therapy. It suggests that all of us practice positive self-talk. If you're going to hypnotize yourself, and you're going to, choose what you're hypnotizing yourself with.

Just learning those powerful tools, practicing them, teaching them and seeing other people use them—it's an incredible blessing, incredible opportunity.

**Rabkin:** Speaking of gratitude, you told me earlier, before we turned on the recorder, that you wanted to be sure to mention your wife.

**Andrews:** Yes! Almost everything I share about what I've done—my ideas, my interactions with students—have been made possible with the collaboration of my wife, Jean. She's a people person. She loves people. She loves to talk. She loves to get to know people. I think if I had had any other person that I've ever known as my wife, I just couldn't have done it, that's all. We came to Santa Cruz, and we moved into Crown College in the dorm. How many people are married to a partner who's willing to do that? And then, when they get there, to open the doors of the apartment to students, day and night and every Sunday morning serve them breakfast? I mean, just amazing.

**Rabkin:** So she's very much been part of your career here.

**Andrews:** Absolutely. Absolutely.

**Rabkin:** Essential.

**Andrews:** Yeah, another area where I was incredibly fortunate. Have been. Still am.

**Rabkin:** Well, I want to thank you so much, Frank, for taking the time to do this and offer you a chance to say anything else if we haven't covered the territory.

**Andrews:** Well, I sure appreciate your being here and the care you are taking in this.

**Rabkin:** Thank you.

## **Appendices: Excerpts of Sample Syllabi for Some of Frank Andrews' Courses**

### **Merrill 120, Personal Empowerment, Winter 2014**

This is a cross-disciplinary course on: Personal Empowerment, General Problem-Solving, Psychological Unblocking, Creativity, Goals, creating Community, Wisdom, Meaning and Richness in Life. Much of this course is devoted to individual goal-oriented behavior, or what is often called problem-solving. How people identify, take on, and move through their problems will be considered through intensive personal scrutiny, exercises, and reading, both in class and outside. The purpose of the course is for us to experience more control over our lives, to choose and solve problems which lead to our own long-term satisfaction and to the enrichment of our society, and to create and experience community and mutual support. The course is of professional value for people who plan to be counselors, teachers, administrators, problem-solvers, or who wish to cultivate their creativity.

The following topics will receive special focus: Problems, purposes, and goals; Meaning in life; The origin and cultivation of emotions; Languages, model-building, and reality; Thinking and creativity; The steps of solving problems; Common blocks and techniques of unblocking; What's it all for, and how do you experience appreciation, caring, community, concern, delight, enthusiasm, joy, sensitivity, surrender, and wonder in the process of it all

READINGS: From the Bay Tree Bookstore: *Writing Down the Bones*, by Natalie Goldberg, *The Art and Practice of Loving*, by Frank Andrews, and *Meetings at the Edge*, by Stephen Levine. You can get my book free in electronic form or bought in paperback from [heartfeltyes.com](http://heartfeltyes.com). Get used copies from Amazon.com.

IMPORTANT NOTICE: This course is intended for people of all majors who are doing well and want to do better. It is not a course in psychotherapy and is not designed for people who want psychotherapy. If you are currently in emotional distress, in

psychotherapy, or taking psychoactive drugs by prescription or recreationally, we must discuss it at the time you apply for the course.

Enrollment is limited. Admission is by permission of instructor on interview and written application from the student. You are admitted when I give you the course number needed to enroll. Please read this information sheet and get all your questions answered by me so you can make a clean decision either to request admission to the class or not to. If you are admitted, you must attend the first class meeting to hold your place. Do not apply if you don't intend to take the course seriously and spend a full one-third of your academic time on it! Please apply only if you are willing to use anything and everything that comes up not to find fault, but for learning and growing. Don't waste the first month of a 10-week class passing judgment on whether the course is worth your commitment.

GENERAL PHILOSOPHY: If this course leaves you with the habit of self-examination and gives you powerful tools for that examination, it will have proved one of your most valuable classes. Use all the work, the reading, whatever happens in class, how you respond to anything in your life throughout the term, as grist for the mill of the course. The responsibility for the outcome is yours. You may well find yourself bored, triumphant, angry, disgusted, excited, whatever, by things that happen in class, in the reading, or in the exercises assigned. Just notice how you are reacting and go ahead and do the assignments anyway, and share your thoughts and experiences with all of us! Use the class and this term as a microcosm of how you run your life. Learn from whatever happens.

DO THE WORK OF THE CLASS, WHETHER YOU WANT TO OR NOT. People stop themselves from growing and succeeding by giving away their power in favor of what they want or don't want. It's OK not to want to do the work of the course, but do it anyway, confronting the barriers and distractions that will come up.

READING: I will announce when the readings will be due. Be sure you have read them by then. If I distribute a handout in class, please read it by the class meeting after it is handed out. Be sure you get the reading done by the deadlines. This is a course in

overcoming blocks. So when you come up against your habitual blocks push through them. Use the help of the class, if need be. We could build a whole course around any one of the books, and many of the ideas and practices take effect only after months or years of practice. Remember that the value of this experience is not measured by where you are ten weeks from now, but by the quality of your life and what you accomplish in the years ahead.

The assignment when reading is not the usual understanding or remembering of the material. It is to read each reading by the date due with the strong aim to get what you can from it. Note that is not to judge, evaluate, agree, disagree, or criticize. Watch how you use negative judgments of parts of a book, or of an author's style (e.g., don't like it, jargon, sexist language, old fashioned, etc.) to write off the author as a loser with nothing to say to you. Know that everything life offers you will have its negative features as well as its positive. Learn more than just from the content of the readings – learn about yourself from your response to the readings. Notice if you get righteous about your personal judgments and see if you're willing to bring it up in class.

If you are admitted to the course and have time over December break, I suggest that you read either *Writing Down the Bones* or *Meetings at the Edge* or both of them before the winter quarter starts. I'm finding that many students end up taking incompletes in the course because of the workload. And spring term is no time to be finishing up work from winter!

JOURNAL: Great numbers of people have found that keeping a self-reflective journal is, by itself, a way to transform their life. The journal that is part of the course is an important part of the experience. As you do the readings, as or after you do exercises in class or out of class, as you reflect on the events of your life, write your reflections in the journal. Write almost every day — by so doing you will create a relationship with journaling that is far more powerful than what you would get from, say, weekly journaling. Your journal is your scratch copy; don't re-write anything just to turn it in, regardless of the mess. If you want to make changes, leave the first version, so you can still read it, and make the changes on a separate sheet. The journal should be a complete

record of your work and written reflections arising out of the course experience. Please begin keeping it immediately.

I want to read your journals. This will motivate you to do and reflect on the work of the course. This is hard motivation to come by in our society. Rarely do people give a damn what we do. I walk to and from campus from home carrying your written material in my pack, so please take the current pages out of your notebook or photocopy them for me. Please give me the new pages you have written as you write them, i.e., on most of the class meetings (and at the very least every week). [Note: If there are parts you don't want me to read, either write a note to that effect at the top of the page(s) of private material, or tape or staple another sheet over the private areas. I will make no attempt to read what you don't want me to, and I will respect the confidentiality of all the material in your journal.] I intend to return your pages to you at the next class meeting after I get them. I may write comments on some of them, and I may just put a check mark to indicate I read it. If you want comments on particular parts, request them and I will be sure to write them. You are likely to find that reading through your journal from time to time is a rewarding process.

WHAT TO WRITE? The first rule is write anything, but write. "You cannot stray — the path bends with your feet." Go for quantity, not quality. Watch perfectionism block you from getting started. And learn from it and overcome it. Watch yourself procrastinate. And learn how you do it and overcome it. Never beat yourself up for writing anything. Date what you write. Work toward feedback. I.e., when you finish and read something over, write, "When I read this over, I feel ——." Dialogues are good to write, e.g., regarding any problem. Write out a dialogue with the problem, or with yourself, or with any other person(s) involved, or with society or events or your body. Sitting at the notebook (or keyboard) with pen in hand draws things out of you that you wouldn't guess were there. You can consciously choose the orientation of your writing to draw out what you want. I will assign writings from time to time. Be guided by Natalie Goldberg's book, *Writing Down the Bones*, which is not only a book on writing, but also a superb metaphor for living.

One last suggestion. People tend to write about events and their feelings about events. Their style suggests there is a mechanical connection between the two – that we are here on earth to go through a set of motions dictated by circumstances, feeling the way the circumstances dictate. Life, however, offers more than that.

The Whiskered Guru,  
The cat snores softly;  
I ask him/her, "Why are we here?"  
S/he yawns and stretches.

(Sorry that English pronouns are all gendered.) What do you think s/he meant by this answer? When I wrote the poem, I assumed that everyone would read it the way I did, but that is by no means the case. (One former student tattooed that haiku on her body, to give you a sense of how much people can create out of all this.

A powerful strategy for turning your life into a learning, growing process is to live life deliberately as a process of discovery and intention. So in concluding a journal entry, ask yourself, "What can I learn from this?" You can learn about yourself, others, and the world from anything. What it takes to learn is the determination to learn. You can practice scanning events and your response to them with the strong will to see lessons. Thus you "discover" the lessons in life (Or maybe you "create" them. It makes no difference.) Each of us lives a life that is incredibly rich in lessons, tailored precisely for us.

Words can be more than just talking about something. Certain words are actions, not symbols. If you promise something, commit to something, the act of saying or writing the promise is the promising, or at least the formalizing of the commitment. So couple your discovery statements with intention statements. These don't have to be big intentions. Make them specific and checkable: "I intend to strike up a conversation with one new person before I go to bed tonight." "I will pass up dessert at dinner." Mark your intention statements so you can quickly find them later, to see if you held to them. If you did, then acknowledge yourself for your success. If you didn't, then use that as an opportunity to learn, and recommit – not as an opportunity to beat yourself up.

**FIVE PROBLEM AREAS:** Immediately choose five problem areas or issues in your life that you want to focus on throughout the course. These will give you concrete directions for applying the generalities from the reading and class. I've listed below a few of the problem areas some people have used, just to stimulate your thinking. List genuine problems or goals of yours. Choose the most important ones in your life right now. You can, of course, keep the nature of some of yours to yourself.

**ASSIGNMENT:** Bring a list of your problems to the second meeting of the class. By a week into the quarter, write out and turn a thorough statement of each of the problem areas.

It will be most useful if you choose a variety, since techniques appropriate to one kind are not necessarily useful with another. These areas might relate to academic, social, or romantic or sexual life, to family, job, leisure-time, money, physical health, or vaguer areas of concern, anxiety, stress, or challenge. You are likely to find that you will work a lot on some of these areas, not much on others, and that new areas arise to occupy you during some of the term. Examples:

Changing a Habit. Being late, overeating, over-smoking, over-drinking, under-studying, speaking too much or too little, under-exercise, procrastinating, quitting, failing, sexual performance, excessive drugs. These often represent conflicts between long-term and short-term motives.

Communication Problems. Hiding truths, unassertive, resentful.

Unwanted Feelings. Depression, anger, anxiety, tension, shame, boredom, pressure, worthlessness, meaninglessness, fear, guilt, ugliness, unlovableness, futility, embarrassment.

Unclear Motives. What am I doing here, what to major in, how to spend leisure time.

Skill Problems. Coursework, music performance, paper-writing, mathematics, chess, baseball, taking examinations, getting money, loneliness, coping with changes (like leaving home), time pressure.

Relationship Problems. Parent, roommate, sibling, romantic partner, friend, child, other relative, coworker, boss, teacher, employee, pupil.

Others. Something you want to have, to become, to change, to affect, to do, to experience.

Success in this course will depend on your willingness to work at the (extensive) assignments and to share your insights and frustrations in class and in writing. Assignments and exercises are likely to cover a wide spectrum including the interesting and relevant, the boring and irrelevant, and the downright obnoxious. All will be valuable grist for the course, which is designed to heighten your self-awareness while you learn to make self-awareness a tool for life-long growth.

You can expect to probe your own motives for all aspects of your life and for your future plans. You can expect to do a lot of reflecting and journal writing. You should plan to give this course the 15 or more hours per week that would represent 1/3 of your course load this term. You can expect your normal ways of responding to stimuli to be challenged so you experience greater personal control over the quality of your life and over your actions.

Class meetings will be directed by the instructor. They won't be typical seminar meetings in which the game is to kick ideas around. Our game is our mutual growth. They won't be encounter groups in which people emote at each other and are left raw. There will certainly be emotions expressed during class meetings, but they will be grist for our mill of self-observation. Join the class only if you will be here to support each others' growth. I intend to bring emotions to closure by the end of each class and use them for the growth of us all. The personal nature of the course makes evaluation of student progress difficult. I dislike having to assign letter grades for this course. Narrative evaluations will be based on the journal, class participation, and your own

self-evaluation. The narrative evaluation can not possibly capture the most important elements of the experience.

### Contract of Agreements

Human interactions are generally conducted under sets of agreements designed to benefit all the people involved. Usually we don't make those agreements explicit. Thus, different people have different senses of what the agreements are. This can lead to trouble. In our culture people don't appreciate the importance to their lives of making clear agreements and then keeping them, whether they want to or not. Often we go along in the spirit that if you don't mention my broken agreements, I won't mention yours. We've not been taught to abide by, argue for, and believe in OUR decisions. We play social and business games, but refuse to play them wholeheartedly. So we hold back and sabotage ourselves.

How do agreements work? When we are in touch with our motivation for some enterprise, we willingly agree to all sorts of things. But later, when out of touch with that motivation, we don't recreate the feeling that led to making the agreement in the first place. Then to what do we give allegiance? What is the final arbiter of our behavior? Too often we let that be our immediate feelings or our wants. When we are lost in the seas of circumstances, feelings, and wants, the only rudder we have to keep on course is the fact that we gave our word. We made an agreement, either with our self and/or with someone else. So we can let the final arbiter be our word, our commitment. By strengthening the power of our word, we stay on purpose and give our life thrust and direction.

This course is conducted under an explicit set of agreements. Each person's keeping all of these agreements is essential for full benefit to be realized by everyone.

1. I freely choose to be in this course, and take that choice seriously and am responsible for keeping my contract of agreements.

2. I embrace the purpose of the course as the personal empowerment of every member of the course. I will work hard to assure my own growth and will support all members in their own. I agree to ask for support in keeping my agreements and to give that support to other participants.

3. I will attend all class meetings, on time, and stay until class is over. Class is scheduled for a full 110 minutes, and Frank intends to end each class by the scheduled ending time. If it is after that time and the class is still going on and I have another pressing activity, I am free to leave.

4. I will bring paper or a notebook to class.

5. I will notify Frank and/or the class in advance about any previous commitment of overriding importance, which I choose to honor, rather than attending class.

6. I will notify Frank and/or the class immediately of emergencies which prevent my attending class. I will do this responsibly, aware that I have agreed to attend and my absence will make a difference to everyone.

7. If I miss all or part of any class, by the next class I will find out the details of what happened from another class member and learn and complete any assignments that were made.

8. I will treat what people share in class as private communications, never to be disclosed outside class in a form that could lead to identification of the sharer with his/her communication.

9. I will do the assignments when assigned. That includes keeping the journal on most days and turning it in regularly, at least once a week.

10. At the end of term, I will write a thoughtful retrospective reflection on my experiences and growth from taking the course.

11. I will handle whatever complaints I may have by communicating them to the person best able to do something about the situation. If about the class, this is likely to be Frank. If about some class member, it is that person. I agree not to complain or criticize to someone who can't do something about it.

12. I agree to be responsible for my own emotions and feelings in this class, and not to blame them on others. I agree to create value for myself and others out of what happens.

13. I acknowledge that there will be no guests or visitors to this class, other than (very unlikely) people Frank may invite to come as professionals.

14. There will be no final exam in this class. We will have a final potluck meeting, perhaps early in finals week, at a time that hopefully everyone will be able to attend. I will come to that meeting if at all possible.

15. I will take risks and expose my secret and embarrassing problems – in the writing exercises and verbally in class – rather than play it safe and hide my natural human attributes from myself and others. I will support others in doing the same.

16. If I break my agreements, I will use that to examine the role of agreements and commitment in my life, to look at what it means to be committed, and to see who is responsible for what I do and don't do.

Here are the many assignments we'll be undertaking. You may want to start practicing one or more of these right now, without waiting to find out whether you've been admitted to the course.

These Assignments Will Be Introduced as We Go Along:

1. Remember your contract of agreements, re-read that contract.

2. Learn the name of everyone in class.
  
3. Complete the written time survey, 7 consecutive days, every 15 minutes, what were you doing, what was the quality of your experience, what (thoughts) were you telling yourself to create that? How were you approaching life? What did you believe or “know” about yourself and the situation? Do you repeat low times? How do you do that? High times, if so, how? How much do you get done? How much did you study? Recreation? Socialization? Did you enjoy these? How do you attend to your body? Your life consists of weeks just like this, one after another. What have you learned from this exercise? Do you care to make any commitments?
  
4. Personal commitment not to beat yourself up until the end of the last class meeting. This commitment may mean working to change a deeply entrenched habit. You can go a long way toward changing a habit during a few weeks of real intention and hard work. I challenge you to take yourself and your life seriously enough to work hard this quarter to become your own friend and supporter, rather than your own saboteur and abuser. What could be more important?
  
5. Early in the quarter, turn in your list of “five problem areas, with some description/journaling of each. Take each area in turn and write it up, at a pace that works for you, explaining how you do (perpetuate) the issue. Attend to how, not to the stories of why, all that stuff in your past that you can blame for this issue. Look for choice points, i.e., openings for changing your habitual approach regarding this issue.
  
6. One-on-one sharing of one of the most important issues for you with a partner in the class. We will amplify this assignment later.
  
7. Pick one major issue of long standing in your life, one that has real emotional content. Write the equivalent of from 3 to 4 double-spaced pages typed in first person, presenting the deep voices in your head, the feeling tone, the emotional content, the pain. Put time into this, and honor the potential of this exercise. We will pair up and meet one on one outside of class to read these to each other. The reading will be in this format: The first person will read through their paper out loud from start to end, then go

back and read it through again, then again, etc. Do not deviate from what you have written. Let whatever emotions and feelings come up as they want to. The listener, simply listen with compassion, but do not make comments that will distract the reader from what they are reading. Read for at least 60 minutes, preferably for 90 minutes. When the first person has completed, it is the other person's turn.

8. At least three times each week, have a great day. Pick a day in advance and make it into a great one.

9. Ask a favor of someone you would not normally ask for one. If this is at all hard for you, do it often, several times a week.

10. Decline someone's request of a favor from you. If this is at all hard for you, do it every week until the end of term. You can remember Miss Manners' never-fail way to decline a request, "I'm sorry but I'm afraid that will just be impossible." You don't owe people any reasons for saying no.

11. Whatever you have loaned to others – property, money, books, go after them and get them back. If you choose not to do so, then in your mind, turn those loans into voluntary gifts on your part. Give back property and money you have borrowed (or stolen) from others.

12. Have a meaningful interaction with someone with whom you would not normally have such an interaction. Do this at least three times weekly to start, then do it daily.

13. Acknowledge or compliment someone you would not normally do this with. Do this at least once a week for the duration of the course. Accept compliments (e.g., "Thank you.") And let them into your awareness.

14. Appreciate your past, self-acknowledgment, Practice 123 in the Loving book: Journal extensively listing many events, activities, experiences, projects, that you have been responsible for. Include differences you have made to other people, animals, and

plants. Times you have been a caretaker, a cause. Experiences you have created for yourself and for others. This list might help you remember items to include: (1) people, (2) quality of your own life, (3) your body, (4) use of resources that were in your control, (5) accomplishments/learnings, (6) ideas, (7) skills, (8) the world, (9) spiritual growth, (10) whatever else. Include times you have let others have the joy and satisfaction of serving you. We will have these journals to refer to when we do a paired exercise in which you will share what is magnificent about yourself with a partner, and get to hear your partner do the same.

15. Listen to your voices: As preparation for a remarkable exercise: Pick a problem area and journal the many negative voices that help keep you locked into the habitual issue. Imagine yourself stating a commitment to dissolve this problem area (either as a generality or a specific part of the problem area) and listen to the familiar voices that come to mind saying you cannot do it, and write them down. Journal how you would answer each voice to take its power away. We will share these in class. Then we will do the listening to your voices exercise.

16. If you have a hard time speaking up in groups/classes: speak up in this class at least once a week (beyond when we are just going around the circle), preferably more, and speak up gratuitously in at least one of your other classes at least once a week. You can push past those familiar voices that tell you that your idea has already been said, that someone else could say it better than you, that it is not on topic, that it will take the focus away from the person we are focusing on at the moment. You don't have to raise your hand – you can simply butt in – even if that feels like rude. The world will not collapse if someone, even the instructor, thinks you are being pushy. We want to hear from you. Believe it or not, your voice wants to be heard.

17. People who have an easy time speaking up in groups/classes: Pay attention to the dynamic of the class discussion. Is there someone in category 16 above who might talk if you wait? Ask yourself if your contribution actually furthers the discussion or if it is a digression. If another person is the center of the discussion at the moment, ask yourself if your comment keeps the focus on that person or diverts it to you. Do this without getting all tied up in knots, because we do want to hear from you.

18. Read the books by the times determined. More on this as we learn more about availability. As you go along, but certainly before the end of term, as part of your journaling, give your comments on each of the books. Be sure to highlight that section of journaling so I will realize this is what you are doing and thus check this part of the assignment off for you.

19. Physical appearance: We will assign: Spend 15 minutes looking at your face in the mirror. Remember your commitment not to beat your self up, but to support yourself instead. Spend 15 minutes looking in a mirror at your whole body clothed. Spend 15 minutes looking in a mirror at your whole body without clothes. Is that body “you?” If so, who chose to say “yes?” Who is doing the looking? Then do Practice 119 in the Loving book. Are you willing to give up criticizing your body – for how it looks? For how it functions? In what ways does your body function well for you? How grateful to it might you be? Are you willing to appreciate it instead of criticizing it? To thank it? To express love to it? To take care of it and to delight in it?

20. With whom do you need to communicate? Perhaps to tell someone how their actions have affected you, to ask for an apology, to offer an apology, express a feeling or emotion, to clarify something, to end a warring relationship, to conclude a relationship cleanly. As you think back through your life, you might find a number of these. The assignment is to do it, to make the communication, provided doing so will not cause still further upset, especially upset by you. If you are frustrated because the person has died or you don't know how to contact them, we can talk about that in class. It might help to begin by drafting several letters to the person, each written from a different voice in your mind or a different point of view about that person. It often helps to write an emotionally over-dramatized presentation of a single point of view. These drafts are not for communication, but for clarification on your part, to enable you to actually make a useful communication, and to help bring peace to this issue.

21. Gratitude Practice: Develop the practice, indeed the habit, of living in a context of thankfulness. Let “Thank you, God,” or else just plain “Thank you” be the mantra of your psycho-spiritual practice. The benefits from this practice are just beginning to be recognized in Western cultures that are non-spiritual, and people are realizing how

amazingly powerful the practice is. We'll be talking together about this throughout the quarter.

### **My Intentions for Wednesday Night Group**

Frank Andrews, September 23, 2013

I have always seen our Group as a growth or personal empowerment group. I trust that members come together out of our commitment to our own growth or personal empowerment and to the growth of each other. And of course out of our wish to learn the skills of growing and facilitating the growth of others.

In Group, we create an environment in which we share our humanity together, supporting each other and learning from each other. Generally, we will be looking past the experience of having our feelings validated to working purposefully to change our habits. When a member raises an issue in Group, we take it for granted that the issue becomes the group's. Often, when it looks as if members are "giving advice" to someone else about "their issue," what they are really doing is speaking to themselves about their own. Thus, we are frequently working on a common human issue together. It's wonderful how often the room is filled with wisdom!

I start by taking for granted that all of us live out of beliefs and habits that make up our skills for living. Clearly none of us has super-expertise at living. I ask all of us to take a stand that

All of us are fallible humans. It's OK to be human. And it's OK to be human in public.

These issues are important. We are humans, being human together, and we try hard to make that safe. We will be moved, maybe to tears. Please be willing.

All of us are busy, and coming to Group takes time. We count on each other being here. Erratic attendance leads to less sense of community and safety. Your presence makes a

difference, as does your absence. Where you locate Group on your priority list will affect the value you create from it for yourself.

Things may happen in Group that you don't like. I call them AFGOs – another fucking growth opportunity. I hope you will use them as an opportunity to learn, to practice, to hold this in a bigger context, one where you're not just reacting.

I'm asking you to commit when you join Group. Commit to come, to participate, to grow. And also to keep things that are shared in Group confidential, so that people outside Group cannot attach people's names with things they disclose.

Finally, it helps to keep our initial go-round on commitments, triumphs, and gratitudes to a reasonable fraction of our three hours together. And really finally: We come to Group to accept and love ourselves and others. We come to Group to serve ourselves and others. We come to Group to delight in life and have fun. And we come to Group to learn how to do these things better. Thanks for being part of this. I love it. And I love you. (As I define it, loving is the experience of a heart-felt YES.)

## **Examining Our Life Through Writing, Crown 123, Spring 2013**

### Purposes of the Course

This course takes for granted that each of us is living primarily out of beliefs and habits that we formed when we were younger. The course's primary purpose is to support you in exploring those beliefs and habits and identifying which ones you want to change and then working to do just that, thereby improving your skills of living. As all of us look within at our lives, we also share with everyone else what we find there and how we are coping with it.

Instructor's Statement: In its occasional lectures, readings, discussions, and extensive thinking/writing assignments, this course offers a smorgasbord from which you can choose and benefit as you see fit. I have spent the last 46 years learning, working on, and teaching topics related to this course because I believe this material is important — to you, to society, and to the future of the Earth and its inhabitants. I will share ideas with you that I know have the potential to be powerful in peoples' lives. These ideas are consistent with cognitive-behavioral and positive psychology. I will speak my own truths — the ideas that make the most sense and impact to me, knowing full well that tomorrow I might hold the opposite ideas as true. I will trust you to screen these ideas in light of your own experience, to challenge and disagree, and use them to forge your own life and make your own contributions to the world. In the writing assignments you'll be asked to explore the beliefs and habits on which you base your life in light of the readings and the class meetings.

The goals of the course are absurdly ambitious – to boost you in transforming your life – and we have only ten weeks in which to accomplish them. So take this course ONLY if you are willing to start off running, and to keep running for the whole term. Don't drag the course down for everyone else by enrolling if you're not willing to commit wholeheartedly to doing the work. If you enroll in the course, you are agreeing to the following list of commitments. I believe that if you keep these agreements, you can derive enormous lifelong benefit from having taken this course.

### Suggestions for Writing Daily Freewrites

In the last 10 minutes of each class, we will do free-writes – based on what happened in class today, what do I want to comment on, and comment on it. As I read your daily free-writes, I am looking for signs of your engagement with ideas relevant to the class. I read them for content, to learn how you have lived, your ideas, your reactions, your thoughts, and values. I believe, based on past experience, that most of the time that “teachers” have read your writing in the past, they were not interested in your ideas, but were busy judging your spelling or your grammar. I am not worrying about your spelling or your grammar. Please take this opportunity seriously and do justice to it. I have been amazed at how people’s writing can flower as they write these reflections. This is what keeps me excited as I read them.

### Weekly Papers

There is a paper assigned, due at each Friday’s class. When we number the weeks, we are not counting the first week in which classes occur. Please either type or computer-generate your paper on 8½ x 11" paper. If you cannot meet a deadline, let me know what’s up. Keep your returned writings for yourself. Many people who took this course in the past have found it extremely worth their while to re-read them after they have left the course or UCSC.

Please Start Each of Your Weekly Papers with These Notes:

1. Purpose — a short, punchy statement of what you intend for the reader (including yourself) to think, believe, or understand.
2. Strengths — What are you pleased with?
3. Weaknesses/Disappointments — What are they and do you want help with them?
4. What you got out of writing the paper.
5. Acknowledgments — sources, help, editing

Week 1. Free-Write Exploring Your Values. The first part of this exercise is designed to get you in touch with the emotional part of you that coexists with the intellectual part that is so well nourished by our rational educational system. In this emotional part of your experience lies the intrinsic value on which all of your values are based.

Set aside a block of time and vividly recall an experience in which you were overcome by emotion. Free-write about the event and your feelings. Do this for several experiences, including at least one of pain, one of anger, love, joy.

List many (at least a couple dozen) different objects, events, experiences, situations that you like, appreciate, delight in, love. Make a similar list of your dislikes, angers, fears. Go for variety in these lists. Explore ecstasy/agonny, joy/sorrow, in your life.

Here is a checklist of areas of life to reflect on so you won't overlook something important:

### 1. People

Family (parents, siblings, spouse, children, etc.)

Peers (friends, fellow citizens, drivers, students, workers, etc.)

Colleagues (workmates, playmates, etc.)

Romantic partners

Employers

Employees

People you have never met

People who haven't been born yet

Others by group or characteristic

### 2. Quality of Your Own Life

Your internal life

Love, peace, joy, satisfaction

How you bear loss, pain, disappointment, failure, frustration

### 3. Your Body

How you use and maintain it in good times and bad

4. Resources

How you use your mind, money, tools, opportunities, natural resources, and the support, love, and cooperation of others

5. Accomplishments

Things built, achieved, not achieved

Goals reached and unreached

Work done

6. Ideas, Skills, Learning

Learning, organizing

Creating, growing

7. Values in Action

Moving your self, others, society, and the world toward better life

8. The World

Your impact on people, objects, animals, plants, earth

9. Spiritual Growth

Interpret this category as seems appropriate to you.

Week 2. Explore the Complexities of the subject of values and develop your own useful ideas. Your Values are the rules, methods, habits, and assessments of better and worse that you use to make choices. Reflecting on your work from week 1, would you call your likes and dislikes "good" and "bad," at least for you? (If your like's are not the same as your good's, give examples of "good" and "bad" to illustrate the difference.)

In what ways, if any, do the words “good” and “bad” as you use them mean more than just your personal preferences? Which of the items on your lists do you extend as general or universal good’s to your friends, family, and others, and which ones don’t you? On what grounds do you make this extension? How would you go about using “good” vs. “evil?” How about “right” vs. “wrong?” [Note: There are cultures whose dominant philosophy does not polarize experiences as good/bad, right/wrong, but instead sees life as a dynamic interplay of complementary events or energies (e.g., yin/yang). What happens to your right/wrongs when you determine to look at them in this way that is less characteristic of Western society?]

What might justify you in trying to impose your values (preferences?) on other people? What might justify a community in imposing the preferences of some of its members on everyone?

Is it correct to say that the items on your lists represent your “values?” If not, state why not and give examples of “values” — positive and negative to illustrate the difference. Free-write about what, to you, makes one value “higher” than another. Give examples of values of yours that are higher than others. What are your “highest values?” What about the phrase, “primary values” — does its meaning differ from “higher values?”

Here is a line of questions that explores a particular area of what some people consider contain higher values for them: What major problems confront the earth, humanity, the United States, your own community, family, and self over the near and distant future? Where have you personally experienced, in yourself or someone close to you, pain or lack of joy and fulfillment due to conditions that might have been (and perhaps should have been) different? What contributions might you personally make to making the world a better place? When have you felt especially fulfilled, competent, optimally challenged, satisfied? Is there a commitment you want to make, now, about what you will hold as your highest values and how you will use your highest values to organize your life?

Week 3. Explore or Clarify a Topic that you consider important. Or talk someone or yourself into something. Identify a subject area involving your own values, or maybe science or technology, that you want to think and write about or maybe even to convince other people or yourself of. Use your writing to think, wonder, question, generate and develop ideas, argue, learn, create, express, care, feel. Do you want to commit to

changing some habit that you may have established years ago, but that is not serving you well? This is not necessarily a formal paper, nor is it the first draft of a formal paper. It can be free-writing, as described in the quote from Natalie Goldberg in the “Helpful Hints for Writing” that follows this list of assignments. Make it an expression of you, some part of you. Make it clear why this subject matters to you.

Take advantage of the various analytic tools you have learned so far in the course. Examine the grounds on which you and others base their values. Consider whether the values involved are intrinsic or are utilitarian.

Week 4. Reflect on Death and Dying, and, if you wish, Write Your Living Will. Note, a living will is not the same as a regular will. Medical technology now makes it possible to keep human bodies alive long after they would have, in the past, died. For example, bodies can be fed intravenously or through stomach tubes, they can be breathed through ventilators and respirators, blood can be pumped and purified by heart-lung machines and kidney dialysis machines. The person being kept alive may be in a coma, may be in severe or moderate pain or discomfort, may experience dementia or forgetfulness ranging from moderate to total, may have lost control and independence, may be fearful or agitated, disoriented, lonely, or stripped of the many abilities and ways of being treated that s/he associates with human dignity.

Suppose you were aging or ill and were considering what kind of care you would want in the various situations mentioned above. Your “living will” is a statement of what kind of care and what kind of life-prolonging treatment you wanted, ranging all the way from euthanasia to maximum attempts at life extension. Express your wishes to those charged with your care, and justify your choice based on your understanding of the values involved in a human life, in this case your own life. What do you believe, as of now, makes your life worth living? How would you like to be cared for in your last days/months/years? Be convincing, because if you aren’t, the people around you will do what they think best based on their values. First do a free-write, then a final compelling/convincing living will. Since most hospital and nursing home staff recommend that everyone have their own living will, you might want to keep this as your own, until you decide to revise it later. There is info at [lentillem.com](http://lentillem.com), and obtain an advanced healthcare directive form that is valid in California. You can google living wills.

Week 5. Another Paper of the Type in Week 3, or a Development based on the Paper of Week 3.

Week 6. Exercises in Experiencing. If you enter into these exercises with strong intention, you can get a glimpse, an important glimpse, of the truth that our experience of life is consistent with how we approach events. (Of course, no brief exercise will permit a person raised with a scientific mind-set to experience life as an aboriginal tribesperson would have.)

The descriptions that follow are based on choice of a tree as an object you would like to get to know better, to experience in a variety of ways. After all, you're going to graduate from UCSC which everyone in the world knows is a bunch of tree-huggers. You can choose any natural object you want for that purpose and modify the four exercises as suits the object you choose. I've found that people who use a tree generally enter into the exercise more wholeheartedly than people who, say, go down to the ocean and sit there for a while. After all, do you want to graduate from UCSC without ever having been assigned to hug a tree? The weather will, after all, affect your choice. After you perform each of these exercises, write about your experience and your reflections on that experience.

First: A Scientific Approach: Go outdoors, far enough away from people so you will have some privacy, and pick a tree that you would like to get to know better. Spend at least 20 minutes experiencing it as a form created by the operation of the inexorable laws of physics and chemistry. It traps its energy from sunlight in its chlorophyll, it absorbs nutrients from the soil through its roots and from the air through its leaves, it takes in water through its roots and transports it both upward and downward through its trunk and branches. Its atoms form complex molecules which undergo series of complex chemical reactions which sustain living cells which create structures which organize its overall form. The end result is the life and growth of this tree. Its molecular mechanisms are directly descended from an unbroken line of prior living organisms that goes back almost 4 billion (4,000,000,000) years. Use all your knowledge of science and imagine still more knowledge to experience this tree as fully as you can through the scientific models available to you.

Second: Approach to Appreciate: Pick your tree and spend at least 20 minutes experiencing it as simply a shimmering play of lights, colors, shapes, sounds, smells,

feelings. Vary your vantage point (e.g., you might lie on the ground beneath it or climb in it.) As you move about, watch its forms change as the position of your eyes changes, as each tiny breeze rustles its leaves. See the tree as a masterful impressionist painting in three space dimensions and one time dimension.

Third: Approach to the Spirit Within: Pick your tree and spend at least 20 minutes experiencing it as follows: Approach it with the strong conviction that within it dwells a spirit capable of loving, fearing, disliking, and governing the behavior of the tree. Experience that spirit dwelling in your tree. It might help to imagine yourself as one of the countless aboriginal peoples who have lived their entire life knowing the spirits in the trees. Know that the spirit of the tree is behind the dance of its leaves and branches, behind the feelings and emotions the tree offers you, behind its life, its shape, its fruit and shade and shelter. Get to know that spirit as it interacts with you using its tree as its vehicle. Suspend for this time your conviction that trees don't have spirits in them. Could all the people who for countless thousands of years of people knew the spirits in trees have been so deluded? Or might they have known how to approach the trees to experience those spirits?

Fourth: Approach for Physical Contact, Oneness: On a day when there is at least a little breeze, pick your tree and climb up into it and rest your body in its care. Feel it support you in its living arms, feel them sway as they rock you gently. Spend at least 20 minutes with your eyes closed, feeling the tree hold you and listening intently to every sound it produces in its quiet lullaby. Feel the bond of oneness between this tree and yourself. Also, if appropriate, bury yourself in its leaves. Before you leave it, embrace its trunk or one of its branches with your arms and pour your love into it, communicating deeply, as it were, with your arboreal mother.

Fifth: Intellectual Reflection: Reflect on your experiences with the "same" tree, and draw any conclusions or extract any ideas that seem appropriate to you.

Week 7. Positive Vision of Your Life as Written by a Loved One. This assignment is the creation of a positive vision of what your entire life might be, written in a particularly evocative format. People are pulled toward their visions. Creating and consciously holding up a vision of part or all of your life is a powerful tool for living according to that vision.

Imagine into the future when you have lived out your entire life and finally died. Write a letter from one of your loved ones to another, reflecting on your entire life — all that you had done and all that you had experienced. Have her/him recall your life as you would like her to be able to, not as your cynical voice says she's likely to. This is not the time for any kind of modesty; this is the time to see the entire thrust of the life you are living through the eyes and heart of a future or present loved one.

Week 8. Another Paper of the Type for Weeks 3 and 5, or a Development based on one of those papers.

Week 9. Asserting Your Primary Values and Committing to Them. This assignment is to identify the primary values you intend to live by, to state them clearly, and to commit to living by them until such time as you choose to modify them. These are the overriding values by which you will make choices and guide your life. You may not know now what form some areas of your life will take, e.g., whether you will marry or have children, or what career(s) you will follow. But you surely have a sense of you intend to create.

Start this assignment by reflecting on the life you have lived so far. Head a page with each of these trigger phrases:

I have been responsible for --- I have been a caretaker of ---

I have created --- I have experienced ---

I have been committed to --- I have been determined to ---

I have made my life reflect ---and free-write as you look over the nine areas of life listed in the assignment for week 1. Thus you acknowledge the contributions, growth, and development you have already accomplished and identified the directions you are already headed.

In order to empower a value, acknowledge the role it has played in your life, appreciate it, respect it. Beware of the cynical voice, the one that says, "Yes, you did that, BUT!"

But someone else did it better, or quicker, or after all you were paid to do it, so you were expected to, or . . . .

Now turn your attention to the values you employ now and will employ in the future. Change the tense of the trigger phrases from past to present, e.g., “I am responsible for – “ And then into the future, e.g., “I will be responsible for —.” Use the list of 9 areas to keep from forgetting important topics, and free-write values for the future.

Based on this, write out a statement of values that you will live by (until you later on decide to revise the statement). Do this in the form of a series of concise commitments by which you will live. You can amplify each of these commitments with a short description or discussion. Print out a copy for me and another for yourself, since I will be unlikely to be able to return yours to you at the end of term. Take care with this, and honor what it says. To gain the most power from this list, post it where you read it every day, and memorize it so you can say it over to yourself as you walk, drive, ride your bike, wash the dishes, or change the diapers.

#### Helpful Hints for Writing

We ... write to heighten our own awareness of life ....

We write to taste life twice, in the moment and in retrospection ....

We write to be able to transcend our life, to reach beyond it ...

to teach ourselves to speak with others, to record the journey

into the labyrinth ... to expand our world when we feel

strangled, constricted, lonely ....

When I don't write I feel my world shrinking.

I feel I lose my fire, my color.

—Anais Nin

On Free-Writing, Writing First Drafts, and Just Getting Going, from *Writing Down the Bones* by Natalie Goldberg:

The basic unit of writing practice is the timed exercise.... 10 minutes, 20 minutes, or an hour. It's up to you.... What matters is that whatever amount of time you choose for that session, you must commit yourself to it and for that full period:

1. Keep your hand or fingers moving. (Don't pause to reread the line you have just written. That's stalling and trying to get control of what you're saying.)
2. Don't cross out or erase. (That is editing as you write. Even if you write something you didn't mean to write, leave it.)
3. Don't worry about spelling, punctuation, grammar. (Don't even care about staying within the margins and lines on the page.)
4. Lose control.
5. Don't think. Don't get logical.
6. Go for the jugular. (If something comes up in your writing that is scary or naked, dive right into it. It probably has lots of energy.)

Notes on Editing:

Don't try to impress people with pompous vocabulary. Write in short simple words. Short sentences are easy to read. When things get complicated, stick in a period and begin a new sentence.

Make verbs do the work, convey the action of the sentence. Verbs are the treasure of the English language. Use action verbs, avoid passive voice ("It was said that . . .") in which no one is ever doing anything; something is always being done to them instead). Too many verbs like *is* and *are* put people to sleep. Make a list of the verbs in a paragraph and ask what clues they give about the actions taking place.

Decide who is talking (point of view) and to whom (audience) and stick to your decision. Don't hop from one point of view to another, from one audience to another. Readers tend to pay attention when "I" talk to "you."

Readers expect the subject of a sentence to be followed immediately by the verb. Don't put a bunch of words between them.

Readers expect the first part of the sentence to tell them which person or thing the sentence is about. They expect the first part to link any new material to what has come before.

Readers emphasize what appears at the end of a sentence. Put new material there; put the point of the sentence there.

Split out lists of items and write them in the form of lists. Make lists of two items clear by using the word "both."

Writing the Papers for Weeks 3, 5, and 8

Explore or clarify a topic for yourself or others, or talk yourself into something. Identify an area involving your own values that you want to think and write about or maybe to convince other people or yourself of. Pick a topic that makes a difference to you. You can use your writing to think, wonder, question, generate and develop ideas, argue, learn, create, express, care, feel. Do you want to commit to changing some habit that is not serving you well? You can make this a formal paper, or the first draft of a formal paper, or free-writing. Make it an expression of you, some part of you. How powerfully can you express how this subject matters to you?

You may have to narrow your topic in order to say something worthwhile about it in a few pages, rather than just to make some obvious generalizations. You might brainstorm ideas onto cards and put them around where you will see them, so you keep thinking about them over time. Eventually, generate a clear one-sentence statement of the purpose of your paper, even if it's "to list and ponder my ideas and feelings about XX and see where they lead me." While you keep its purpose in mind, you can push the cards around, seeing how they relate to each other, and thereby organize your paper. Elaborate each point clearly, and the first draft of your paper is finished!

You don't have to write an informative paper, "a paper about something." You may want to convince yourself or others. Then pick your viewpoint and make a case for it. Do that and you are sure to inform. You don't have to "give both sides of an argument," but if you want to convince somebody of your view, it often helps to acknowledge theirs. Otherwise, they might reject what you say out of hand for being biased.

You might first introduce your topic and show its importance. Readers are bored with academic papers, so you might grab the reader, maybe with a story. Take your stand. Somewhere you might want to give some background. This informs the reader and shows her that you know what you are talking about, so she might well listen to your arguments. Citing sources can show that you haven't just made things up. But all of us know how sources can be used to support any argument and how they can put the reader to sleep.

You are writing for people, not for academics. People love stories, feelings, emotions. Lead the reader by the hand through your feelings and thoughts into your point of view. Use short sentences, short paragraphs, punchy short verbs, and active (rather than passive) voice.

End your paper with a powerful argument, not with your weakest, with a positive vision rather than a negative one. Finish with some kind of punch, maybe with a very short summary.

Take advantage of the various ideas and analytic tools you have learned so far in the course. Consider the grounds on which you (and perhaps others) base their values. Consider whether the values involved are intrinsic or are utilitarian.

Clarify unfamiliar terms or jargon. Swap your paper with other people in or out of the class and give each other feedback. This increases the value of the paper, because we are social creatures, not just assignment fillers. Give it to someone with opposing views to see how they respond. Can you use their comments to strengthen your paper?

No perfectionism! Nobody writes perfectly. Just write. Gaining skills takes practice. Would you ever have learned to walk if you gave up because you fell down the first 500 times you tried, and even hurt yourself a few times?

No procrastination! Start now. If it's worth doing, it's worth doing – even poorly. Far easier to improve a paper over time than to stay up all the night before it's due desperately dumping words into a computer. You're in a university, which is an institution for learning, not a place where you have to show off how much you already know. Practice – you'll get better – I promise.

Are you willing to take your own ideas seriously? Why not? An idea doesn't have to be the cosmic truth in order to be important to you and others. You don't have to be right to take your views seriously. Have years of education left you "knowing" that you write only for the approval of some authority? How long will you keep disempowering yourself by denying the importance of your own ideas, your own cares, your own views, your own voice? What would it take for you to start honoring your life by honoring your writing? And why not use this class to start?

**About the Interviewer and Editor:**

Sarah Rabkin taught in the UC Santa Cruz writing program and environmental studies department for over twenty-five years. She holds a BA in biology from Harvard University and a graduate certificate in Science Communication from UCSC. Her book of essays, *What I Learned at Bug Camp*, was published in 2011.